

Critique of Pure Reason

IMMANUEL KANT

Musean Translation

MOUSEIA

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Translated by Michael Berardi

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TRANSLATOR

Michael Berardi

THE WORK

Written 1787 · Philosophy

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[B i]

Critique of Pure Reason by Immanuel Kant

Professor in Königsberg, Member of the Royal Academy of Sciences in Berlin

Second Edition, Improved Here and There (1787)

[B ii]

Bacon of Verulam

The Great Renewal. Preface.

Of ourselves we say nothing. As for the matter in hand, we ask that people regard it not as an opinion but as a work, and hold it certain that we are laying foundations not for some sect or doctrine, but for human welfare and greatness. Next, we ask that, being fair to their own interests, they take counsel for the common good and themselves take part. Further, that they be of good hope, and neither imagine nor conceive our renewal, as some do, to be something infinite and beyond mortal power; for in truth it is the end and rightful limit of endless error.

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To His Excellency, the Royal Minister of State, Baron von Zedlitz

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Gracious Sir,

To do one's part to advance the growth of the sciences is to serve Your Excellency's own interest; for this interest is most intimately bound to them, not merely through the exalted position of a patron, but through the far closer position of a lover and enlightened connoisseur. I therefore also avail myself of the only means that lies to some extent within my power to express my gratitude for the gracious confidence with which Your Excellency honors me, as if I could contribute something to this end.

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To the same gracious attention that Your Excellency bestowed on the first edition of this work, I now dedicate this second edition, and with it all the other concerns of my literary calling, and remain, with the deepest reverence,

Your Excellency's most humbly obedient servant, Königsberg, April 23, 1787

Immanuel Kant

Preface to the Second Edition



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Preface to the Second Edition

Whether the cultivation of the cognitions that belong to reason's business follows the secure course of a science can soon be judged by its results. If, after much preparation and equipment, it comes to a standstill as soon as it approaches its goal, or must repeatedly retrace its steps and strike out on another path to reach it; likewise, if its various collaborators cannot be brought to agree on how their common purpose is to be pursued, then we may always be certain that such a study has by no means yet entered upon the secure course of a science, but is merely groping about. It is already a service to reason to discover this path, if possible, even if much that was included in the goal previously adopted without reflection must be abandoned as futile.

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That logic has followed this secure course since the earliest times is evident from the fact that, since Aristotle, it has not had to take a single step backward —unless we choose to count the removal of a few dispensable subtleties, or the clearer determination of what it teaches, as improvements, though these concern the elegance rather than the security of the science. It is also remarkable that, up to now, logic has been unable to take a single step forward, and thus seems to all appearances to be closed and complete. For when some modern thinkers imagined they were enlarging it by inserting psychological chapters on

the various cognitive powers (imagination, wit), metaphysical chapters on the origin of cognition or the different kinds of certainty according to the difference of objects (idealism, skepticism, and so on), or anthropological chapters on prejudices (their causes and remedies), this arose from their ignorance of the distinctive nature of this science. It is not an enlargement but a disfigurement of the sciences when their boundaries are allowed to run into one another. The boundary of logic, however, is determined with complete precision by its being a science.

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That science does nothing but set out in full, and rigorously prove, the formal rules of all thinking—whether thinking is a priori or empirical, whatever its origin or object, and whatever contingent or natural obstacles it encounters in our mind.

Logic owes its success solely to its restricted scope, which entitles it, indeed obliges it, to abstract from all objects of cognition and their differences, so that in logic the understanding deals with nothing but itself and its form. Naturally, it must have been far more difficult for reason to enter upon the secure path of science when it has to do not merely with itself but also with objects. Hence logic, as a propaedeutic, constitutes, so to speak, only the forecourt of the sciences; and where items of knowledge are at issue, although a logic is presupposed for judging them, their acquisition must be sought in the sciences properly and objectively so called.

Now, insofar as reason is to be present in these sciences, something in them must be cognized a priori. Reason's cognition can be related to its object in one of two ways.

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Either it merely determines the object and its concept (which must be given from elsewhere), or it also makes the object actual. The first is theoretical, the second practical cognition of reason. In both, the pure part, however much or little it may contain—namely, the part in which reason determines its object wholly a priori—must first be presented on its own, without mixing into it what comes from other sources. For it is bad management to spend receipts

blindly, without being able afterward, when the business runs into difficulties, to distinguish which part of the income can bear the expenditure and from which part it must be cut.

Mathematics and physics are the two theoretical cognitions of reason that are to determine their objects a priori: the former wholly purely, the latter at least in part purely, but also in accordance with sources of cognition other than reason.

From the earliest times to which the history of human reason extends, mathematics has followed the secure path of a science among that admirable people, the Greeks. Yet we must not suppose that it was as easy for mathematics as for logic, in which reason has to do only with itself, to find that royal road, or rather to open it for itself.

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I believe instead that mathematics long remained a mere groping about, especially among the Egyptians, and that this transformation must be attributed to a revolution brought about by the fortunate insight of a single person in an experiment. From that point on, the path to be taken could no longer be missed, and the secure course of a science was entered upon and marked out for all time and to infinite distances. The history of this revolution in the way of thinking, which was far more important than the discovery of the route around the famous cape, and of the fortunate person who brought it about, has not been preserved for us. Yet the story handed down to us by Diogenes Laertius, who names the supposed inventor of even the smallest elements of geometrical demonstration—elements that common judgment does not consider to need any proof—shows that the memory of the change brought about by the first trace of this new path's discovery must have seemed exceedingly important to mathematicians and thus became unforgettable. A light dawned on the first person who demonstrated the equilateral triangle, whether his name was Thales or whatever else it may have been.

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For he found that he must not trace what he saw in the figure, or even its mere concept, and as it were learn its properties from that; rather, he must produce them through what he himself thought into it a priori according to concepts and presented through construction. He found that, to know anything securely a priori, he must attribute to the thing nothing but what followed necessarily from what he himself had put into it in accordance with his concept.

Natural science took much longer to find the highway of science, for it is only about a century and a half since the proposal of the ingenious Bacon of Verulam partly brought about this discovery and partly, since its trail had already been found, gave it fresh impetus. This discovery, too, can be explained by a sudden revolution in the way of thinking. Here I will consider natural science only insofar as it is founded on empirical principles.

When Galileo had his balls roll down an inclined plane with a weight he had himself chosen, or Torricelli had the air sustain a weight he had thought in advance to be equal to that of a column of water known to him, a light dawned on all investigators of nature.

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The same happened when, still later, Stahl transformed metals into calx and this back into metal by taking something away from them and giving it back*. They understood that reason has insight only into what it itself produces according to its own plan; that it must lead the way with principles of its judgments according to constant laws and compel nature to answer its questions, rather than let itself be led by nature alone, as if on a leash. For otherwise accidental observations, made according to no previously devised plan, do not connect at all in a necessary law, which is nevertheless what reason seeks and needs. Reason must approach nature with its principles in one hand, according to which alone agreeing appearances can count as laws, and in the other the experiment it has devised in accordance with those principles. It must do so to be instructed by nature, certainly, but not as a pupil who lets the teacher dictate whatever the teacher wishes; rather, as an appointed judge who compels witnesses to answer the questions he puts to them. Thus even physics owes the very advantageous revolution in its way of thinking solely to a single idea.

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That idea was to seek in nature, in accordance with what reason itself puts into it, what reason must learn from nature and could not know on its own—not to invent it and ascribe it to nature. Only through this was natural science first brought onto the secure course of a science, after having been nothing more than a mere groping about for so many centuries.

* Here I am not following precisely the historical course of the experimental method, whose first beginnings are not well known either.

Metaphysics, an entirely isolated speculative cognition of reason that rises wholly above instruction from experience, and does so through mere concepts —not, like mathematics, by applying them to intuition—has not yet enjoyed a fate so favorable that it could enter upon the secure course of a science. Here, then, reason is to be its own pupil. Yet metaphysics is older than all the other sciences and would remain even if all the rest were swallowed up entirely in the abyss of an all-destroying barbarism. For in metaphysics reason continually comes to a standstill, even when it wishes to gain a priori insight, as it claims to do, into laws confirmed by the most ordinary experience. In metaphysics we must retrace our path countless times because we find that it does not lead where we wish to go.

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As for agreement among its adherents in their assertions, metaphysics is still so far from this that it is instead a battlefield apparently designed expressly for exercising one's powers in mock combat, where no fighter has ever been able to win even the smallest piece of ground and establish lasting possession on the strength of his victory. There is therefore no doubt that its procedure has so far been a mere groping about, and, worst of all, among mere concepts.

What is it, then, that has kept a secure path of science from being found here? Is it perhaps impossible? Why, then, has nature afflicted our reason with the restless striving to seek it out as one of its most important concerns? More than that, how little cause we have to place confidence in our reason if, in one of the most important objects of our curiosity, it not only abandons us but holds us

off with false pretenses and finally deceives us! Or has the path merely been missed until now? What sign can we use to hope that, in a renewed search, we will be more fortunate than others before us?

Mathematics and natural science became what they now are through a revolution accomplished all at once.

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I should think their example remarkable enough to prompt reflection on the essential feature of the change in their way of thinking that proved so advantageous to them, and to imitate them in this, at least as an experiment, so far as their analogy with metaphysics, as cognitions of reason, permits. Until now it has been assumed that all our cognition must conform to the objects; but all attempts to establish something about them a priori through concepts, by which our cognition would be enlarged, have come to nothing on this assumption. Let us therefore try for once whether we make better progress with the problems of metaphysics by assuming that the objects must conform to our cognition. This already agrees better with the desired possibility of a cognition of objects a priori, a cognition that is to establish something about objects before they are given to us. The situation here is like that of Copernicus's first thoughts. When he could make no good progress in explaining the movements of the heavens on the assumption that the entire host of stars revolved around the spectator, he tried whether he might succeed better by having the spectator revolve while leaving the stars at rest.

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In metaphysics we can make a similar experiment concerning the intuition of objects. If intuition had to conform to the constitution of the objects, I do not see how we could know anything about it a priori. But if the object, as an object of the senses, conforms to the constitution of our faculty of intuition, I can quite well represent this possibility to myself. Yet I cannot stop at these intuitions if they are to become cognitions; I must refer them, as representations, to something as their object and determine that object through them. I can therefore either assume that the concepts through which I bring about this determination also conform to the object, and then I am once again in the same

difficulty as to how I could know anything about it a priori; or I assume that the objects—or, what amounts to the same thing, the experience in which alone they are cognized as given objects—conform to these concepts. I then see at once an easier solution. For experience is itself a kind of cognition that requires understanding, whose rule I must presuppose in myself before objects are given to me, hence a priori. This rule is expressed in a priori concepts. All objects of experience must therefore necessarily conform to these concepts and agree with them.

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As for objects insofar as they are thought merely through reason, and indeed necessarily, but cannot be given in experience at all—at least not as reason thinks them—the attempts to think them, for they must surely allow themselves to be thought, will afterward provide a splendid touchstone for what we are adopting as the changed method in our way of thinking: namely, that we cognize a priori of things only what we ourselves put into them.*

* This method, modeled on that of the investigator of nature, thus consists in seeking the elements of pure reason in what can be confirmed or refuted by an experiment. Now, to test propositions of pure reason, especially when they venture beyond every boundary of possible experience, no experiment can be made with their objects, as it can in natural science. An experiment will therefore be practicable only with concepts and principles that we assume a priori: we arrange them so that the same objects can be considered from two different sides—on the one hand as objects of the senses and the understanding for experience, and on the other as objects merely thought, if need be for reason isolated and striving beyond the boundary of experience. If it now turns out that, when things are considered from this twofold standpoint, agreement with the principle of pure reason is found, whereas from a single standpoint an unavoidable conflict of reason with itself arises, the experiment decides in favor of the correctness of that distinction.

This experiment succeeds as desired and promises metaphysics the secure course of a science in its first part, where it deals with a priori concepts for which the corresponding objects can be given in experience in conformity with

them.

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For after this change in our way of thinking, we can quite well explain the possibility of a priori cognition and, what is more, supply satisfactory proofs of the laws that lie a priori at the foundation of nature as the sum total of the objects of experience. Both were impossible under the previous procedure. But from this deduction of our capacity to cognize a priori there emerges, in the first part of metaphysics, a strange result, apparently very detrimental to its entire purpose, with which the second part is concerned: namely, that with this capacity we can never go beyond the boundary of possible experience, though precisely this is the most essential concern of this science.

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Yet here lies the experiment that provides a countercheck on the truth of the result of that first assessment of our a priori rational cognition: that it extends only to appearances, leaving the thing in itself as indeed actual in itself but uncognized by us. For what necessarily drives us beyond the boundary of experience and of all appearances is the unconditioned, which reason necessarily and with every right demands in things in themselves for everything conditioned, thereby demanding the series of conditions as complete. Now, suppose we find that, on the assumption that our cognition through experience conforms to objects as things in themselves, the unconditioned cannot be thought at all without contradiction; but that, on the assumption that our representation of things as they are given to us does not conform to them as things in themselves, and that these objects as appearances instead conform to our way of representing, the contradiction disappears; and that consequently the unconditioned must be encountered not in things insofar as we know them, as they are given to us, but in them insofar as we do not know them, as things in themselves.

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Then it becomes clear that what we initially assumed only as an experiment is well grounded.* Now, after speculative reason has been denied all progress in this field of the supersensible, we still have to try whether data for determining that transcendent concept of reason, the concept of the unconditioned, may

not be found in its practical cognition. In this way we may, in accordance with the wish of metaphysics, reach beyond the boundary of all possible experience with our a priori cognition, though such cognition is possible only for practical purposes. And by proceeding in this way, speculative reason has at least made room for such an enlargement, even if it had to leave that room empty. We therefore remain free—indeed, speculative reason itself calls on us—to fill that room.

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We are to do so, if we can, with practical data of reason.**

* This experiment of pure reason has much in common with the chemists' experiment, which they sometimes call the experiment of reduction, but generally the synthetic procedure. The metaphysician's analysis separated pure a priori cognition into two very dissimilar elements: cognition of things as appearances and cognition of things in themselves. Dialectic reunites the two in agreement with the necessary rational idea of the unconditioned, and finds that this agreement can never be achieved except through that distinction, which is therefore the true one.

** In the same way, the central laws of the motion of heavenly bodies gave established certainty to what Copernicus had at first assumed only as a hypothesis. At the same time they proved the invisible force binding the structure of the universe together—Newtonian attraction—which would have remained forever undiscovered had Copernicus not ventured, in a manner contrary to the senses yet true, to seek the observed movements not in the objects of the heavens but in their spectator. In this preface I likewise present the change in the way of thinking set out in the Critique, analogous to that hypothesis, only as a hypothesis. In the treatise itself, however, it is proved not hypothetically but apodictically from the constitution of our representations of space and time and from the elementary concepts of the understanding. My purpose here is only to draw attention to the first attempts at such a change, which are always hypothetical.

The business of this critique of pure speculative reason consists in that attempt to change the procedure hitherto followed by metaphysics, by carrying out a complete revolution in it after the example of geometers and investigators of nature. It is a treatise on method, not a system of the science itself; yet it traces the science's entire outline, both as regards its boundaries and its whole internal structure.

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For pure speculative reason has this peculiarity: it can and should measure its own capacity according to the different ways in which it selects objects for thought, and itself enumerate completely the various ways of setting itself problems, thus sketching the entire plan for a system of metaphysics. As regards the first point, this is because in a priori cognition nothing can be attributed to objects except what the thinking subject draws from itself. As regards the second, it is because reason, with respect to its principles of cognition, is an entirely separate, self-subsisting unity in which, as in an organized body, every member exists for the sake of all the others and all for the sake of each. No principle can be taken with assurance in one relation without having been investigated at the same time in its thoroughgoing relation to the entire pure use of reason. In return, metaphysics also enjoys a rare good fortune that can belong to no other science of reason concerned with objects—for logic deals only with the form of thinking in general. The good fortune is this: once this critique has brought metaphysics onto the secure course of a science, it can embrace the whole field of cognitions belonging to it. It can thus complete its work and leave it for posterity's use as a capital fund that can never be increased.

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For it deals only with principles and with the limitations of their use, which are determined by those principles themselves. As a fundamental science, it is therefore also bound to this completeness, and it must be possible to say of it: nil actum reputans, si quid superesset agendum ("he counts nothing done while anything remains to be done").

But what, someone will ask, is the treasure we intend to leave to posterity in a metaphysics purified in this way by critique and thereby also brought into a lasting condition? A cursory survey of this work may seem to show that its benefit is merely negative: that we must never venture with speculative reason beyond the boundary of experience. And this is indeed its first benefit. But this benefit at once becomes positive when we recognize that the principles with which speculative reason ventures beyond its boundary in fact lead inevitably not to an enlargement but, on closer examination, to a restriction of our use of reason. For they actually threaten to extend the boundaries of sensibility, to which they properly belong, over everything.

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They thus threaten to displace the pure (practical) use of reason altogether. Hence a critique that limits speculative reason is indeed negative in that respect; but by at the same time removing an obstacle that restricts the latter use, or even threatens to destroy it, it has in fact a positive and very important benefit. This becomes clear as soon as we are convinced that there is an absolutely necessary practical use of pure reason—the moral use—in which reason inevitably extends beyond the boundaries of sensibility. For this it needs no assistance from speculative reason, but must nevertheless be secured against its opposition, so as not to fall into contradiction with itself. To deny this service of critique a positive benefit would be like saying that the police confer no positive benefit because their principal business is merely to put a stop to the violence citizens may fear from other citizens, so that each can pursue his affairs in peace and security. The analytic part of the Critique proves that space and time are only forms of sensible intuition, hence only conditions of the existence of things as appearances; further, that we have no concepts of the understanding, and thus no elements for cognizing things at all.

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It proves that we have them only insofar as an intuition corresponding to these concepts can be given, and consequently that we can have cognition of no object as a thing in itself, but only insofar as it is an object of sensible intuition, that is, as an appearance. From this, of course, follows the restriction of all pos-

sible speculative cognition of reason to mere objects of experience. Yet—and this must be carefully noted—it is always reserved that, although we cannot cognize these same objects as things in themselves, we must at least be able to think them as such*. Otherwise the absurd proposition would follow that there is an appearance without anything that appears.

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Now let us assume that the distinction made necessary by our critique between things as objects of experience and those same things as things in themselves had not been made at all. Then the principle of causality, and hence the mechanism of nature in determining them, would have to hold without exception for all things in general as efficient causes. Of one and the same being, for example the human soul, I could therefore not say that its will is free and yet at the same time subject to natural necessity, that is, not free, without falling into an obvious contradiction. For in both propositions I would have taken the soul in precisely the same sense, namely as a thing in general (as a thing in itself), and without a prior critique could not have taken it otherwise. But suppose the critique has not erred in teaching us to take the object in two senses, namely as appearance or as thing in itself; suppose its deduction of the concepts of the understanding is correct, and hence the principle of causality applies only to things taken in the first sense, insofar as they are objects of experience, while those very same things in the second sense are not subject to it.

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Then the very same will is thought, in appearance—in its visible actions—as necessarily conforming to the law of nature and to that extent not free, and yet, on the other hand, as belonging to a thing in itself, as not subject to that law and thus as free, without any contradiction arising. Now, although I cannot cognize my soul, considered from the latter side, through any speculative reason, still less through empirical observation, and therefore also cannot cognize freedom as a property of a being to which I ascribe effects in the sensible world —because I would have to cognize such a being as determined in its existence and yet not in time (which is impossible, since I cannot supply my concept with an intuition)—I can nevertheless think freedom. That is, its representa-

tion at least contains no contradiction in itself, provided our critical distinction between the two ways of representing, the sensible and the intellectual, is valid, together with the resulting limitation of the pure concepts of the understanding and hence also of the principles flowing from them. Now suppose morality necessarily presupposes freedom, in the strictest sense, as a property of our will, adducing, as its data a priori, original practical principles lying in our reason.
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Without the presupposition of freedom these principles would be absolutely impossible; but suppose speculative reason had proved that freedom cannot be thought at all. Then the former presupposition, the moral one, would necessarily have to yield to the one whose opposite contains an obvious contradiction. Consequently freedom, and with it morality—for morality's opposite contains no contradiction unless freedom is already presupposed—would have to give way to the mechanism of nature. As matters stand, however, for morality I need nothing more than that freedom does not contradict itself, and can thus at least be thought, without my needing any further insight into it; and that it therefore places no obstacle in the way of the natural mechanism of the very same action, taken in another relation. Thus the doctrine of morality keeps its place, and the doctrine of nature keeps its own. This could not have happened had critique not first instructed us about our unavoidable ignorance concerning things in themselves and restricted everything we can cognize theoretically to mere appearances. The same exposition of the positive benefit of the critical principles of pure reason can be given with regard to the concept of God and the simple nature of our soul, but for brevity I pass over it.
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I cannot, therefore, even assume God, freedom, and immortality for the sake of the necessary practical use of my reason unless I at the same time deprive speculative reason of its pretension to extravagant insights. For, to attain these, it must employ principles that in fact extend only to objects of possible experience; when these are nevertheless applied to what cannot be an object of experience, they always actually transform it into appearance and thus declare every practical enlargement of pure reason impossible. I therefore had to set aside

knowledge to make room for belief; and the dogmatism of metaphysics—that is, the prejudice that we can make progress in it without a critique of pure reason—is the true source of all unbelief opposed to morality, which is always highly dogmatic.—If, then, it can be no great difficulty to leave posterity a legacy in a systematic metaphysics composed according to the critique of pure reason, this is no gift to be slighted. We may look merely to the cultivation of reason through the secure course of a science in general.

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This is to be compared with its groundless groping and reckless wandering without critique. Or we may look to the better use of time by inquisitive young people, who under ordinary dogmatism receive so early and so much encouragement to reason idly about things they do not understand, and into which neither they nor anyone in the world will ever gain insight, or even to set out to invent new thoughts and opinions, and so neglect the learning of well-grounded sciences. Above all, however, we may reckon the priceless advantage of putting an end for all future time to every objection against morality and religion in the Socratic manner: by the clearest proof of the opponents' ignorance. For some metaphysics has always existed in the world and will presumably continue to exist; and with it a dialectic of pure reason will also be found, since this is natural to reason. It is therefore philosophy's first and most important concern to deprive this dialectic of all harmful influence once and for all by stopping up the source of its errors.

* To cognize an object, I must be able to prove its possibility, either from its actuality as attested by experience or a priori through reason. But I can think whatever I please, provided I do not contradict myself—that is, provided my concept is a possible thought—even though I cannot guarantee whether an object corresponds to it within the sum total of all possibilities. To ascribe objective validity to such a concept, however—real possibility, since the former was merely logical—something more is required. But this something more need not be sought in theoretical sources of cognition; it may also lie in practical ones.

Despite this important change in the field of the sciences, and the loss speculative reason must suffer in its hitherto imagined possessions, everything remains in the same advantageous condition as ever with regard to the universal human concern and the benefit the world has until now drawn from the teachings of pure reason.

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The loss affects only the monopoly of the schools, by no means the interest of humanity. I ask the most unbending dogmatist whether the proof of our soul's continued existence after death from the simplicity of substance; the proof of freedom of the will against universal mechanism through the subtle but powerless distinctions between subjective and objective practical necessity; or the proof of God's existence from the concept of a most real being, from the contingency of what changes and the necessity of a first mover—whether, after issuing from the schools, these proofs have ever been able to reach the public and exert the slightest influence on its conviction. If this has not happened, and can never be expected, given the ordinary human understanding's unsuitability for such subtle speculation, then rather, in the first case, the disposition of our nature, evident to everyone, never to be satisfied by temporal things (as inadequate to the capacities for our whole vocation), must alone have produced the hope of a future life.

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In the second, the mere clear presentation of duties in opposition to every claim of inclination must alone have produced the consciousness of freedom. And finally, in the third, the magnificent order, beauty, and care that shine forth everywhere in nature must alone have produced belief in a wise and great author of the world. If these alone must have brought about the conviction that spreads among the public, insofar as it rests on rational grounds, then this possession not only remains undisturbed but gains in authority. For the schools are now taught to claim no higher or more extensive insight, on a point of universal human concern, than that which the great multitude, most worthy of our respect, can reach just as easily. They are thus taught to restrict themselves solely to cultivating these grounds of proof, which are universally accessible and

sufficient for moral purposes. The change therefore concerns only the arrogant claims of the schools, which would gladly have themselves regarded here—as they rightly are in many other matters—as the sole experts and custodians of truths whose use alone they communicate to the public, keeping the key to themselves (quod mecum nescit, solus vult scire videri).

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Nevertheless, provision is also made for a more reasonable claim of the speculative philosopher. He always remains the exclusive trustee of a science useful to the public without its knowing it: the critique of reason. For this can never become popular, nor need it do so. Just as the finely spun arguments for useful truths do not enter the people's heads, so the equally subtle objections against them never occur to them either. The schools, by contrast, like everyone who rises to speculation, inevitably encounter both. They are therefore bound, by a thorough investigation of the rights of speculative reason, to prevent once and for all the scandal that sooner or later must arise even among the people from the disputes into which metaphysicians—and, as such, eventually even clergymen—inevitably become entangled without critique, and which afterward falsify even their doctrines. Only through critique can the very roots be cut away from materialism, fatalism, atheism, freethinking unbelief, fanaticism, and superstition, which can become harmful to everyone, and finally also from idealism and skepticism, which are more dangerous to the schools and can hardly spread to the public.

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If governments see fit to concern themselves with the affairs of scholars at all, it would be far more consistent with their wise care for the sciences and for humanity to favor the freedom of such a critique, through which alone the labors of reason can be placed on a firm footing, than to support the ridiculous despotism of the schools. These raise a loud outcry about public danger whenever their cobwebs are torn, though the public has never taken notice of them and can therefore never feel their loss.

Critique is not opposed to reason's dogmatic procedure in its pure cognition as science—for science must always be dogmatic, that is, prove rigorously from secure a priori principles—but to dogmatism: the presumption of getting on by itself with a pure cognition from concepts (the philosophical), according to principles such as reason has long employed, without inquiring how and by what right it arrived at them. Dogmatism is therefore the dogmatic procedure of pure reason without a preceding critique of its own capacity. This opposition is not meant to speak in favor of a chattering shallowness under the pretended name of popularity.

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Still less is it meant to speak for skepticism, which makes short work of all metaphysics. Rather, critique is the necessary preliminary preparation for advancing a well-grounded metaphysics as science. This must necessarily be carried out dogmatically and, by the strictest requirement, systematically, hence in a scholarly, not a popular, manner. For this demand upon it is indispensable, since it undertakes to carry out its business wholly a priori and thus to the full satisfaction of speculative reason. In carrying out the plan prescribed by the Critique, that is, in the future system of metaphysics, we must therefore one day follow the rigorous method of the celebrated Wolf, the greatest of all dogmatic philosophers. He first gave the example—and through this example became the originator of the spirit of thoroughness in Germany, which has not yet died out—of how to enter upon the secure course of a science by establishing principles in accordance with rules, clearly determining concepts, attempting rigorous proofs, and preventing bold leaps in inferences. For that very reason he was especially well suited to place a science such as metaphysics in this condition, had it occurred to him first to prepare the field through a critique of its organ, pure reason itself.

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This lack is to be attributed less to him than to the dogmatic way of thinking of his age; on this score, the philosophers of his time and of all preceding times have nothing to reproach one another for. Those who reject both his method

of teaching and the procedure of the critique of pure reason can have no other intention than to throw off the bonds of science altogether, to turn labor into play, certainty into opinion, and philosophy into a love of opinion.

As for this second edition, I have, as was only right, not wished to let the opportunity pass without remedying, as far as possible, the difficulties and obscurity that may have given rise to some of the misinterpretations acute thinkers have encountered in judging this book, perhaps not without fault on my part. In the propositions themselves and their grounds of proof, as also in the form and completeness of the plan, I have found nothing to change. This is attributable partly to the long examination to which I subjected them before presenting the book to the public, and partly to the nature of the matter itself: the nature of a pure speculative reason, which contains a genuine articulated structure in which everything is an organ, everything existing for the sake of one and each individual part for the sake of all.

[B xxxviii]

Hence any infirmity, however small, whether a fault (an error) or a deficiency, must inevitably betray itself in use. I hope this system will continue to maintain itself in this unchangeability. It is not conceit that entitles me to this confidence, but merely the evidence produced by the experiment of obtaining the same result both in proceeding from the smallest elements to the whole of pure reason and in returning from the whole—which is also given independently through reason's ultimate practical purpose—to each part. For the attempt to change even the smallest part immediately produces contradictions, not merely within the system but within universal human reason. Yet much remains to be done in the presentation, and in this edition I have attempted improvements intended to remedy, in part, the misunderstanding of the Aesthetic, especially of the concept of time; in part, the obscurity of the deduction of the concepts of the understanding; in part, the supposed lack of sufficient evidence in the proofs of the principles of the pure understanding; and finally, the misinterpretation of the paralogisms charged against rational psychology.

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Thus far—that is, only to the end of the first chapter of the Transcendental Dialectic, and no further—do my changes to the manner of presentation* extend.

[B xl]

This is because time was too short.

[B xli]

It is also because, concerning the rest, no misunderstanding on the part of competent and impartial examiners had come to my attention.

[B xlii]

Even without my being permitted to name them with the praise they deserve, they will find for themselves, in the appropriate places, the attention I have paid to their observations. But this improvement entails a small loss for the reader, which could not be avoided without making the book far too voluminous. Various things that are not essential to the completeness of the whole, but that some readers might nevertheless be sorry to miss, since they can be useful for other purposes, have had to be omitted or presented in an abbreviated form to make room for what I hope is now a more intelligible presentation. Fundamentally, this changes absolutely nothing in the propositions or even in their grounds of proof; yet in places its method of exposition departs so far from the earlier one that it could not be accomplished by insertions. I hope the greater intelligibility more than compensates for this small loss, which in any case can be made good by comparing the first edition, as each reader pleases. In various published writings, partly on the occasion of reviews of books and partly in separate treatises, I have observed with grateful pleasure that the spirit of thoroughness has not died out in Germany, but has only been drowned out for a short time by the fashionable tone of a genius-like freedom in thinking.

[B xliii]

I have also observed that the thorny paths of critique, which lead to a scholarly science of pure reason—yet one that is lasting only as such, and therefore supremely necessary—have not prevented courageous and clear minds from mastering it. To these deserving men, who so happily combine thorough insight with a talent for lucid presentation, of which I am not particularly con-

scious in myself, I leave the completion of my work wherever it may still be deficient in the latter respect. For in this case the danger is not of being refuted, but of not being understood. For my part, I cannot henceforth enter into disputes, though I will carefully attend to every suggestion, whether from friends or opponents, in order to use them in the future elaboration of the system in accordance with this propaedeutic. Since in the course of this work I have already advanced rather far into old age—entering my sixty-fourth year this month—I must be sparing with my time if I am to carry out my plan of providing the metaphysics of nature and of morals as confirmation of the correctness of the critique of both speculative and practical reason.

[B xliv]

The clarification of obscurities scarcely avoidable at first in this work, and the defense of the whole, I must expect from the deserving men who have made it their own. Every philosophical exposition can be pinched at individual points, for it cannot appear in armor as a mathematical one can. Yet the articulated structure of the system, considered as a unity, does not thereby run the slightest risk. When a system is new, few possess the mental agility to survey it, and still fewer the inclination, since every innovation is unwelcome to them. Apparent contradictions, too, can be picked out of any writing, especially one proceeding in the manner of free discourse, if individual passages are torn from their context and compared with one another. In the eyes of those who rely on others' judgment, these cast an unfavorable light on the work; but for anyone who has grasped the idea as a whole, they are very easily resolved. Meanwhile, if a theory has stability within itself, the action and reaction that at first threatened it with great danger serve over time only to smooth its unevenness and, if men of impartiality, insight, and true popularity devote themselves to it, to give it soon the requisite elegance as well.

Königsberg, April 1787.

* The only addition I could call a genuine enlargement, though only in the manner of proof, is the new refutation of psychological idealism and the rigorous proof—as I believe, the only possible one—of the objective reality of outer intuition that I have given on p. 273. However harmless idealism may be held

to be in relation to the essential purposes of metaphysics, which in fact it is not, it always remains a scandal to philosophy and universal human reason that we must accept the existence of things outside us merely on faith, (from which, after all, we have the entire material for cognitions, even for our inner sense), and that, if anyone chooses to doubt it, we cannot oppose him with a satisfactory proof. Since there is some obscurity in the wording of the proof from the third line to the sixth, I ask that the sentence be changed as follows: "But this persistent element cannot be an intuition within me. For all the determining grounds of my existence that can be encountered within me are representations, and as such themselves require a persistent element distinct from them, in relation to which their change, and thus my existence in the time in which they change, can be determined." Someone will presumably say against this proof: I am, after all, immediately conscious only of what is within me, that is, of my representation of outer things; consequently, it still remains undecided whether anything outside me corresponds to it or not. But I am conscious of my existence in time, and hence also of its determinability in time, through inner experience. This is more than being merely conscious of my representation, yet is identical with the empirical consciousness of my existence, which is determinable only through relation to something that is outside me and bound up with my existence. This consciousness of my existence in time is thus inseparably combined, as one and the same consciousness, with the consciousness of a relation to something outside me. It is therefore experience, not invention, sense, not imagination, that inseparably connects what is outer with my inner sense. For outer sense is already in itself a relation of intuition to something actual outside me, and its reality, as distinct from imagining, rests only on its being inseparably combined with inner experience itself as the condition of the latter's possibility, which is what happens here. If, along with the intellectual consciousness of my existence in the representation "I am," which accompanies all my judgments and acts of understanding, I could also combine a determination of my existence through intellectual intuition, then consciousness of a relation to something outside me would not necessarily belong to that determination. But although that intellectual consciousness precedes, the inner intu-

ition in which alone my existence can be determined is sensible and bound to the condition of time. This determination, and hence inner experience itself, depends on something persistent that is not within me, and thus only on something outside me in relation to which I must consider myself. The reality of outer sense is therefore necessarily combined with that of inner sense for the possibility of experience in general. That is, I am just as securely conscious that there are things outside me relating to my sense as I am conscious that I myself exist as determined in time. But which given intuitions actually have objects outside me corresponding to them, and thus belong to outer sense and are to be ascribed to it rather than to imagination, must be decided in each particular case according to the rules by which experience in general, even inner experience, is distinguished from imagining. The proposition that there actually is outer experience always lies at the foundation of this. One may add the following observation: the representation of something persistent in existence is not the same as a persistent representation. For this representation can be very mutable and changing, like all our representations, even those of matter, and yet relate to something persistent. That persistent something must therefore be a thing distinct from all my representations and external to them, whose existence is necessarily included in the determination of my own existence and, together with it, constitutes one single experience, which would not even occur inwardly if it were not at the same time partly outward. The question of how this happens admits of no further explanation here, any more than how we think at all of what stands still in time, whose simultaneity with what changes produces the concept of alteration.

Introduction



[B 1]

Introduction

I. On the distinction between pure and empirical cognition

There is no doubt at all that all our cognition begins with experience. For what else could awaken our cognitive faculty to activity if not objects that affect our senses and partly produce representations of themselves, partly set our understanding into motion to compare these, connect or separate them, and thus work up the raw material of sensible impressions into a cognition of objects called experience? In the order of time, then, no cognition in us precedes experience, and with experience all cognition begins.

But although all our cognition starts with experience, it does not follow that all of it arises from experience. For it could well be that even our cognition through experience is a composite of what we receive through impressions and what our own cognitive faculty, merely prompted by sensible impressions, supplies from itself.

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We do not distinguish this addition from that basic material until long practice has made us attentive to it and skilled at separating it out.

It is therefore at least a question still requiring closer investigation, and not one to be dismissed at first sight, whether there is any such cognition independent of experience and even of all impressions of the senses. Such cognitions are

called a priori, and are distinguished from empirical cognitions, whose sources are a posteriori, namely in experience.

That expression, however, is not yet definite enough to convey the full meaning appropriate to the question before us. For it is customary to say of some cognition derived from experiential sources that we are capable of it or possess it a priori, because we derive it not immediately from experience but from a general rule that we have nevertheless ourselves borrowed from experience. Thus one says of someone who undermined the foundation of his house: he could have known a priori that it would collapse; that is, he did not need to wait for the experience of its actual collapse. Yet he could not have known this wholly a priori. For he first had to learn through experience that bodies are heavy and therefore fall when their support is taken away.

In what follows, then, we will understand by a priori cognitions not those that occur independently of this or that experience.

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We mean, rather, those that occur absolutely independently of all experience. Opposed to them are empirical cognitions, or those possible only a posteriori, that is, through experience. Among a priori cognitions, however, those are called pure in which nothing empirical is mixed. Thus, for example, the proposition "Every alteration has its cause" is an a priori proposition, but not a pure one, because alteration is a concept that can be drawn only from experience.

II. We possess certain a priori cognitions, and even ordinary understanding is never without them

What matters here is a mark by which we can securely distinguish a pure cognition from an empirical one. Experience indeed teaches us that something is constituted in this or that way, but not that it cannot be otherwise. First, then, if we find a proposition that is thought together with its necessity, it is an a priori judgment; if, moreover, it is derived from no proposition except one that is itself in turn valid as a necessary proposition, it is absolutely a priori. Second, experience never gives its judgments true or strict universality, but only assumed and comparative universality through induction.

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Properly speaking, it must therefore be said: so far as we have yet perceived, no exception is found to this or that rule. If, then, a judgment is thought with strict universality, that is, in such a way that no exception at all is allowed as possible, it is not derived from experience but is valid absolutely a priori. Empirical universality is therefore only an arbitrary extension of validity from what holds in most cases to what holds in all, as, for example, in the proposition "All bodies are heavy." Where strict universality belongs essentially to a judgment, by contrast, it points to a special source of its cognition, namely a faculty of a priori cognition. Necessity and strict universality are thus secure marks of an a priori cognition, and also belong inseparably together. Yet in applying them it is sometimes easier to show the empirical limitation of judgments than their contingency, and sometimes more evident to show the unrestricted universality we ascribe to a judgment than its necessity. It is therefore advisable to use these two criteria, each of which is infallible on its own, separately.

It is easy to show that such necessary judgments, universal in the strictest sense and hence pure a priori judgments, actually occur in human cognition. If an example from the sciences is wanted, we need only look to all the propositions of mathematics.

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If one is wanted from the most ordinary use of the understanding, the proposition that every alteration must have a cause will serve. Indeed, in the latter case the very concept of a cause so plainly contains the concept of a necessary connection with an effect and of a strict universality of the rule that it would be entirely lost if we tried, as Hume did, to derive it from a repeated association of what happens with what precedes it, and from a resulting habit—and thus a merely subjective necessity—of connecting representations. Even without needing such examples to prove the actuality of pure a priori principles in our cognition, we could demonstrate their indispensability for the possibility of experience itself, and thus demonstrate it a priori. For where could experience itself obtain its certainty if all the rules according to which it proceeds were always in turn empirical, hence contingent? We could hardly allow these to count as first principles. Here, however, we can be content to have established

the pure use of our cognitive faculty as a fact, together with its distinguishing marks. But an a priori origin reveals itself not only in judgments, but even in some concepts. Gradually remove from your experiential concept of a body everything empirical in it: color, hardness or softness, weight, even impenetrability. There still remains the space that the body, now entirely vanished, occupied, and you cannot remove that.

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Likewise, if you remove from your empirical concept of any object, corporeal or incorporeal, all the properties experience teaches you, you still cannot take away the property through which you think it as a substance or as inhering in a substance, although this concept contains more determination than that of an object in general. Convinced by the necessity with which this concept forces itself upon you, you must therefore admit that it has its seat a priori in your cognitive faculty.

III. Philosophy needs a science that determines the possibility, principles, and scope of all a priori cognitions

What signifies far more than everything said so far is this: certain cognitions even leave the field of all possible experiences and seem to enlarge the scope of our judgments beyond all its boundaries through concepts for which no corresponding object can be given anywhere in experience.

Precisely in these latter cognitions, which go beyond the sensible world, where experience can provide neither guidance nor correction, lie the inquiries of our reason.

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We consider these far superior in importance, and their ultimate purpose far more exalted, than anything the understanding can learn in the field of appearances. Here, even at the risk of error, we would sooner venture everything than abandon such important investigations on any grounds of hesitation, or out of contempt and indifference. These unavoidable problems of pure reason itself are God, freedom, and immortality. The science whose ultimate purpose, with all its preparations, is directed properly only toward solving them is called meta-

physics. Its procedure is initially dogmatic: that is, without first examining reason's capacity or incapacity for so great an undertaking, it confidently sets about carrying it out.

Now it does indeed seem natural that, once we have left the ground of experience, we should not immediately erect a building with cognitions we possess without knowing their origin, and on the credit of principles whose source we do not know, without first assuring ourselves of its foundation through careful investigations. It seems, then, that we should long ago have raised the question of how the understanding could arrive at all these a priori cognitions, and what scope, validity, and worth they might have. In fact, nothing is more natural, if by "natural" we understand what ought reasonably and rightly to happen.

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But if we understand by it what ordinarily happens, then nothing is more natural and comprehensible than that this investigation should long have been neglected. For some of these cognitions, mathematical ones, have long possessed reliability, and thus create favorable expectations for others, even though these may be of an entirely different nature. Moreover, once we are beyond the sphere of experience, we are sure not to be refuted by experience. The allure of enlarging our cognitions is so great that only a clear contradiction we encounter can halt our progress. But this can be avoided if we make our inventions cautiously, without their ceasing on that account to be inventions. Mathematics gives us a brilliant example of how far we can go in a priori cognition independently of experience. It does, admittedly, concern itself with objects and cognitions only insofar as these can be presented in intuition. But this circumstance is easily overlooked, because the intuition in question can itself be given a priori and is thus scarcely distinguished from a mere pure concept. Captivated by such a proof of reason's power, the drive for enlargement sees no boundaries. The light dove, cleaving the air in free flight and feeling its resistance, might imagine that it would fare much better still in airless space.

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Likewise, Plato left the sensible world because it sets such narrow limits to the understanding, and ventured beyond it on the wings of ideas into the empty space of the pure understanding. He did not notice that his efforts made no headway, for he had no resistance, no supporting ground as it were, against which he could brace himself and apply his powers to move the understanding forward. But it is the usual fate of human reason in speculation to finish its building as early as possible and only afterward investigate whether its foundation has been well laid. Then all sorts of embellishments are sought out to reassure us about its soundness, or rather to dismiss such a belated and dangerous examination altogether. What frees us from all anxiety and suspicion while we build, and flatters us with an apparent thoroughness, is this. A great part, perhaps the greatest, of our reason's business consists in analyzing the concepts we already have of objects. This supplies us with a multitude of cognitions that, although they are nothing more than clarifications or elucidations of what was already thought in our concepts, albeit still confusedly, are nevertheless esteemed, at least in form, as equal to new insights. Yet in matter or content they do not enlarge the concepts we have, but only unfold them. Since this procedure yields an actual a priori cognition that makes secure and useful progress, reason, without itself noticing it, slips in under this pretense assertions of an entirely different kind.

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Here reason adds quite alien concepts to given ones, and does so a priori, without our knowing how it arrives at them, or even letting such a question enter our thoughts. I will therefore deal at the outset with the distinction between these two kinds of cognition.

IV. On the distinction between analytic and synthetic judgments

In all judgments in which the relation of a subject to a predicate is thought—considering only affirmative judgments, since the application to negative ones is easy afterward—this relation is possible in two ways. Either the predicate B belongs to the subject A as something contained (covertly) in this concept A; or B lies entirely outside the concept A, although it stands in connection with it. In the first case I call the judgment analytic, in the second synthetic. Analytic

judgments, affirmative ones, are therefore those in which the connection of predicate and subject is thought through identity; those in which this connection is thought without identity are to be called synthetic judgments.

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The former could also be called elucidatory judgments, the latter ampliative judgments. For the former add nothing through the predicate to the concept of the subject, but merely break it up by analysis into its component concepts, which were already thought in it, though confusedly. The latter, by contrast, add to the concept of the subject a predicate not thought in it at all, which could not have been extracted through any analysis of it. For example, if I say, "All bodies are extended," this is an analytic judgment. For I need not go beyond the concept I combine with body to find extension connected with it; I need only analyze that concept, that is, become conscious of the manifold I always think in it, to encounter this predicate there. It is therefore an analytic judgment. By contrast, if I say, "All bodies are heavy," the predicate is something quite different from what I think in the mere concept of a body in general. The addition of such a predicate therefore yields a synthetic judgment.

Judgments of experience, as such, are all synthetic. For it would be absurd to found an analytic judgment on experience, since I need not go beyond my concept at all to make the judgment, and thus require no testimony from experience. That a body is extended is a proposition established a priori, not a judgment of experience.

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For before I turn to experience, I already have all the conditions for my judgment in the concept, from which I need only extract the predicate according to the principle of contradiction. In doing so I can at the same time become conscious of the judgment's necessity, which experience could not even teach me. By contrast, although I do not include the predicate of weight in the concept of a body in general, that concept nevertheless designates an object of experience through one part of experience, to which I can therefore add other parts of that same experience as belonging with the first. I can first cognize the concept of body analytically through the marks of extension, impenetrability, shape, and

so on, all of which are thought in this concept. But now I enlarge my cognition: looking back to the experience from which I abstracted this concept of body, I find weight always connected with the marks mentioned above, and thus add it synthetically as a predicate to that concept. It is therefore experience on which the possibility of the synthesis of the predicate of weight with the concept of body is grounded. For although neither concept is contained in the other, the two nevertheless belong together, albeit only contingently, as parts of a whole, namely experience, which is itself a synthetic combination of intuitions.

But in synthetic a priori judgments this aid is entirely lacking.

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If I am to go beyond the concept A to cognize another concept B as combined with it, what is it that I rely on, and through which the synthesis becomes possible? For here I do not have the advantage of looking around for it in the field of experience. Take the proposition "Everything that happens has its cause." In the concept of something that happens I do indeed think an existence preceded by a time, and so on, and analytic judgments can be drawn from this. But the concept of a cause lies entirely outside that concept and indicates something different from what happens; it is therefore not contained at all in this latter representation. How, then, do I come to say of what happens in general something entirely different from it, and to cognize the concept of cause, although not contained in it, as nevertheless belonging to it, and indeed necessarily? What is here the unknown = X on which the understanding relies when it believes it has found, outside the concept of A, a predicate B alien to it that it nevertheless regards as connected with it? It cannot be experience, because the principle cited adds this second representation to the first not only with greater universality but also with the expression of necessity, hence wholly a priori and from mere concepts. Now the entire ultimate purpose of our speculative a priori cognition rests on such synthetic, that is, ampliative principles.

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For analytic principles are indeed supremely important and necessary, but only to attain that distinctness of concepts required for a secure and extensive synthesis as a genuinely new acquisition.

V. All theoretical sciences of reason contain synthetic a priori judgments as principles

1 Mathematical judgments are all synthetic. This proposition seems hitherto to have escaped the notice of those who analyze human reason, indeed to run directly counter to all their conjectures, although it is indisputably certain and very important in its consequences. For since it was found that mathematicians' inferences all proceed according to the principle of contradiction, as the nature of every apodictic certainty requires, people persuaded themselves that the principles too were cognized from the principle of contradiction. In this they were mistaken; for a synthetic proposition can certainly be understood in accordance with the principle of contradiction, but only by presupposing another synthetic proposition from which it can be inferred, never in itself.

First of all, it must be noted that properly mathematical propositions are always a priori judgments, not empirical ones, because they carry necessity with them, which cannot be drawn from experience.

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But if this is not conceded, then let me restrict my proposition to pure mathematics, whose very concept entails that it contains not empirical but solely pure a priori cognition.

At first one might indeed think that the proposition 7 + 5 = 12 is merely analytic, following from the concept of a sum of seven and five according to the principle of contradiction. But on closer examination we find that the concept of the sum of 7 and 5 contains nothing more than the union of the two numbers into a single one, which does not at all determine what this single number comprising them both is. The concept of twelve is by no means already thought merely by my thinking that union of seven and five; and however long I analyze my concept of such a possible sum, I will never find twelve in it. We must go beyond these concepts by calling on the intuition that corresponds to one of the two—say, our five fingers, or, as Segner does in his Arithmetic, five

points—and thus gradually add the units of the five given in intuition to the concept of seven. For I first take the number 7 and, for the concept of 5, call on the fingers of my hand as an intuition.

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The units that I previously took together to constitute the number 5 I now add, one by one in that image of mine, to the number 7, and so see the number 12 arise. That 7 was to be added to 5 I did indeed think in the concept of a sum = 7 + 5, but not that this sum was equal to the number 12. The arithmetical proposition is therefore always synthetic. We become all the more clearly aware of this when we take somewhat larger numbers; for then it is plainly evident that, however we turn and twist our concepts, we could never find the sum merely by analyzing them without calling on intuition.

Nor is any principle of pure geometry analytic. That the straight line between two points is the shortest is a synthetic proposition. For my concept of straightness contains nothing of magnitude, but only a quality. The concept of the shortest is therefore wholly added to it and cannot be drawn by any analysis from the concept of a straight line. Here, then, intuition must be called on, through which alone the synthesis is possible.

A few principles presupposed by geometers are indeed genuinely analytic and rest on the principle of contradiction.

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But, like identical propositions, they serve only to link the steps of the method, not as principles: for example, a = a, the whole is equal to itself, or (a + b) > a, that is, the whole is greater than its part. Yet even these, although valid through mere concepts, are admitted in mathematics only because they can be presented in intuition. What commonly leads us here to believe that the predicate of such apodictic judgments already lies in our concept, and that the judgment is therefore analytic, is merely the ambiguity of the expression. We are required to think a certain predicate in addition to a given concept, and this necessity already attaches to the concepts. But the question is not what we are required to think in addition to the given concept, but what we actually think in it,

though only obscurely. It then becomes clear that the predicate does indeed attach necessarily to those concepts, but not as thought in the concept itself: rather, through an intuition that must be added to the concept.

2 Natural science (Physica) contains synthetic a priori judgments as principles. I will cite only a couple of propositions as examples: that in all alterations of the corporeal world the quantity of matter remains unchanged; or that in every communication of motion, action and reaction must always be equal to one another. In both it is clear not only that they are necessary, hence have an a priori origin, but also that they are synthetic propositions.

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For in the concept of matter I do not think persistence, but merely its presence in space through filling it. I therefore actually go beyond the concept of matter to think something a priori in addition to it that I did not think in it. The proposition is thus not analytic but synthetic, and yet thought a priori; and so it is with the other propositions of the pure part of natural science.

3 Metaphysics, even if we regard it as a science hitherto merely attempted, yet indispensable through the nature of human reason, is to contain synthetic a priori cognitions. Its concern is by no means merely to analyze concepts we form a priori of things and thereby elucidate them analytically. Rather, we wish to enlarge our a priori cognition. For this we must employ principles that add to the given concept something not contained in it, and through synthetic a priori judgments go perhaps so far beyond it that experience itself cannot follow us that far: for example, in the proposition "The world must have a first beginning," and other such propositions. Thus metaphysics consists, at least in its purpose, entirely of synthetic a priori propositions.

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VI. The general problem of pure reason

Much is already gained if we can bring a multitude of investigations under the formula of a single problem. For we thereby not only lighten our own work by determining it precisely, but also make it easier for anyone who wishes to exam-

ine it to judge whether we have satisfied our intention or not. The proper problem of pure reason is now contained in the question: How are synthetic a priori judgments possible?

That metaphysics has hitherto remained in so wavering a condition of uncertainty and contradictions is attributable solely to the fact that this problem, and perhaps even the distinction between analytic and synthetic judgments, was not thought of earlier. The standing or falling of metaphysics now rests on the solution of this problem, or on a satisfactory proof that the possibility it asks to have explained does not in fact exist at all. David Hume, who among all philosophers came closest to this problem, but thought it neither with sufficient precision nor in its universality, stopping instead at the synthetic proposition of the connection of an effect with its causes (Principium causalitatis), believed he had established that such an a priori proposition was entirely impossible.

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According to his conclusions, everything we call metaphysics would amount to a mere delusion of supposed rational insight into what is in fact merely borrowed from experience and has acquired the illusion of necessity through habit. He would never have arrived at this assertion, destructive of all pure philosophy, had he kept our problem in view in its universality. For he would then have seen that, according to his argument, pure mathematics too could not exist, since it certainly contains synthetic a priori propositions; and his good understanding would surely have preserved him from such an assertion.

The solution of the above problem also comprehends the possibility of the pure use of reason in founding and developing all sciences that contain a theoretical a priori cognition of objects; that is, it includes the answers to the questions:

How is pure mathematics possible? How is pure natural science possible?

Since these sciences are actually given, it is entirely fitting to ask how they are possible; for their actuality proves that they must be possible*.

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As for metaphysics, however, its poor progress hitherto, and the fact that of no metaphysics yet presented can it be said, as regards its essential purpose, that it actually exists, must give everyone grounds for doubting its possibility.

* Some might still doubt this last point concerning pure natural science. But one need only look at the various propositions found at the beginning of physics proper (empirical physics)—such as those concerning the persistence of the same quantity of matter, inertia, the equality of action and reaction, and so on—to become convinced that they constitute a physicam puram (or rationalem) that well deserves to be set out separately as a science of its own, in its full scope, whether narrow or wide.

Now in a certain sense this kind of cognition must nevertheless also be regarded as given, and metaphysics is actual, if not as science, then as a natural predisposition (metaphysica naturalis). For human reason advances irresistibly, driven by its own need and not merely moved by the vanity of knowing much, to questions that cannot be answered by any experiential use of reason or by principles borrowed from it. Thus in all human beings, as soon as reason extends in them to speculation, some metaphysics has always actually existed, and will always remain. Of this too, then, the question is:

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How is metaphysics possible as a natural predisposition?

That is, how do the questions pure reason raises for itself, and which its own need drives it to answer as well as it can, arise from the nature of universal human reason?

But since all previous attempts to answer these natural questions—for example, whether the world has a beginning or has existed from eternity, and so on—have always produced unavoidable contradictions, we cannot rest content with the mere natural predisposition to metaphysics, that is, the pure faculty of reason itself, from which some metaphysics, whatever it may be, always grows. Rather, it must be possible to attain certainty with it, either in knowing or in not knowing its objects: that is, to decide either about the objects of its questions or about reason's capacity or incapacity to judge anything concerning

them, and thus either to enlarge our pure reason reliably or to set it definite and secure limits. This last question, which flows from the general problem above, would rightly be: How is metaphysics possible as science?

The critique of reason therefore leads in the end necessarily to science.

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Its dogmatic use without critique, by contrast, leads to groundless assertions against which others equally plausible can be set, and thus to skepticism.

Nor can this science be of a dauntingly great extent, since it deals not with the objects of reason, whose diversity is infinite, but only with reason itself and with problems that arise entirely from its own midst. These are set before it not by the nature of things distinct from it, but by its own nature. Once reason has first become fully acquainted with its own capacity concerning the objects it may encounter in experience, it must therefore be easy to determine fully and securely the scope and boundaries of its attempted use beyond all boundaries of experience.

We can and must therefore regard all attempts hitherto made to bring about a metaphysics dogmatically as if they had never occurred. For whatever is analytic in one or another of them, namely a mere analysis of concepts residing a priori in our reason, is not yet the goal at all, but only a preparation for metaphysics proper: the synthetic enlargement of our a priori cognition. Such analysis is unsuited to this goal, because it shows only what is contained in these concepts, not how we arrive at such concepts a priori, so as then to determine their valid use with regard to the objects of all cognition in general.

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Nor does it take much self-denial to abandon all these claims, since reason's undeniable contradictions with itself, which are also unavoidable in the dogmatic procedure, have long since deprived every previous metaphysics of its authority. More steadfastness will be needed to keep inward difficulty and outward resistance from deterring us, through a different treatment wholly opposed to the previous one, from at last bringing to healthy and fruitful growth a science indispensable to human reason, of which we may cut off every stem that has shot up, but cannot uproot the root.

VII. The idea and division of a special science called the critique of pure reason

From this alone there now emerges the idea of a special science that can be called the critique of pure reason. For reason is the faculty that supplies the principles of a priori cognition. Pure reason is therefore that which contains the principles for cognizing something absolutely a priori. An organon of pure reason would be the sum total of certain principles.

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According to these principles, all pure a priori cognitions can be acquired and actually brought about. The full application of such an organon would yield a system of pure reason. But since this is a great deal to ask, and it remains unsettled whether an enlargement of our cognition is possible here at all, and in which cases, we can regard a science that merely judges pure reason, its sources and boundaries, as the propaedeutic to the system of pure reason. Such a science would have to be called not a doctrine but only a critique of pure reason. Its benefit with respect to speculation would really be merely negative: it would serve not to enlarge our reason but only to purify it and keep it free from errors, which is already a considerable gain. I call all cognition transcendental that concerns itself not so much with objects as with our way of cognizing objects in general, insofar as this is to be possible a priori. A system of such concepts would be called transcendental philosophy. But this, in turn, is still too much for a beginning. For since such a science would have to contain both analytic and synthetic a priori cognition completely, its scope is too wide for our intention, since we need carry the analysis only so far as is indispensably necessary for insight into the principles of a priori synthesis in their full scope, which alone is our concern.

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This investigation is what now occupies us. We can properly call it not doctrine but only transcendental critique, because its aim is not the enlargement of cognitions themselves but only their correction, and it is to provide the touchstone of the worth or worthlessness of all a priori cognitions. Such a critique is accordingly a preparation, if possible, for an organon, and, should this fail, at least for a canon of these cognitions, according to which the complete system

of the philosophy of pure reason could one day be presented both analytically and synthetically, whether it consists in enlarging reason's cognition or merely in delimiting it. For that this is possible, indeed that such a system need not be too extensive for us to hope to complete it entirely, can already be judged beforehand from the fact that the object here is not the inexhaustible nature of things, but the understanding that judges the nature of things, and this, in turn, only with regard to its a priori cognition. Since we need not seek the understanding's stock outside ourselves, it cannot remain hidden from us; and it is presumably small enough to be surveyed completely, judged as to its worth or worthlessness, and correctly appraised.

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Still less should one expect here a critique of books and systems of pure reason, rather than of the pure faculty of reason itself. Only when this is laid at the foundation do we have a secure touchstone for assessing the philosophical content of old and new works in this field. Otherwise the unauthorized historian and judge assesses others' groundless assertions by his own, which are equally groundless.

Transcendental philosophy is the idea of a science for which the critique of pure reason is to draw up the entire plan architectonically, that is, from principles, fully guaranteeing the completeness and security of all the parts that constitute this building. It is the system of all principles of pure reason. That this critique is not itself already called transcendental philosophy rests solely on the fact that, to be a complete system, it would also have to contain a full analysis of the whole of human a priori cognition. Our critique must indeed place before us a complete enumeration of all the fundamental concepts constituting the pure cognition in question. But it rightly refrains from a full analysis of these concepts themselves, as also from a complete survey of those derived from them.

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This is partly because such an analysis would not serve its purpose, since it does not involve the difficulty encountered in synthesis, for whose sake the entire critique properly exists; and partly because it would run counter to the unity of

the plan to assume responsibility for the completeness of an analysis and derivation from which its intention could dispense us. This completeness, both of analysis and of derivation from the a priori concepts to be supplied later, is nevertheless easy to add, once they are first present as fully set-out principles of synthesis and nothing is lacking with regard to this essential intention.

Everything that constitutes transcendental philosophy thus belongs to the critique of pure reason, and it is the complete idea of transcendental philosophy, but not yet that science itself, because it carries the analysis only so far as is required for the complete assessment of synthetic a priori cognition.

The chief consideration in dividing such a science is this: no concepts containing anything empirical must enter into it; in other words, the a priori cognition must be wholly pure. Thus, although the supreme principles of morality and its fundamental concepts are a priori cognitions, they nevertheless do not belong to transcendental philosophy.

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For although they do not themselves base their precepts on the concepts of pleasure and displeasure, desires and inclinations, and so on, all of which are of empirical origin, they must nevertheless, in the concept of duty, necessarily bring them into the composition of the system of pure morality, either as an obstacle to be overcome or as an inducement that must not be made a motive. Transcendental philosophy is therefore a philosophy of pure, merely speculative reason. For everything practical, insofar as it contains incentives, relates to feelings, which belong to empirical sources of cognition.

If we now wish to divide this science from the general standpoint of a system as such, the science we are presenting must contain, first, a doctrine of elements and, second, a doctrine of method of pure reason. Each of these main parts would have its subdivisions, the grounds of which, however, cannot yet be set out here. Only this much seems necessary by way of introduction or preliminary reminder: there are two stems of human cognition, which perhaps arise from a common but to us unknown root, namely sensibility and understanding. Through the former objects are given to us; through the latter they are

thought. Now insofar as sensibility may contain a priori representations constituting the condition under which objects are given to us, it would belong to transcendental philosophy.

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The transcendental doctrine of the senses would have to belong to the first part of the science of elements, because the conditions under which alone the objects of human cognition are given precede those under which they are thought.

Transcendental Aesthetic



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Critique of Pure Reason
I. Transcendental Doctrine of Elements
[B 33]
Transcendental Doctrine of Elements First Part Transcendental Aesthetic
§ 1
In whatever manner and by whatever means a cognition may relate to objects, the manner in which it relates to them immediately, and toward which all thinking as a means is directed, is intuition. But intuition occurs only insofar as the object is given to us; and this, in turn, is possible, for us human beings at least, only through its affecting the mind in a certain way. The capacity (receptivity) to receive representations through the way objects affect us is called sensibility. Through sensibility, then, objects are given to us, and it alone supplies us with intuitions; through the understanding, however, they are thought, and from it concepts arise. But all thinking must ultimately relate, whether straightaway (directly) or by a detour (indirectly), through certain marks, to intuitions, and hence, in our case, to sensibility, because no object can be given to us in any other way.
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The effect of an object on the capacity for representation, insofar as we are affected by it, is sensation. An intuition that relates to the object through sensation is called empirical. The undetermined object of an empirical intuition is called appearance.

In appearance I call what corresponds to sensation its matter; but what makes it possible for the manifold of appearance to be ordered in certain relations I call the form of appearance. Since that in which alone sensations can be ordered and placed in a certain form cannot itself in turn be sensation, the matter of all appearance is indeed given to us only a posteriori, but its form must lie ready for all appearances a priori in the mind, and must therefore be capable of being considered apart from all sensation.

I call all representations pure (in the transcendental sense) in which nothing belonging to sensation is encountered. Accordingly, the pure form of sensible intuitions in general, in which all the manifold of appearances is intuited in certain relations, will be found a priori in the mind. This pure form of sensibility will itself also be called pure intuition.

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Thus, if I separate from the representation of a body what the understanding thinks of it—substance, force, divisibility, and so on—and likewise what belongs in it to sensation—impenetrability, hardness, color, and so on—something from this empirical intuition still remains for me: namely, extension and shape. These belong to pure intuition, which occurs a priori in the mind as a mere form of sensibility, even without an actual object of the senses or sensation.

A science of all a priori principles of sensibility I call transcendental aesthetic*.

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There must therefore be such a science, forming the first part of the transcendental doctrine of elements, in contrast to the science that contains the principles of pure thinking and is called transcendental logic.

* The Germans are the only people who now use the word "aesthetic" to designate what others call the critique of taste. Underlying this is a mistaken hope entertained by the excellent analyst Baumgarten: to bring the critical judging of

beauty under principles of reason and raise its rules to a science. But this effort is futile. For the rules or criteria in question are, in their principal sources, merely empirical, and can therefore never serve as determinate a priori laws to which our judgment of taste would have to conform. Rather, the latter constitutes the proper touchstone of the correctness of the former. It is therefore advisable either to let this use of the name lapse again and reserve it for the doctrine that is a true science—which would also bring us closer to the language and sense of the ancients, among whom the division of cognition into aistheta kai noeta was very well known—or to share the name with speculative philosophy and take aesthetic partly in a transcendental sense and partly in a psychological meaning.

In transcendental aesthetic, then, we will first isolate sensibility by separating out everything the understanding thinks in connection with it through its concepts, so that nothing but empirical intuition remains. Second, we will detach from this everything belonging to sensation, so that nothing but pure intuition and the mere form of appearances remains, which is the only thing sensibility can supply a priori. In this investigation we will find that there are two pure forms of sensible intuition as principles of a priori cognition, namely space and time, which we will now consider.

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Transcendental Aesthetic First Section On Space

§ 2 Metaphysical exposition of this concept

Through outer sense (a property of our mind) we represent objects as outside us, and all of them in space. In space their shape, magnitude, and relation to one another are determined or determinable. Inner sense, through which the mind intuits itself or its inner state, does not indeed give an intuition of the soul itself as an object; yet there is a determinate form under which alone the intuition of its inner state is possible, so that everything belonging to inner determinations is represented in relations of time. Time cannot be intuited outwardly, any more than space can be intuited as something within us. What,

then, are space and time? Are they actual beings? Are they, to be sure, only determinations or relations of things, but such as would belong to things even in themselves, even if they were not intuited?

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Or are they such as attach only to the form of intuition, and hence to the subjective constitution of our mind, without which these predicates cannot be ascribed to any thing at all? To learn about this, let us first expound the concept of space. By exposition (expositio) I understand the clear (though not exhaustive) representation of what belongs to a concept; an exposition is metaphysical when it contains what presents the concept as given a priori.

1 Space is not an empirical concept abstracted from outer experiences. For in order that certain sensations be referred to something outside me, that is, to something in a different place in space from the one in which I am, and likewise in order that I may represent them as outside and alongside one another, hence not merely as different but as in different places, the representation of space must already lie at the foundation. Accordingly, the representation of space cannot be borrowed through experience from the relations of outer appearance; rather, this outer experience is itself first possible only through that representation.

2 Space is a necessary a priori representation that underlies all outer intuitions. We can never form a representation of there being no space, although we can quite well think of no objects being encountered in it.

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Space is therefore regarded as the condition of the possibility of appearances, not as a determination dependent on them, and is an a priori representation that necessarily underlies outer appearances.

3 Space is not a discursive or, as one says, general concept of relations of things in general, but a pure intuition. For, first, we can represent only one single space; and when we speak of many spaces, we mean by this only parts of one and the same unique space. Nor can these parts precede the single all-embracing space

as if they were its constituents (from which its composition would be possible); they can be thought only in it. Space is essentially one; the manifold in it, and hence also the general concept of spaces in general, rests solely on limitations. From this it follows that an a priori intuition (which is not empirical) underlies all concepts of space. Thus all geometrical principles too—for example, that in a triangle two sides together are greater than the third—are never derived from general concepts of line and triangle, but from intuition, and indeed a priori with apodictic certainty.

4 Space is represented as an infinite given magnitude.

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Now every concept must indeed be thought as a representation contained in an infinite multitude of different possible representations (as their common mark), and hence as containing these under itself. But no concept as such can be thought as containing an infinite multitude of representations within itself. Yet space is thought in this way (for all the parts of space, to infinity, exist simultaneously). Therefore the original representation of space is a priori intuition, not a concept.

§ 3 Transcendental exposition of the concept of space

By a transcendental exposition I understand the explanation of a concept as a principle from which the possibility of other synthetic a priori cognitions can be understood. For this purpose it is required 1) that such cognitions actually flow from the given concept, and 2) that these cognitions be possible only on the assumption of a given way of explaining this concept.

Geometry is a science that determines the properties of space synthetically and yet a priori. What, then, must the representation of space be for such a cognition of it to be possible?

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It must originally be intuition; for from a mere concept no propositions can be drawn that go beyond the concept, which is nevertheless what happens in geometry (Introduction V). But this intuition must be found in us a priori, that is, before all perception of an object, and must therefore be pure, not

empirical intuition. For geometrical propositions are all apodictic, that is, combined with the consciousness of necessity—for example, space has only three dimensions. Such propositions, however, cannot be empirical judgments or judgments of experience, nor can they be inferred from them (Introduction II). How, then, can an outer intuition reside in the mind that precedes the objects themselves, and in which the concept of these objects can be determined a priori? Plainly in no other way than insofar as it has its seat solely in the subject, as the subject's formal constitution for being affected by objects and thereby receiving an immediate representation of them, that is, intuition; thus only as the form of outer sense in general.

Our explanation alone, therefore, makes comprehensible the possibility of geometry as a synthetic a priori cognition. Any mode of explanation that does not provide this, even if it appears to bear some resemblance to ours, can most securely be distinguished from it by these marks.

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Conclusions from the above concepts

a) Space represents no property whatever of any things in themselves, nor things in their relation to one another; that is, it represents no determination of them that attaches to the objects themselves and would remain even if we abstracted from all subjective conditions of intuition. For neither absolute nor relative determinations can be intuited before the existence of the things to which they belong, hence not a priori.

b) Space is nothing other than the form of all appearances of outer senses, that is, the subjective condition of sensibility under which alone outer intuition is possible for us. Since the subject's receptivity for being affected by objects necessarily precedes all intuitions of these objects, we can understand how the form of all appearances can be given in the mind before all actual perceptions, hence a priori; and how, as a pure intuition in which all objects must be determined, it can contain principles of their relations prior to all experience.

Accordingly, we can speak of space, extended beings, and so on only from a human standpoint. If we depart from the subjective condition under which alone we can receive outer intuition, namely as we may be affected by objects,

the representation of space means nothing at all.

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This predicate is ascribed to things only insofar as they appear to us, that is, are objects of sensibility. The constant form of this receptivity, which we call sensibility, is a necessary condition of all relations in which objects are intuited as outside us; and, if we abstract from these objects, it is a pure intuition bearing the name of space. Since we cannot make the special conditions of sensibility into conditions of the possibility of things, but only of their appearances, we can indeed say that space comprises all things that may appear to us outwardly, but not all things in themselves, whether they are intuited or not, or by whatever subject they may be intuited. For we cannot judge at all whether the intuitions of other thinking beings are bound to the same conditions that limit our intuition and are universally valid for us. If we add the restriction of a judgment to the concept of its subject, the judgment then holds unconditionally. The proposition "All things are alongside one another in space" holds under the restriction that these things are taken as objects of our sensible intuition. If I add the condition to the concept here and say, "All things, as outer appearances, are alongside one another in space," this rule holds universally and without restriction.

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Our expositions accordingly teach the reality, that is, the objective validity, of space with regard to everything that can come before us outwardly as an object, but at the same time the ideality of space with regard to things when reason considers them in themselves, that is, without regard to the constitution of our sensibility. We therefore assert the empirical reality of space (with regard to all possible outer experience), while at the same time asserting its transcendental ideality: that it is nothing as soon as we leave aside the condition of the possibility of all experience and take it as something underlying things in themselves.

But apart from space there is also no other subjective representation related to something outer that could be called a priori objective. For from none of them can synthetic a priori propositions be derived, as they can from intuition in space, § 3. Strictly speaking, therefore, no ideality at all belongs to them,

although they agree with the representation of space in belonging merely to the subjective constitution of our manner of sensing—for example, of sight, hearing, and touch, through sensations of colors, sounds, and warmth. But because these are mere sensations and not intuitions, they do not in themselves allow us to cognize any object, least of all a priori.

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The intention of this observation is only to prevent anyone from attempting to elucidate the asserted ideality of space through quite inadequate examples: for instance, that colors, taste, and so on are rightly regarded not as constitutions of things but merely as modifications of our subject, which can even differ in different people. For in this case what is originally itself only appearance—for example, a rose—is taken in the empirical sense for a thing in itself, which may nevertheless appear differently in color to every eye. By contrast, the transcendental concept of appearances in space is a critical reminder that nothing intuited in space is a thing in itself, nor is space a form of things that might belong to them in themselves. Rather, objects in themselves are not known to us at all, and what we call outer objects are nothing other than mere representations of our sensibility, whose form is space. Their true correlate, however, that is, the thing in itself, is not cognized through these representations at all, nor can it be; yet it is also never inquired after in experience.

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Transcendental Aesthetic Second Section On Time

§ 4 Metaphysical exposition of the concept of time

Time is 1. not an empirical concept abstracted from any experience. For simultaneity or succession would not itself enter perception if the representation of time did not underlie it a priori. Only on this presupposition can we represent that some things exist at one and the same time (simultaneously) or at different times (successively).

2 Time is a necessary representation that underlies all intuitions. With regard to appearances in general, we cannot remove time itself, although we can quite well take appearances out of time. Time is therefore given a priori. In it alone is

all actuality of appearances possible. These can all fall away, but time itself, as the universal condition of their possibility, cannot be removed.
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3 This a priori necessity also grounds the possibility of apodictic principles concerning the relations of time, or axioms of time in general. It has only one dimension: different times are not simultaneous but successive (just as different spaces are not successive but simultaneous). These principles cannot be drawn from experience, for experience would yield neither strict universality nor apodictic certainty. We could say only, "This is what ordinary perception teaches," but not, "This is how it must be." These principles hold as rules under which experiences are possible at all, and instruct us before experience, not through it.

4 Time is not a discursive or, as it is called, general concept, but a pure form of sensible intuition. Different times are only parts of the very same time. But a representation that can be given only through a single object is intuition. Nor could the proposition that different times cannot be simultaneous be derived from a general concept. The proposition is synthetic and cannot arise from concepts alone. It is therefore immediately contained in the intuition and representation of time.

5 The infinity of time means nothing more than that every determinate magnitude of time is possible only through limitations of one single time lying at the foundation.
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The original representation, time, must therefore be given as unlimited. But where the parts themselves, and every magnitude of an object, can be represented determinately only through limitation, the whole representation must not be given through concepts (for these contain only partial representations); rather, immediate intuition must underlie them.
§ 5 Transcendental exposition of the concept of time

For this I can refer to No. 3, where for brevity I placed what is properly transcendental among the articles of the metaphysical exposition. Here I add that the concept of alteration and, with it, the concept of motion (as change of place) are possible only through and in the representation of time. If this representation were not an a priori (inner) intuition, no concept, whatever it might be, could make comprehensible the possibility of an alteration, that is, of a combination of contradictorily opposed predicates in one and the same object —for example, the being in a place and the not-being in that same place of the very same thing.

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Only in time can both contradictorily opposed determinations be encountered in one thing, namely successively. Our concept of time thus explains the possibility of as many synthetic a priori cognitions as are set forth by the general theory of motion, which is by no means unfruitful.

§ 6 Conclusions from these concepts

a) Time is not something that would subsist on its own or inhere in things as an objective determination, and would thus remain if we abstracted from all subjective conditions of intuiting them. For in the first case it would be something actual without an actual object. As for the second, as a determination or order inhering in things themselves, it could not precede objects as their condition and be cognized and intuited a priori through synthetic propositions. This latter is, by contrast, quite possible if time is nothing but the subjective condition under which all intuitions can occur in us. For then this form of inner intuition can be represented before the objects, hence a priori.

b) Time is nothing other than the form of inner sense, that is, of the intuition of ourselves and of our inner state. For time can be no determination of outer appearances.

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It belongs neither to a shape nor to a position, and so on, but instead determines the relation of representations in our inner state. And precisely because this inner intuition yields no shape, we also seek to compensate for this lack through analogies, representing the succession of time by a line extending to

infinity, in which the manifold constitutes a series of only one dimension. From the properties of this line we infer all the properties of time, except the single one that the parts of the former are simultaneous, whereas those of the latter are always successive. From this it also becomes clear that the representation of time is itself intuition, because all its relations can be expressed in an outer intuition.

c) Time is the a priori formal condition of all appearances in general. Space, as the pure form of all outer intuition, is limited as an a priori condition merely to outer appearances. By contrast, all representations, whether they have outer things as their object or not, nevertheless belong in themselves, as determinations of the mind, to the inner state; and this inner state falls under the formal condition of inner intuition, hence of time. Time is therefore an a priori condition of all appearance in general: the immediate condition of inner appearances (those of our souls), and precisely thereby also the mediate condition of outer appearances.

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If I can say a priori that all outer appearances are in space and determined a priori according to the relations of space, I can say quite generally, from the principle of inner sense, that all appearances in general, that is, all objects of the senses, are in time and necessarily stand in relations of time.

If we abstract from our way of intuiting ourselves inwardly and, through this intuition, also embracing all outer intuitions in our capacity for representation, and thus take objects as they may be in themselves, then time is nothing. It has objective validity only with regard to appearances, because these are already things we take as objects of our senses. But it is no longer objective if we abstract from the sensibility of our intuition, hence from the way of representing peculiar to us, and speak of things in general. Time is therefore solely a subjective condition of our (human) intuition (which is always sensible, that is, insofar as we are affected by objects), and in itself, apart from the subject, nothing. Nevertheless, with regard to all appearances, and hence also all things that can occur to us in experience, it is necessarily objective. We cannot say, "All things are in time."

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This is because in the concept of things in general we abstract from every way of intuiting them, whereas this is the very condition under which time belongs to the representation of objects. But if the condition is added to the concept, so that we say, "All things, as appearances (objects of sensible intuition), are in time," the principle has its proper objective correctness and a priori universality.
Our assertions thus teach the empirical reality of time, that is, objective validity with regard to all objects that may ever be given to our senses. And since our intuition is always sensible, no object can ever be given to us in experience that does not fall under the condition of time. By contrast, we deny time any claim to absolute reality: that it would attach to things absolutely as a condition or property, even without regard to the form of our sensible intuition. Such properties as belong to things in themselves can never be given to us through the senses either. In this, then, consists the transcendental ideality of time: if we abstract from the subjective conditions of sensible intuition, it is nothing at all and can be counted neither as subsisting nor as inhering among objects in themselves (apart from their relation to our intuition).
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Yet this ideality, no more than that of space, is to be compared with the subreptions of sensation. For in those cases we still presuppose that the appearance itself, in which these predicates inhere, has objective reality. Here this falls away entirely, except insofar as it is merely empirical, that is, regards the object itself merely as appearance. On this, see the above observation in the first section.
§ 7 Elucidation
Against this theory, which grants time empirical reality but denies it absolute and transcendental reality, I have heard an objection from insightful men with such unanimity that I infer it must naturally occur to every reader unaccustomed to these reflections. It runs as follows: alterations are actual (this is proved by the change of our own representations, even if one wished to deny all outer appearances along with their alterations). Now alterations are possible only in time; consequently, time is something actual. The answer presents no

difficulty. I grant the entire argument. Time is certainly something actual, namely the actual form of inner intuition. It therefore has subjective reality with regard to inner experience; that is, I actually have the representation of time and of my determinations in it.

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It is therefore actually to be regarded not as an object but as the way of representing myself as an object. But if I myself, or another being, could intuit me without this condition of sensibility, the very same determinations that we now represent as alterations would yield a cognition in which the representation of time, and hence also of alteration, did not occur at all. Its empirical reality as the condition of all our experiences therefore remains. Only absolute reality cannot be granted to it, according to what has been said above. It is nothing but the form of our inner intuition*. If we remove from it the special condition of our sensibility, the concept of time also vanishes; it attaches not to the objects themselves, but merely to the subject that intuits them.

* I can indeed say, "My representations follow one another," but this means only that we are conscious of them as in a temporal succession, that is, according to the form of inner sense. Time is not on that account something in itself, nor a determination attaching objectively to things.

The reason this objection is made so unanimously, even by those who nevertheless know of no convincing objection to the doctrine of the ideality of space, is this.

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They did not hope to demonstrate the absolute reality of space apodictically, because idealism stands against them, holding that the actuality of outer objects admits of no rigorous proof. By contrast, the actuality of the object of our inner sense (myself and my state) is immediately clear through consciousness. The former objects could be mere illusion; but the latter, in their opinion, is undeniably something actual. They did not consider, however, that both, without any need to dispute their actuality as representations, nevertheless belong only to appearance, which always has two sides. On the one side, the object is considered in itself, without regard to the way of intuiting it, and for that very

reason its constitution always remains problematic. On the other, attention is paid to the form of the intuition of this object, which must be sought not in the object in itself but in the subject to whom it appears, yet nevertheless actually and necessarily belongs to the appearance of this object.

Time and space are thus two sources of cognition from which various synthetic cognitions can be drawn a priori, as pure mathematics in particular provides a brilliant example with regard to cognitions of space and its relations.

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Taken together, they are pure forms of all sensible intuition and thereby make synthetic a priori propositions possible. But these a priori sources of cognition determine their own boundaries by that very fact (that they are merely conditions of sensibility). Namely, they relate only to objects insofar as these are considered as appearances, and do not present things in themselves. Appearances alone are the field of their validity; if we go beyond it, no further objective use of them occurs. This reality of space and time, moreover, leaves the security of cognition through experience untouched. For we are equally certain of it whether these forms necessarily attach to things in themselves or only to our intuition of these things. By contrast, those who assert the absolute reality of space and time, whether they take them as subsisting or merely inhering, must come into conflict with the principles of experience itself. For if they choose the first alternative (which is generally the position of mathematical investigators of nature), they must assume two eternal and infinite self-subsisting nonentities (space and time) that exist (without there being anything actual) merely to embrace everything actual within themselves. If they choose the second position (held by some metaphysical teachers of nature), space and time count for them as relations of appearances (alongside or successively).

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These relations are abstracted from experience, though represented confusedly in their abstraction. They must then deny a priori mathematical teachings their validity concerning actual things (for example in space), or at least deny their apodictic certainty, since such certainty does not occur a posteriori at all; and on this view the a priori concepts of space and time are only creatures of imagi-

nation, whose source must really be sought in experience. From experience's abstracted relations, imagination has made something that indeed contains their general character, but cannot occur without the restrictions nature has connected with them. The first group gains this much: they clear the field of appearances for mathematical assertions. On the other hand, these very conditions greatly entangle them when the understanding wishes to go beyond this field. The second group does indeed gain in this latter respect: the representations of space and time do not stand in their way when they wish to judge objects not as appearances but merely in relation to the understanding. Yet they can neither account for the possibility of a priori mathematical cognitions, since they lack a true and objectively valid a priori intuition, nor bring the propositions of experience into necessary agreement with those assertions.

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Our theory of the true constitution of these two original forms of sensibility remedies both difficulties.

Finally, it is clear that transcendental aesthetic can contain no more than these two elements, space and time, because all other concepts belonging to sensibility, even that of motion, which unites both elements, presuppose something empirical. For motion presupposes the perception of something movable. In space considered in itself, however, there is nothing movable; hence the movable must be something found in space only through experience, and thus an empirical datum. Likewise, transcendental aesthetic cannot count the concept of alteration among its a priori data. For time itself does not alter, but something in time does. For this, then, perception of some existence and of the succession of its determinations is required, hence experience.

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§ 8 General observations on the Transcendental Aesthetic

I. First it will be necessary to explain as clearly as possible what our view is concerning the fundamental constitution of sensible cognition in general, to prevent every misinterpretation of it.

What we have meant to say, then, is that all our intuition is nothing but the representation of appearance; that the things we intuit are not in themselves what we intuit them as being, nor are their relations constituted in themselves as they appear to us; and that if we remove our subject, or even merely the subjective constitution of the senses in general, all the constitution and all the relations of objects in space and time, indeed space and time themselves, would vanish. As appearances they cannot exist in themselves, but only in us. What the objects may be in themselves, apart from all this receptivity of our sensibility, remains entirely unknown to us. We know nothing but our way of perceiving them, which is peculiar to us and need not necessarily belong to every being, though it belongs to every human being. This alone concerns us.
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Space and time are its pure forms; sensation in general is its matter. The former alone we can cognize a priori, that is, before all actual perception, and it is therefore called pure intuition. The latter, however, is that in our cognition which makes it be called a posteriori cognition, that is, empirical intuition. The former attach to our sensibility with absolute necessity, whatever kind our sensations may be; the latter can be very diverse. Even if we could bring this intuition of ours to the highest degree of distinctness, we would thereby come no closer to the constitution of objects in themselves. For we would in any case completely cognize only our way of intuiting, that is, our sensibility, and this always only under the conditions of space and time originally attaching to the subject. What the objects may be in themselves would never become known to us even through the most enlightened cognition of their appearance, which alone is given to us.

To say, therefore, that our entire sensibility is nothing but the confused representation of things, containing solely what belongs to them in themselves but under an accumulation of marks and partial representations that we do not consciously separate, is to falsify the concepts of sensibility and appearance, rendering their entire doctrine useless and empty.
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The distinction between an indistinct and a distinct representation is merely logical and does not concern the content. Without doubt, the concept of right employed by sound understanding contains precisely what the subtlest speculation can develop from it; only in ordinary practical use we are not conscious of these manifold representations in this thought. We cannot therefore say that the ordinary concept is sensible and contains a mere appearance, for right cannot appear at all; rather, its concept lies in the understanding and represents a constitution (the moral one) of actions that belongs to them in themselves. By contrast, the representation of a body in intuition contains nothing at all that could belong to an object in itself, but merely the appearance of something and the way we are affected by it. This receptivity of our capacity for cognition is called sensibility, and remains worlds apart from cognition of the object in itself, even if we were to see through the appearance to its very ground.

The Leibniz-Wolfian philosophy has therefore assigned an entirely mistaken standpoint to all investigations into the nature and origin of our cognitions, in regarding the distinction between sensibility and the intellectual as merely logical.

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It is plainly transcendental, concerning not merely the form of distinctness or indistinctness but the origin and content of these cognitions. Through sensibility we cognize the constitution of things in themselves not merely indistinctly, but not at all; and as soon as we remove our subjective constitution, the represented object, with the properties sensible intuition ascribed to it, is nowhere to be found, nor can it be found. For precisely this subjective constitution determines its form as appearance.

Ordinarily, among appearances, we do distinguish what attaches essentially to their intuition and holds for every human sense in general from what belongs to it only contingently, being valid not in relation to sensibility in general but only to a particular position or organization of this or that sense. We then call the former a cognition that represents the object in itself, and the latter merely its appearance. But this distinction is only empirical. If we stop at it, as usually happens, and do not in turn regard that empirical intuition as mere appear-

ance, as we should, in which nothing at all concerning any thing in itself is to be encountered, then our transcendental distinction is lost. We then believe that we do cognize things in themselves, although everywhere (in the sensible world), even in the deepest investigation of its objects, we deal with nothing but appearances.

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Thus we will indeed call the rainbow a mere appearance during a sun shower, but the rain the thing in itself. This is correct insofar as we understand the latter concept only physically, as that which in universal experience, under every different position relative to the senses, is nevertheless determined in intuition in this and no other way. But if we take this empirical element in general and ask, without attending to its agreement with every human sense, whether it too represents an object in itself (not the raindrops, since these, as appearances, are already empirical objects), then the question of the relation of representation to object is transcendental. Not only are these drops mere appearances, but even their round shape, indeed even the space in which they fall, are nothing in themselves, but mere modifications or foundations of our sensible intuition; the transcendental object, however, remains unknown to us.

The second important concern of our transcendental aesthetic is that it should not merely win some favor as a plausible hypothesis, but be as certain and indubitable as can ever be required of a theory intended to serve as an organon. To make this certainty fully evident, let us choose a case.

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In this case its validity can become manifest, and it can serve to clarify further what was stated in § 3.

Suppose, then, that space and time are objective in themselves and conditions of the possibility of things in themselves. First, it becomes apparent that a great many apodictic and synthetic a priori propositions occur concerning both, especially concerning space, which we therefore wish to investigate here in particular as our example. Since the propositions of geometry are cognized synthetically a priori and with apodictic certainty, I ask: from where do you obtain such propositions, and on what does our understanding rely in order to arrive

at such absolutely necessary and universally valid truths? There is no other path than through concepts or through intuitions, both as given either a priori or a posteriori. The latter, namely empirical concepts, and likewise that on which they are grounded, empirical intuition, can yield no synthetic proposition except one that is itself merely empirical, that is, a proposition of experience. Hence it can never contain necessity and absolute universality, which are nevertheless characteristic of all propositions of geometry. As for the first and only means of attaining such cognitions, namely through mere concepts or through a priori intuitions, it is clear that no synthetic cognition at all can be attained from mere concepts, but only analytic cognition.

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Take just the proposition that no space can be enclosed by two straight lines, and hence no figure is possible, and try to derive it from the concept of straight lines and the number two; or take the proposition that a figure is possible from three straight lines, and try likewise to derive it merely from these concepts. All your effort is futile, and you find yourselves compelled to take refuge in intuition, as geometry always does. You therefore give yourselves an object in intuition. But of what kind is this intuition? Is it a pure a priori intuition or an empirical one? If it were the latter, no universally valid proposition, still less an apodictic one, could ever arise from it, for experience can never supply such a thing. You must therefore give your object a priori in intuition and ground your synthetic proposition on it. Now if there did not lie within you a faculty of intuiting a priori; if this subjective condition, as to its form, were not at the same time the universal a priori condition under which alone the object of this (outer) intuition is itself possible; if the object (the triangle) were something in itself without relation to your subject—how could you say that what necessarily lies in your subjective conditions for constructing a triangle must also necessarily belong to the triangle in itself? For you could not add to your concepts (of three lines) something new (the figure).

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That figure would for that reason necessarily have to be encountered in the object, since the object is given before your cognition and not through it. Thus, if space (and likewise time) were not a mere form of your intuition containing a priori conditions under which alone things can be outer objects for you, and without which subjective conditions they are nothing in themselves, you could establish absolutely nothing synthetically a priori about outer objects. It is therefore indubitably certain, and not merely possible or even probable, that space and time, as the necessary conditions of all (outer and inner) experience, are merely subjective conditions of all our intuition. In relation to them, therefore, all objects are mere appearances and not things given for themselves in this manner. For this very reason much can be said a priori about these appearances as regards their form, but never the least thing about the thing in itself that may underlie them.

II. To confirm this theory of the ideality of outer as well as inner sense, and hence of all objects of the senses as mere appearances, the following observation is especially useful: everything in our cognition that belongs to intuition—excluding, therefore, the feeling of pleasure and displeasure, and the will, which are not cognitions at all—contains nothing but mere relations.

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These are relations of places in an intuition (extension), of change of places (motion), and of laws according to which this change is determined (moving forces). But what is present in the place, or what acts in the things themselves apart from the change of place, is not given through this. Now a thing in itself is not cognized through mere relations. We may therefore conclude that, since nothing but mere representations of relations is given to us through outer sense, it too can contain only the relation of an object to the subject in its representation, and not the inner character that belongs to the object in itself. It is just the same with inner intuition. Not only do the representations of outer senses constitute the actual material with which we occupy our mind, but time, in which we place these representations, already contains relations of succession, of simultaneity, and of what is simultaneous with succession (the persistent). Time itself precedes consciousness of these representations in experience

and underlies the way we place them in the mind as its formal condition. Now what can precede, as a representation, every act of thinking anything is intuition; and if it contains nothing but relations, it is the form of intuition. Since this form represents nothing except insofar as something is posited in the mind, it can be nothing other than the way the mind is affected through its own activity.

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The activity in question is this positing of its representation, so that the mind is affected through itself, that is, an inner sense as regards its form. Everything represented through a sense is to that extent always appearance. Either, then, no inner sense at all would have to be admitted, or the subject that is its object could be represented through it only as appearance, not as it would judge itself if its intuition were mere self-activity, that is, intellectual. The entire difficulty here rests only on how a subject can intuit itself inwardly; but this difficulty is common to every theory. Consciousness of oneself (apperception) is the simple representation of the I; and if through this alone all the manifold in the subject were given by its own activity, inner intuition would be intellectual. In human beings this consciousness requires inner perception of the manifold previously given in the subject, and because of this distinction, the way this manifold is given in the mind without spontaneity must be called sensibility. If the faculty of becoming conscious is to seek out (apprehend) what lies in the mind, it must affect the mind, and only in this way can it produce an intuition of itself. The form of this intuition, however, lies beforehand at the foundation in the mind. It determines, in the representation of time, the way the manifold is together in the mind.

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The mind thus intuits itself not as it would immediately represent itself through its own activity, but according to the way it is affected from within, consequently as it appears to itself, not as it is.

III. When I say that in space and time both the intuition of outer objects and the mind's self-intuition represent each as it affects our senses, that is, as it appears, I do not mean that these objects are mere illusion. For in appearance

the objects, indeed even the constitutions we ascribe to them, are always regarded as something actually given. It is only that, insofar as this constitution depends merely on the subject's way of intuiting in the relation of the given object to it, this object as appearance is distinguished from itself as object in itself. Thus I do not say that bodies merely seem to be outside me, or that my soul only seems to be given in my self-consciousness, when I assert that the quality of space and time, in conformity with which I posit both as the condition of their existence, lies in my way of intuiting and not in these objects in themselves. It would be my own fault if I made mere illusion out of what I ought to count as appearance*. But this does not happen according to our principle of the ideality of all our sensible intuitions.

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Rather, if objective reality is ascribed to those forms of representation, it is impossible to avoid transforming everything through them into mere illusion. For if space and time are regarded as constitutions that must be encountered, as to their possibility, in things in themselves, and we reflect on the absurdities in which we then entangle ourselves, namely two infinite things that are neither substances nor anything actually inhering in substances.

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These things must nevertheless exist, indeed must be the necessary condition of the existence of all things, and must remain even if all existing things are removed. Then we can hardly blame the good Berkeley for reducing bodies to mere illusion. Indeed, even our own existence, which would in this way be made dependent on the independently subsisting reality of a nonentity such as time, would have to be transformed along with it into sheer illusion, an absurdity of which no one has yet been guilty.

* The predicates of appearance can be ascribed to the object itself in relation to our sense: for example, the red color or the scent to the rose. But illusion can never be ascribed to the object as a predicate, precisely because it ascribes to the object in itself what belongs to it only in relation to the senses, or to the subject in general: for example, the two handles initially ascribed to Saturn. What is not to be encountered in the object in itself at all, but is always to be encountered

in its relation to the subject and is inseparable from the representation of the former, is appearance. Thus the predicates of space and time are rightly ascribed to objects of the senses as such, and there is no illusion in this. But if I ascribe redness to the rose in itself, handles to Saturn, or extension in itself to all outer objects, without regard to a determinate relation of these objects to the subject and without restricting my judgment to it, only then does illusion arise.

IV. In natural theology, where one thinks an object that not only cannot be an object of intuition for us at all, but cannot in any way be an object of sensible intuition even to itself, one is careful to remove the conditions of time and space from all its intuition. For all its cognition must be intuition, not thinking, which always indicates limits. But by what right can one do this if one has previously made both into forms of things in themselves, indeed forms that, as a priori conditions of the existence of things, remain even if the things themselves have been removed? For as conditions of all existence in general, they would also have to be conditions of God's existence. If we do not wish to make them objective forms of all things, nothing else remains.

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We must make them subjective forms of our way of intuiting, outer as well as inner. This is called sensible because it is not original, that is, not such that through it the very existence of the object of intuition is given (which, so far as we can see, can belong only to the primordial being), but is dependent on the existence of the object, and is thus possible only through the object's affecting the subject's capacity for representation.

Nor is it necessary for us to restrict the way of intuiting in space and time to human sensibility. It may be that all finite thinking beings must necessarily agree with human beings in this, although we cannot decide it. Yet this universal validity does not make it cease to be sensibility, precisely because it is derivative (intuitus derivativus), not original (intuitus originarius), and hence not intellectual intuition. For the reason just given, intellectual intuition seems to belong only to the primordial being, never to a being dependent both in its

existence and in its intuition, which determines its existence in relation to given objects. This last observation, however, must be counted only as an elucidation of our aesthetic theory, not as a ground of proof.

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Conclusion of the Transcendental Aesthetic

Here, then, we have one of the elements required for solving the general problem of transcendental philosophy: How are synthetic a priori propositions possible? Namely, pure a priori intuitions, space and time. If we wish, in an a priori judgment, to go beyond the given concept, we find in them what can be discovered a priori not in the concept but in the intuition corresponding to it, and can be synthetically combined with that concept. For this reason, however, such judgments never extend further than to objects of the senses, and can hold only for objects of possible experience.

Transcendental Analytic

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Transcendental Doctrine of Elements Second Part Transcendental Logic

Introduction The Idea of a Transcendental Logic

I. On logic in general

Our cognition arises from two fundamental sources of the mind. The first is the reception of representations (the receptivity of impressions); the second is the faculty of cognizing an object through these representations (the spontaneity of concepts). Through the first an object is given to us; through the second it is thought in relation to that representation (as a mere determination of the mind). Intuition and concepts thus constitute the elements of all our cognition, so that neither concepts without an intuition in some way corresponding to them, nor intuition without concepts, can yield a cognition. Both are either pure or empirical: empirical when sensation (which presupposes the actual presence of the object) is contained in them; pure when no sensation is mixed into the representation. Sensation can be called the matter of sensible cognition.

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Hence pure intuition contains solely the form under which something is intuited, and a pure concept solely the form of thinking an object in general. Pure intuitions or concepts alone are possible a priori; empirical ones only a posteriori.

If we call the receptivity of our mind to receive representations insofar as it is affected in some way sensibility, then the faculty of producing representations itself, or the spontaneity of cognition, is the understanding. Our nature is so constituted that intuition can never be other than sensible, that is, it contains only the way we are affected by objects. The faculty of thinking the object of sensible intuition, by contrast, is the understanding. Neither of these properties is to be preferred to the other. Without sensibility no object would be given to us, and without understanding none would be thought. Thoughts without content are empty; intuitions without concepts are blind. It is therefore just as necessary to make our concepts sensible, that is, to add their object in intuition, as to make our intuitions intelligible, that is, to bring them under concepts. Nor can these two faculties or capacities exchange their functions. The understanding can intuit nothing, and the senses can think nothing. Only through their union can cognition arise.

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But we must not on that account mix their contributions; rather, we have strong grounds for carefully separating and distinguishing each from the other. We therefore distinguish the science of the rules of sensibility in general, aesthetic, from the science of the rules of the understanding in general, logic.

Logic can in turn be undertaken with a twofold aim: either as the logic of the general use of the understanding, or of its particular use. The first contains the absolutely necessary rules of thinking, without which no use of the understanding occurs at all; it therefore concerns the understanding without regard to the difference of objects toward which it may be directed. The logic of the particular use of the understanding contains the rules for thinking correctly about a certain kind of object. The former can be called elementary logic, the latter the organon of this or that science. The latter is usually placed before the sciences in the schools as a propaedeutic, although in the course of human reason it is the last thing reached, attained only when the science has long been complete and needs only the finishing touch for its correction and perfection. For one must already know the objects to a fairly high degree.

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One needs this if one wishes to state the rule for bringing about a science of them.

General logic is either pure or applied logic. In the former we abstract from all empirical conditions under which our understanding is exercised: for example, from the influence of the senses, the play of imagination, the laws of memory, the power of habit, inclination, and so on; hence also from the sources of prejudices, indeed from all causes in general from which certain cognitions may arise in us or be foisted upon us. For these concern the understanding merely under certain circumstances of its application, and experience is required to know them. A general but pure logic therefore deals solely with a priori principles and is a canon of the understanding and reason, but only with regard to the formal aspect of their use, whatever the content may be, empirical or transcendental. General logic is called applied, however, when it is directed to the rules for using the understanding under the subjective empirical conditions psychology teaches us. It therefore has empirical principles, although it is general insofar as it concerns the use of the understanding without distinction of objects. For that reason it is not a canon of the understanding in general.

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Nor is it an organon of particular sciences, but solely a cathartic for ordinary understanding.

In general logic, therefore, the part that is to constitute the pure doctrine of reason must be entirely separated from the part constituting applied (though still general) logic. The former alone is properly science, though brief and dry, as the scholarly presentation of an elementary doctrine of the understanding requires. In this, then, logicians must always keep two rules in view.

1 As general logic it abstracts from all content of the understanding's cognition and from the difference of its objects, and deals with nothing but the mere form of thinking.

2 As pure logic it has no empirical principles, and thus draws nothing (as people have sometimes persuaded themselves) from psychology. Psychology therefore has no influence at all on the canon of the understanding. It is a demonstrated

doctrine, and everything in it must be certain entirely a priori.

What I call applied logic—contrary to the usual meaning of the term, according to which it is supposed to contain certain exercises for which pure logic gives the rule—is a representation of the understanding and the rules of its necessary use in concreto: namely, under the contingent conditions of the subject that can hinder or promote this use and that are all given only empirically.

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It treats of attention, its hindrances and consequences, the origin of error, the states of doubt, scruple, conviction, and so on. General and pure logic stands to it as pure morality, which contains merely the necessary moral laws of a free will in general, stands to the doctrine of virtue proper. The latter considers these laws under the hindrances of feelings, inclinations, and passions to which human beings are more or less subject, and can never yield a true and demonstrated science, because it requires empirical and psychological principles just as that applied logic does.

II. On transcendental logic

As we have shown, general logic abstracts from all content of cognition, that is, from every relation of cognition to the object, and considers only the logical form in the relation of cognitions to one another, that is, the form of thinking in general. But since there are pure as well as empirical intuitions, as transcendental aesthetic demonstrates, a distinction might also be found between pure and empirical thinking of objects.

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In that case there would be a logic in which one did not abstract from all content of cognition. For a logic containing merely the rules of the pure thinking of an object would exclude all cognitions of empirical content. It would also concern the origin of our cognitions of objects insofar as that origin cannot be ascribed to the objects. General logic, by contrast, has nothing to do with this origin of cognition. Rather, it considers representations, whether originally a priori in ourselves or merely given empirically, only according to the laws under

which the understanding uses them in relation to one another when it thinks. It thus treats only of the form of understanding that can be imparted to representations, wherever else they may have originated.

Here I make an observation that extends its influence over all the following considerations and must be kept firmly in view: not every a priori cognition must be called transcendental, but only that through which we cognize that, and how, certain representations (intuitions or concepts) are applied or are possible solely a priori. That is, "transcendental" concerns the possibility of cognition or its use a priori.

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Hence neither space nor any a priori geometrical determination of it is a transcendental representation. Rather, only the cognition that these representations are not of empirical origin at all, and the possibility of how they can nevertheless relate a priori to objects of experience, can be called transcendental. Likewise, the use of space concerning objects in general would also be transcendental; but if it is restricted solely to objects of the senses, it is called empirical. The distinction between the transcendental and the empirical therefore belongs only to the critique of cognitions and does not concern their relation to their object.

In the expectation, then, that there may perhaps be concepts that relate a priori to objects, not as pure or sensible intuitions but merely as acts of pure thinking, and that are thus concepts of neither empirical nor aesthetic origin, we form in advance the idea of a science of the cognition of pure understanding and reason through which we think objects wholly a priori. A science that determined the origin, scope, and objective validity of such cognitions would have to be called transcendental logic. For it deals only with the laws of understanding and reason.

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It does so solely insofar as it is related a priori to objects, and not, like general logic, to empirical as well as pure cognitions of reason without distinction.

III. On the division of general logic into analytic and dialectic

The old and famous question with which people imagined they could drive logicians into a corner, seeking to force them either to be caught in a wretched evasion or to confess their ignorance and thus the vanity of their entire art, is this: What is truth? The nominal explanation of truth, namely that it is the agreement of cognition with its object, is granted and presupposed here. But what is demanded is to know the universal and secure criterion of the truth of every cognition.

It is already a great and necessary proof of prudence or insight to know what one ought reasonably to ask. For if the question is in itself absurd and calls for needless answers, then, besides shaming the person who raises it, it sometimes has the further disadvantage of leading an unwary listener into absurd answers.

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It then presents the ridiculous spectacle that one person (as the ancients said) milks a male goat while the other holds a sieve beneath it.

If truth consists in the agreement of a cognition with its object, this object must thereby be distinguished from others. For a cognition is false if it does not agree with the object to which it is referred, even if it contains something that could well hold of other objects. Now a universal criterion of truth would be one valid for all cognitions without distinction of their objects. But it is clear that, since in such a criterion we abstract from all content of cognition (its relation to its object), while truth concerns precisely this content, it is quite impossible and absurd to ask for a mark of the truth of this content of cognitions. Hence a sufficient and yet at the same time universal mark of truth cannot possibly be given. Since we have already called the content of a cognition its matter, we must say: no universal mark of the truth of cognition as regards its matter can be demanded, because this is self-contradictory.

But concerning cognition as regards its mere form, setting all content aside, it is equally clear that a logic, insofar as it sets out the universal and necessary rules of the understanding, must present criteria of truth in these very rules.

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For whatever contradicts them is false, because the understanding then conflicts with its universal rules of thinking and hence with itself. Yet these criteria concern only the form of truth, that is, of thinking in general, and are to that extent entirely correct but not sufficient. For although a cognition may conform completely to logical form, that is, not contradict itself, it can nevertheless still contradict the object. Thus the merely logical criterion of truth, namely the agreement of a cognition with the universal and formal laws of understanding and reason, is indeed the conditio sine qua non, hence the negative condition, of all truth. But logic can go no further, and no touchstone of logic can discover an error concerning not the form but the content.

General logic now resolves the entire formal business of understanding and reason into its elements and presents them as principles of all logical assessment of our cognition. This part of logic can therefore be called analytic, and for that very reason is the at least negative touchstone of truth. For we must first test and appraise all cognition as to its form by these rules, before investigating it as to its content to determine whether it contains positive truth with regard to the object.

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But since the mere form of cognition, however much it may agree with logical laws, is far from sufficient to establish material (objective) truth for cognition, no one can venture to judge objects and assert anything about them merely by means of logic without first having acquired well-grounded information about them outside logic. Only then may one attempt their use and connection in a connected whole according to logical laws, or, better still, merely test them by those laws. Nevertheless, there is something so seductive in possessing an art so plausible as that of giving all our cognitions the form of the understanding, even though we may still be very empty and poor as to their content, that general logic, which is merely a canon for judging, has been used as if it were an organon for the actual production of objective assertions, or at least for the illusion of such production, and has thereby in fact been misused. General logic as a supposed organon is called dialectic.

However various the senses in which the ancients used this name for a science or art, its actual use allows us to infer securely that for them it was nothing other than the logic of illusion.

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It was a sophistical art of giving one's ignorance, indeed even one's deliberate deceptions, the veneer of truth by imitating the method of thoroughness prescribed by logic in general and using its topics to embellish every empty pretense. Now we may note as a secure and useful warning that general logic, considered as an organon, is always a logic of illusion, that is, dialectical. For it teaches us nothing at all about the content of cognition, but only the formal conditions of agreement with the understanding, which are otherwise entirely indifferent to the objects. The demand to use it as an instrument, an organon, for expanding and enlarging our cognitions, at least in pretense, must therefore amount to nothing but chatter: asserting anything one pleases with some show of plausibility, or disputing it at will.

Such instruction is in no way consistent with the dignity of philosophy. For this reason the name "dialectic" has instead been included in logic as a critique of dialectical illusion, and that is how we wish it to be understood here as well.

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IV. On the division of transcendental logic into transcendental analytic and dialectic

In a transcendental logic we isolate the understanding (just as above, in transcendental aesthetic, we isolated sensibility) and select from our cognition merely that part of thinking that has its origin solely in the understanding. But the use of this pure cognition rests on the condition that objects are given to us in intuition to which it can be applied. For without intuition all our cognition lacks objects and then remains entirely empty. The part of transcendental logic that sets out the elements of pure cognition of the understanding and the principles without which no object can be thought at all is therefore transcendental analytic, and at the same time a logic of truth. For no cognition can contradict it without at the same time losing all content, that is, every relation to any object, and hence all truth. But it is very tempting and seductive to employ

these pure cognitions and principles of the understanding alone, even beyond the boundaries of experience. Yet it is experience alone that can supply us with the matter (the objects).

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It is to this matter that those pure concepts of the understanding can be applied. The understanding thus runs the risk of making a material use of the merely formal principles of the pure understanding through empty rationalizing, and of judging indiscriminately about objects that are not given to us and perhaps cannot be given in any way at all. Since transcendental analytic should properly be only a canon for assessing the empirical use of the understanding, it is misused when we allow it to count as the organon of a general and unrestricted use, and venture with the pure understanding alone to judge, assert, and decide synthetically about objects in general. The use of the pure understanding would then be dialectical. The second part of transcendental logic must therefore be a critique of this dialectical illusion and is called transcendental dialectic—not as an art of dogmatically producing such illusion (an unfortunately very common art of various kinds of metaphysical trickery), but as a critique of understanding and reason with regard to their hyperphysical use. Its aim is to expose the false illusion of their groundless presumptions and reduce their claims to discovery and enlargement, which they imagine they can achieve merely through transcendental principles, to the mere assessment of the pure understanding and its protection against sophistical deception.

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Transcendental Logic First Division Transcendental Analytic

This analytic is the analysis of our entire a priori cognition into the elements of pure cognition of the understanding. The following points matter here: 1. That the concepts are pure and not empirical concepts. 2. That they belong not to intuition and sensibility but to thinking and understanding. 3. That they are elementary concepts and are clearly distinguished from those derived from them or composed of them. 4. That their table is complete and they entirely fill the whole field of the pure understanding. Now this completeness of a science cannot reliably be assumed on an estimate of an aggregate brought about

merely through trial. It is therefore possible only through an idea of the whole of the understanding's a priori cognition and through the division, determined by that idea, of the concepts constituting it; hence only through their connection in a system. The pure understanding separates itself completely not only from everything empirical, but even from all sensibility. It is therefore a unity subsisting on its own, sufficient to itself, and incapable of being enlarged by any additions from outside.

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Hence the sum total of its cognition will constitute a system to be comprehended and determined under one idea, whose completeness and articulation can at the same time provide a touchstone of the correctness and genuineness of all the elements of cognition that fit into it. This entire part of transcendental logic consists of two books, one containing the concepts, the other the principles of the pure understanding.

Transcendental Analytic First Book The Analytic of Concepts

By the analytic of concepts I understand not their analysis, or the usual procedure in philosophical investigations of analyzing the content of the concepts that present themselves and bringing them to distinctness. I mean, rather, the as yet little-attempted analysis of the faculty of understanding itself, in order to investigate the possibility of a priori concepts by seeking them in the understanding alone as their birthplace and analyzing its pure use in general.

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For this is the distinctive business of a transcendental philosophy; the rest is the logical treatment of concepts in philosophy in general. We will therefore trace pure concepts back to their first seeds and predispositions in the human understanding, where they lie prepared until, on the occasion of experience, they are finally developed and, freed by that same understanding from the empirical conditions attaching to them, presented in their purity.

The Analytic of Concepts First Chapter On the Guiding Thread for Discovering All Pure Concepts of the Understanding

When a cognitive faculty is brought into play, various concepts emerge on its different occasions of activity, making this faculty known. They can be collected in a more or less exhaustive list, according to whether they have been observed for a longer time or with greater acuteness. By this as it were mechanical procedure, it can never be determined with certainty when the investigation will be complete. Nor do concepts found only as occasion offers reveal themselves in any order or systematic unity.

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In the end they are merely paired according to similarities and arranged in series according to the magnitude of their content, from the simple to the more composite. These series are produced in a manner that is indeed methodical in a certain way, but anything but systematic.

Transcendental philosophy has the advantage, but also the obligation, of seeking its concepts according to a principle, because they arise pure and unmixed from the understanding as an absolute unity and must therefore themselves be connected with one another according to a concept or idea. Such a connection, however, supplies a rule by which the place of each pure concept of the understanding, and the completeness of all of them together, can be determined a priori. Otherwise all this would depend on discretion or chance.

The Transcendental Guiding Thread for Discovering All Pure Concepts of the Understanding First Section On the Logical Use of the Understanding in General

Above, the understanding was explained only negatively, as a nonsensible faculty of cognition. Now, independently of sensibility, we cannot partake in any intuition. The understanding is therefore not a faculty of intuition.

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But apart from intuition there is no other way of cognizing than through concepts. Hence the cognition of every understanding, at least of the human understanding, is cognition through concepts, not intuitive but discursive. All intuitions, as sensible, rest on affections; concepts, therefore, on functions. By function, however, I understand the unity of the act of ordering different representations under a common one. Concepts are thus grounded on the spon-

taneity of thinking, just as sensible intuitions are grounded on the receptivity of impressions. Now the understanding can make no other use of these concepts than to judge by means of them. Since no representation except intuition relates immediately to the object, a concept is never referred immediately to an object, but to some other representation of it, whether this is an intuition or itself already a concept. Judgment is therefore the mediate cognition of an object, hence the representation of a representation of it. In every judgment there is a concept that holds of many representations and, among these many, comprehends a given representation, which is then referred immediately to the object. Thus, for example, in the judgment "All bodies are alterable," the concept of the divisible relates to various other concepts; but among these it is here referred especially to the concept of body, and this to certain appearances we encounter.

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These objects are therefore represented mediately through the concept of divisibility. All judgments are accordingly functions of unity among our representations: instead of an immediate representation, a higher one, comprehending this and several others under itself, is used to cognize the object, and many possible cognitions are thereby drawn together into one. But we can reduce all acts of the understanding to judgments, so that the understanding in general can be represented as a faculty of judging. For, according to the above, it is a faculty of thinking. Thinking is cognition through concepts. Concepts, however, as predicates of possible judgments, relate to some representation of an as yet undetermined object. Thus the concept of body signifies something, for example metal, that can be cognized through that concept. It is therefore a concept only because other representations are contained under it, through which it can relate to objects. It is thus the predicate of a possible judgment, for example, "Every metal is a body." The functions of the understanding can therefore all be found if the functions of unity in judgments can be presented completely. The following section will show that this can quite well be accomplished.

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The Guiding Thread for Discovering All Pure Concepts of the Understanding

Second Section

§ 9 On the logical function of the understanding in judgments

If we abstract from all content of a judgment in general and attend only to the mere form of understanding in it, we find that the function of thinking in it can be brought under four headings, each containing three moments under itself. They may conveniently be presented in the following table.

1 Quantity of judgments: universal, particular, singular

2 Quality: affirmative, negative, infinite

3 Relation: categorical, hypothetical, disjunctive

4 Modality: problematic, assertoric, apodictic

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Since this division seems in some, though not essential, respects to depart from the customary technique of logicians, the following safeguards against possible misunderstanding will not be unnecessary.

1 Logicians rightly say that in using judgments in inferences of reason we can treat singular judgments like universal ones. For precisely because they have no extension at all, their predicate cannot be referred merely to some of what is contained under the concept of the subject while being excluded from the rest. It therefore holds of that concept without exception, just as if the concept were a generally valid one with an extension to whose entire range of meaning the predicate applied. If, by contrast, we compare a singular judgment with a generally valid one merely as cognition, as regards magnitude, it stands to the latter as unity to infinity and is thus in itself essentially different from it. Hence, if I appraise a singular judgment (judicium singulare) not merely according to its inner validity but also as cognition in general, according to its magnitude in comparison with other cognitions, it is certainly distinct from generally valid judgments (judicia communia) and deserves a special place in a complete table of the moments of thinking in general.

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Admittedly, it does not deserve one in a logic restricted merely to the use of judgments in relation to one another.

2 Likewise, in a transcendental logic infinite judgments must still be distinguished from affirmative ones, although in general logic they are rightly counted among the latter and form no separate member of the division. For general logic abstracts from all content of the predicate, even when it is negative, and considers only whether it is ascribed to the subject or opposed to it. Transcendental logic, however, also considers the judgment according to the worth or content of this logical affirmation by means of a merely negative predicate, and the gain it provides with regard to cognition as a whole. Had I said of the soul that it is not mortal, I would at least have warded off an error through a negative judgment. Now, through the proposition "The soul is nonmortal," I have actually affirmed something as regards logical form, by placing the soul within the unlimited extension of beings that do not die. Since the mortal comprises one part of the entire extension of possible beings and the undying the other, my proposition says nothing more than that the soul is one of the infinite multitude of things left over when I remove everything mortal. But this limits the infinite sphere of everything possible only to the extent that the mortal is separated from it.

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The soul is thereby placed in the remaining extension of its space. Despite this exclusion, however, this space still remains infinite, and further parts of it can be removed without the concept of the soul thereby growing in the least or being affirmatively determined. These judgments, infinite as regards logical extension, are thus actually merely limiting as regards the content of cognition in general. To that extent they must not be passed over in the transcendental table of all moments of thinking in judgments, because the function of the understanding exercised here may be important in the field of its pure a priori cognition.

3 All relations of thinking in judgments are those a) of the predicate to the subject, b) of the ground to the consequence, c) of the divided cognition and the collected members of the division to one another. In the first kind of judgment only two concepts are considered in relation to one another; in the second, two judgments; in the third, several judgments. The hypothetical proposition "If there is perfect justice, then the persistently wicked person is punished" contains, properly speaking, the relation of two propositions: "There is perfect justice," and "The persistently wicked person is punished." Whether both propositions are true in themselves remains undecided here. Only the consequence is thought through this judgment.
[B 99]
Finally, the disjunctive judgment contains a relation of two or more propositions to one another, not a relation of consequence but of logical opposition, insofar as the sphere of one excludes that of the other, yet at the same time of community, insofar as together they fill the sphere of the cognition proper. It is thus a relation of the parts of the sphere of a cognition, where the sphere of each part complements that of the other to make up the whole sum of the divided cognition. For example: "The world exists either through blind chance, or through inner necessity, or through an external cause." Each of these propositions occupies a part of the sphere of possible cognition concerning the existence of a world in general; all together occupy the entire sphere. To remove the cognition from one of these spheres means to place it in one of the others; conversely, to place it in one sphere means to remove it from the others. Thus in a disjunctive judgment there is a certain community of cognitions, consisting in their mutually excluding one another, yet thereby determining the true cognition as a whole, since taken together they constitute the entire content of one single given cognition. And this alone is what I find necessary to note here for the sake of what follows.

4 The modality of judgments is a quite special function of them.
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It is distinguished by contributing nothing to the content of the judgment—for apart from quantity, quality, and relation there is nothing further that constitutes a judgment's content—but concerning only the value of the copula in relation to thinking in general. Problematic judgments are those in which affirmation or negation is assumed as merely possible (at one's discretion). Assertoric judgments are those in which it is regarded as actual (true). Apodictic judgments are those in which it is regarded as necessary*. Thus the two judgments whose relation constitutes the hypothetical judgment (antecedens and consequens), and likewise those whose interaction constitutes the disjunctive judgment (members of the division), are all merely problematic. In the example above, the proposition "There is perfect justice" is not asserted assertorically, but is thought only as an optional judgment that someone might possibly adopt; only the consequence is assertoric. Hence such judgments may also be manifestly false and yet, taken problematically, be conditions of cognizing truth. Thus the judgment "The world exists through blind chance" has only problematic significance in the disjunctive judgment: namely, that someone might adopt this proposition for a moment.

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Yet it serves to find the true proposition, just as marking the false path among all those one can take serves to find the right one. A problematic proposition is therefore one expressing only logical possibility, which is not objective: that is, a free choice to let such a proposition count, a merely discretionary admission of it into the understanding. An assertoric proposition speaks of logical actuality or truth, as for instance in a hypothetical inference of reason the antecedens occurs problematically in the major premise and assertorically in the minor, and it indicates that the proposition is already combined with the understanding according to its laws. The apodictic proposition thinks the assertoric one as determined through these laws of the understanding itself, and hence as asserting a priori, and in this way expresses logical necessity. Since everything here is incorporated into the understanding by degrees, so that one first judges something problematically, then perhaps also accepts it assertorically as true, and

finally asserts it as inseparably combined with the understanding, that is, as necessary and apodictic, these three functions of modality can also be called so many moments of thinking in general.

* As if thinking in the first case were a function of the understanding, in the second of the power of judgment, and in the third of reason. This observation awaits its clarification only in what follows.

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The Guiding Thread for Discovering All Pure Concepts of the Understanding

Third Section

§ 10 On the pure concepts of the understanding, or categories

As has already been said several times, general logic abstracts from all content of cognition and expects representations to be given to it from elsewhere, wherever they may come from, in order first to transform them into concepts, which proceeds analytically. Transcendental logic, by contrast, has lying before it an a priori manifold of sensibility, offered to it by transcendental aesthetic, to provide material for the pure concepts of the understanding. Without this it would have no content at all and would thus be entirely empty. Now space and time contain a manifold of pure a priori intuition, yet they belong to the conditions of our mind's receptivity under which alone it can receive representations of objects, and which must therefore also always affect the concept of these objects. But the spontaneity of our thinking requires that this manifold first be gone through, taken up, and combined in a certain way in order to make a cognition of it. This act I call synthesis.

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By synthesis in the most general sense, however, I understand the act of adding different representations to one another and comprehending their manifoldness in one cognition. Such a synthesis is pure if the manifold is given not empirically but a priori, as is the manifold in space and time. Before any analysis of our representations, these must first be given, and no concepts can arise analytically as regards their content. But the synthesis of a manifold, whether given empirically or a priori, first produces a cognition that may initially still be crude and confused, and thus requires analysis. Yet synthesis is what properly gathers

the elements into cognitions and unites them into a certain content. It is therefore the first thing to which we must attend if we wish to judge the first origin of our cognition.

Synthesis in general is, as we will see later, the mere effect of imagination, a blind though indispensable function of the soul, without which we would have no cognition at all, but of which we are seldom even conscious. Yet bringing this synthesis to concepts is a function belonging to the understanding, through which it first supplies us with cognition in the proper sense.

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Pure synthesis, represented generally, now yields the pure concept of the understanding. By this synthesis, however, I understand one resting on a ground of a priori synthetic unity. Thus our counting (it is especially noticeable with larger numbers) is a synthesis according to concepts, because it proceeds according to a common ground of unity (for example the decimal system). Under this concept, therefore, unity in the synthesis of the manifold becomes necessary.

Different representations are brought analytically under one concept (a business treated by general logic). But transcendental logic teaches how to bring not the representations but the pure synthesis of representations to concepts. The first thing that must be given to us for the a priori cognition of all objects is the manifold of pure intuition. The synthesis of this manifold through imagination is the second, but does not yet yield cognition. The concepts that give unity to this pure synthesis, and consist solely in the representation of this necessary synthetic unity, provide the third element for the cognition of an object encountered, and rest on the understanding.

The same function gives unity to the different representations in a judgment.

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It also gives unity to the mere synthesis of different representations in an intuition. This unity, expressed generally, is called the pure concept of the understanding. Thus the same understanding, through the very same acts by which it brought about the logical form of a judgment in concepts by means of analytic unity, also introduces a transcendental content into its representations by

means of the synthetic unity of the manifold in intuition in general. For this reason they are called pure concepts of the understanding, which relate a priori to objects, something general logic cannot accomplish.

In this way there arise exactly as many pure concepts of the understanding relating a priori to objects of intuition in general as there were logical functions in all possible judgments in the preceding table. For the understanding is completely exhausted by those functions, and its capacity is thereby measured in full. Following Aristotle, we will call these concepts categories, since our purpose is originally the same as his, although in its execution it departs very far from his.

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Table of Categories

1 Of Quantity: unity, plurality, totality.

2 Of Quality: reality, negation, limitation.

3 Of Relation: of inherence and subsistence (substantia et accidens); of causality and dependence (cause and effect); of community (interaction between agent and patient).

4 Of Modality: possibility—impossibility, existence—nonbeing, necessity—contingency.

This, then, is the list of all originally pure concepts of synthesis that the understanding contains a priori within itself, and for whose sake alone it is a pure understanding. For through them alone can it understand something in the manifold of intuition, that is, think an object of it. This division is generated systematically from a common principle, namely the faculty of judging, which is the same as the faculty of thinking. It has not arisen rhapsodically from a haphazard search for pure concepts.

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Of the completeness of such concepts we can never be certain, since it is inferred only through induction—not to mention that by this latter method we never understand why precisely these concepts, and not others, reside in the

pure understanding. Aristotle's plan to seek out these fundamental concepts was worthy of an acute thinker. But since he had no principle, he gathered them as he happened upon them, and at first collected ten, which he called categories (predicaments). Later he believed he had discovered five more, which he added under the name of postpredicaments. Yet his table still remained deficient. Moreover, some modi of pure sensibility are found among them (quando, ubi, situs, likewise prius, simul), and also an empirical one (motus), which do not belong at all in this register of the understanding's ancestry. Or else derived concepts are counted among the original concepts (actio, passio), while some of the latter are entirely missing.

For the sake of these latter concepts, it must also be noted that the categories, as the true fundamental concepts of the pure understanding, also have their equally pure derived concepts, which can by no means be passed over in a complete system of transcendental philosophy. In a merely critical essay, however, I can be content with simply mentioning them.

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Let me call these pure but derived concepts of the understanding the predicables of the pure understanding (in contrast to the predicaments). Once we have the original and primitive concepts, the derived and subordinate ones can easily be added, and the family tree of the pure understanding can be fully drawn. Since my concern here is not the completeness of the system but only of the principles for a system, I reserve this completion for another undertaking. But this aim can be largely attained by taking the ontological textbooks in hand and subordinating, for example, to the category of causality the predicables of force, action, and passion; to that of community those of presence and resistance; and to the predicaments of modality those of coming to be, passing away, alteration, and so on. The categories, combined with the modi of pure sensibility or with one another, yield a great multitude of derived a priori concepts. To note these and, if possible, list them completely would be a useful and not unpleasant effort, but one dispensable here.

In this treatise I deliberately refrain from defining these categories, although I may well be in possession of their definitions. Later I will analyze these concepts to the degree sufficient for the doctrine of method I am developing.

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In a system of pure reason one could rightly demand their definitions of me; but here they would only distract us from the main point of the investigation by provoking doubts and attacks that can quite well be referred to another undertaking without detracting from the essential purpose. Meanwhile, the little I have said about them makes it clearly evident that a complete dictionary, with all the requisite explanations, is not only possible but easy to produce. The compartments are already there; they need only be filled, and a systematic topic such as the present one makes it difficult to miss the place to which each concept properly belongs, while at the same time making it easy to notice any place still empty.

§ 11

Interesting reflections can be made on this table of categories that might perhaps have significant consequences for the scientific form of all rational cognitions. For it is already self-evident that this table is extraordinarily useful, indeed indispensable, in the theoretical part of philosophy for drawing up the complete plan of a whole science insofar as it rests on a priori concepts, and dividing it mathematically according to determinate principles. This is clear from the fact that the table contains all the elementary concepts of the understanding completely.

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It contains, indeed, even the form of a system of them in the human understanding, and consequently gives directions for all the moments of a proposed speculative science, even for their order. I have also given an example of this elsewhere*. Here are some of these observations.

* Metaphysical Foundations of Natural Science.

The first is that this table, which contains four classes of concepts of the understanding, can first be divided into two divisions. The first is directed to objects of intuition, pure as well as empirical; the second to the existence of these

objects, either in relation to one another or to the understanding.

I would call the first class that of the mathematical categories, the second that of the dynamical categories. The first class, as we see, has no correlates; these are encountered only in the second class. This difference must surely have a ground in the nature of the understanding.

2nd observation. Each class everywhere has the same number of categories, namely three. This too invites reflection, since otherwise all a priori division through concepts must be a dichotomy. In addition, the third category everywhere arises from the combination of the second with the first in its class.

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Thus totality is nothing other than plurality considered as unity; limitation nothing other than reality combined with negation; community is the causality of a substance in determining another reciprocally; finally, necessity is nothing other than existence given through possibility itself. But we must by no means think that the third category is therefore merely a derived concept and not a fundamental concept of the pure understanding. For combining the first and second to produce the third concept requires a special act of the understanding not identical with the act exercised in the first and second. Thus the concept of a number (which belongs to the category of totality) is not always possible wherever the concepts of multitude and unity are present (for example in the representation of the infinite). Nor, from my combining the concept of a cause and that of a substance, is influence immediately understood: that is, how one substance can become the cause of something in another substance. It is evident from this that a special act of the understanding is required for it; and so with the others.

3rd observation. In the case of a single category, namely that of community, which is found under the third heading, the agreement is not as obvious as in the others.

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This is the agreement with the corresponding form of a disjunctive judgment in the table of logical functions.

To assure ourselves of this agreement, we must note that in all disjunctive judgments the sphere (the multitude of everything contained under the judgment) is represented as a whole divided into parts (the subordinate concepts). Since one cannot be contained under another, they are thought as coordinated with, not subordinated to, one another, so that they determine one another not one-sidedly, as in a series, but reciprocally, as in an aggregate: if one member of the division is posited, all the others are excluded, and conversely.

Now a similar connection is thought in a whole of things, where one is not subordinated as effect to another as the cause of its existence, but is at the same time reciprocally coordinated as cause with regard to the determination of the others. This occurs, for example, in a body whose parts mutually attract and also resist one another. This is an entirely different kind of connection from that encountered in the mere relation of cause to effect, of ground to consequence, in which the consequence does not in turn reciprocally determine the ground, and therefore does not form a whole with it, as the creator of the world does not with the world.

[B 113]

The understanding observes the same procedure when it represents the sphere of a divided concept as when it thinks a thing as divisible. Just as the members of the division in the first case exclude one another and yet are combined in one sphere, so it represents the parts of the thing in the latter case as each having existence, as substances, independently of the others, yet as combined in one whole.

§ 12

In the transcendental philosophy of the ancients, however, there is yet another chapter containing pure concepts of the understanding that, though not counted among the categories, were nevertheless supposed by them to hold as a priori concepts of objects. In that case they would increase the number of categories, which cannot be. These are set forth in the proposition so renowned among the scholastics: quodlibet ens est unum, verum, bonum. Although the use of this principle proved very meager in its consequences, yielding nothing but tautological propositions, so that even in modern times it is usually

included in metaphysics almost only for honor's sake, a thought that has survived so long, however empty it may seem, always deserves an investigation of its origin. It warrants the conjecture that it has its ground in some rule of the understanding that has merely, as often happens, been misinterpreted.

[B 114]

These supposedly transcendental predicates of things are nothing other than logical requirements and criteria of all cognition of things in general, and take the categories of quantity—unity, plurality, and totality—as its foundation. But while these categories should properly have been taken materially, as belonging to the possibility of things themselves, they were in fact used only in a formal sense, as belonging to the logical requirement concerning every cognition; yet these criteria of thinking were incautiously made into properties of things in themselves. In every cognition of an object there is, first, unity of the concept, which may be called qualitative unity insofar as by it we think only the unity of the gathering together of the manifold of cognitions, such as the unity of the theme in a play, a speech, or a fable. Second, truth with regard to consequences. The more true consequences follow from a given concept, the more marks there are of its objective reality. This could be called the qualitative plurality of marks belonging to a concept as a common ground (not to be thought in it as a magnitude). Finally, third, perfection, which consists in this plurality's leading back, conversely, to the unity of the concept and agreeing completely with this concept and no other. This can be called qualitative completeness (totality).

[B 115]

From this it is evident that these logical criteria of the possibility of cognition in general here transform the three categories of magnitude, in which the unity in the generation of the quantum must be assumed throughout to be homogeneous, solely with regard to the connection even of heterogeneous elements of cognition in one consciousness through the quality of a cognition as principle. Thus the criterion of the possibility of a concept (not of its object) is the definition, in which the unity of the concept, the truth of everything that may be derived immediately from it, and finally the completeness of what has been

drawn from it together constitute what is required to restore the whole concept. Likewise, the criterion of a hypothesis is the intelligibility of the assumed explanatory ground, or its unity (without an auxiliary hypothesis); the truth (agreement among themselves and with experience) of the consequences to be derived from it; and finally the completeness of the explanatory ground for them. These consequences point back to nothing more or less than was assumed in the hypothesis, and analytically supply again a posteriori what was thought synthetically a priori, agreeing with it.—Thus the concepts of unity, truth, and perfection do not supplement the transcendental table of categories as if it were deficient.

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Rather, with the relation of these concepts to objects entirely set aside, the procedure with them is merely brought under general logical rules of the agreement of cognition with itself.

Transcendental Analytic Second Chapter On the Deduction of the Pure Concepts of the Understanding

First Section

§ 13 On the principles of a transcendental deduction in general

When jurists speak of entitlements and presumptions, they distinguish in a legal dispute the question of what is lawful (quid juris) from the question concerning the fact (quid facti). In demanding proof of both, they call the first proof, which is to establish the entitlement or legal claim, the deduction. We employ a multitude of empirical concepts without anyone's objection and consider ourselves entitled, even without a deduction, to ascribe a sense and an imagined meaning to them, because experience is always at hand to prove their objective reality.

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Yet there are also usurped concepts, such as luck and fate, which circulate with almost universal indulgence but are occasionally challenged by the question quid juris. We then find ourselves in no small difficulty over their deduction, since we can cite no clear legal ground, either from experience or from reason, that would make the entitlement to their use evident.

Among the many concepts that constitute the very mixed fabric of human cognition, however, some are also destined for a pure a priori use (wholly independent of all experience), and their entitlement always requires a deduction. For proofs from experience are not sufficient to establish the lawfulness of such a use, yet we must know how these concepts can relate to objects that they do not obtain from any experience. I therefore call the explanation of how concepts can relate a priori to objects their transcendental deduction. I distinguish it from an empirical deduction, which shows how a concept has been acquired through experience and reflection on it, and therefore concerns not its lawfulness but the fact through which its possession arose.

[B 118]

We already have two kinds of concepts, of entirely different sorts, that nevertheless agree in both relating wholly a priori to objects: the concepts of space and time as forms of sensibility, and the categories as concepts of the understanding. To attempt an empirical deduction of them would be wholly wasted labor. For the distinctive feature of their nature lies precisely in their relating to their objects without having borrowed anything from experience for the representation of those objects. If, then, a deduction of them is necessary, it must always be transcendental.

Nevertheless, for these concepts as for all cognition, we can seek in experience, if not the principle of their possibility, at least the occasional causes of their generation. The impressions of the senses then provide the first occasion for unfolding our entire cognitive power with regard to them and bringing about experience, which contains two very dissimilar elements: a matter for cognition from the senses, and a certain form for ordering it from the inner source of pure intuiting and thinking. These are first brought into activity on the occasion of the former and produce concepts. Such a tracing of the first efforts of our cognitive power has undoubtedly its great use.

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Its aim is to rise from individual perceptions to general concepts, and we owe the first opening of this path to the celebrated Locke. But a deduction of pure a priori concepts is never achieved by it, for such a deduction does not lie on this

path at all. As regards their future use, which is to be entirely independent of experience, these concepts must be able to show a birth certificate quite different from that of descent from experiences. This attempted physiological derivation, which cannot properly be called a deduction at all because it concerns a quaestionem facti, I will therefore call the explanation of the possession of a pure cognition. It is thus clear that there can be only a transcendental deduction of these concepts, and by no means an empirical one, and that with regard to pure a priori concepts the latter are nothing but futile attempts, occupying only someone who has not understood the wholly distinctive nature of these cognitions.

But although the only possible kind of deduction of pure a priori cognition is conceded to be the transcendental one, this does not yet make it evident that such a deduction is indispensably necessary. Above, by means of a transcendental deduction, we traced the concepts of space and time to their sources and explained and determined their objective a priori validity.

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Nevertheless, geometry advances securely through entirely a priori cognitions without needing to request from philosophy a certificate attesting the pure and lawful descent of its fundamental concept of space. But in this science the use of the concept also concerns only the outer sensible world, of whose intuition space is the pure form. In this world all geometrical cognition, because it is grounded on a priori intuition, has immediate evidence, and the objects are given a priori in intuition, as regards their form, through cognition itself. With the pure concepts of the understanding, by contrast, there begins an indispensable need to seek a transcendental deduction not only of these concepts themselves but also of space. For these concepts speak of objects not through predicates of intuition and sensibility but through predicates of pure a priori thinking, and thus relate universally to objects without any conditions of sensibility. Since they are not grounded on experience, they also cannot exhibit in a priori intuition an object on which to ground their synthesis before all experience.

They therefore not only arouse suspicion concerning the objective validity and limits of their use, but also make that concept of space ambiguous, through their inclination to use it beyond the conditions of sensible intuition.

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For this reason a transcendental deduction of space was also necessary above. The reader must therefore be convinced of the indispensable necessity of such a transcendental deduction before taking a single step in the field of pure reason. Otherwise he proceeds blindly and, after wandering about in many directions, must return to the ignorance from which he started. But he must also clearly grasp the unavoidable difficulty in advance, so as not to complain of obscurity where the matter itself is deeply veiled, or grow weary too soon of clearing away the obstacles. For the issue is either to abandon entirely all claims to insights of pure reason in its favorite field, namely beyond the boundaries of all possible experience, or to bring this critical investigation to completion.

Above, with the concepts of space and time, we were able with little effort to make comprehensible how these, as a priori cognitions, must nevertheless necessarily relate to objects and make synthetic cognition of them possible independently of all experience. For since only by means of such pure forms of sensibility can an object appear to us, that is, be an object of empirical intuition.

[B 122]

Space and time are therefore pure intuitions containing a priori the condition of the possibility of objects as appearances, and the synthesis in them has objective validity.

The categories of the understanding, by contrast, do not at all represent to us the conditions under which objects are given in intuition. Objects can therefore certainly appear to us without necessarily having to relate to functions of the understanding, so that the understanding would contain their conditions a priori. Here, then, a difficulty emerges that we did not encounter in the field of sensibility: how subjective conditions of thinking should have objective validity, that is, provide conditions of the possibility of all cognition of objects. For appearances can certainly be given in intuition without functions of the understanding. I take, for example, the concept of cause, which signifies a particular

kind of synthesis in which, upon something A, something entirely different B is posited according to a rule. It is not clear a priori why appearances should contain anything of this kind. Experiences cannot be cited as proof, for the objective validity of this concept must be capable of being demonstrated a priori. It is therefore doubtful a priori whether such a concept may not be entirely empty and encounter no object anywhere among appearances.

[B 123]

For that objects of sensible intuition must conform to the formal conditions of sensibility lying a priori in the mind is clear, because otherwise they would not be objects for us. But that they must also, in addition, conform to the conditions the understanding needs for the synthetic insight of thinking is an inference not so easy to grasp. For appearances might conceivably be so constituted that the understanding found them wholly out of keeping with the conditions of its unity, and everything lay in such confusion that, for example, in the succession of appearances nothing presented itself that supplied a rule of synthesis and thus corresponded to the concept of cause and effect. This concept would then be entirely empty, null, and without meaning. Appearances would nevertheless offer objects to our intuition, for intuition in no way requires the functions of thinking.

If someone thought to escape the labor of these investigations by saying that experience continually offers examples of such regularity in appearances as provide sufficient occasion to abstract the concept of cause from them, and thereby at the same time to confirm the objective validity of such a concept, he would fail to notice that the concept of cause cannot arise in this way at all. Rather, it must either be grounded wholly a priori in the understanding or be abandoned entirely as a mere figment of the brain.

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For this concept absolutely requires that something A be such that something else B follows from it necessarily and according to an absolutely universal rule. Appearances certainly supply cases from which a rule is possible according to which something usually happens, but never that the outcome is necessary. Hence the synthesis of cause and effect carries a dignity that cannot be

expressed empirically at all: namely, that the effect is not merely added to the cause but posited through it and follows from it. Nor is the strict universality of the rule a property of empirical rules, which through induction can acquire no more than comparative universality, that is, widespread applicability. But the use of pure concepts of the understanding would change entirely if we wished to treat them merely as empirical products.

§ 14 Transition to the transcendental deduction of the categories

There are only two possible cases in which synthetic representation and its objects can coincide, necessarily relate to one another, and as it were meet one another. Either the object alone makes the representation possible, or the representation alone makes the object possible.

[B 125]

In the first case this relation is only empirical, and the representation is never possible a priori. This is the case with appearances as regards what belongs in them to sensation. In the second case, however, since representation in itself does not produce its object as to its existence—for its causality by means of the will is not at issue here at all—representation is nevertheless then a priori determining with regard to the object if through it alone it is possible to cognize something as an object. There are, however, two conditions under which alone cognition of an object is possible: first, intuition, through which it is given, but only as appearance; second, concept, through which an object corresponding to this intuition is thought. It is clear from the above that the first condition, namely that under which alone objects can be intuited, in fact lies a priori in the mind at the foundation of objects as regards their form. All appearances therefore necessarily agree with this formal condition of sensibility, because only through it can they appear, that is, be empirically intuited and given. The question now is whether a priori concepts also precede as conditions under which alone something, though not intuited, is nevertheless thought as an object in general.

[B 126]

For then all empirical cognition of objects necessarily conforms to such concepts, because without presupposing them nothing is possible as an object of experience. But all experience contains, besides the intuition of the senses through which something is given, a concept of an object that is given in intuition, or appears. Accordingly, concepts of objects in general will underlie all cognition through experience as a priori conditions. Consequently, the objective validity of the categories as a priori concepts will rest on the fact that through them alone experience is possible as regards the form of thinking. For then they necessarily and a priori relate to objects of experience, because only by their means can any object of experience be thought at all.

The transcendental deduction of all a priori concepts thus has a principle toward which the entire inquiry must be directed: that these concepts must be cognized as a priori conditions of the possibility of experiences, whether of the intuition encountered in experience or of thinking. Concepts that provide the objective ground of the possibility of experience are necessary for that very reason. But unfolding the experience in which they are encountered is not their deduction but their illustration, because in that case they would still be merely contingent.

[B 127]

Without this original relation to possible experience, in which all objects of cognition occur, their relation to any object could not be comprehended at all.

Lacking this consideration, and finding pure concepts of the understanding in experience, the celebrated Locke also derived them from experience; yet he proceeded so inconsistently that he ventured with them on attempts at cognitions extending far beyond every boundary of experience. David Hume recognized that, to do the latter, these concepts would necessarily have to originate a priori. But he could not explain at all how it was possible that the understanding must think concepts that are not in themselves combined in the understanding as nevertheless necessarily combined in the object. Nor did it occur to him that perhaps the understanding could itself, through these concepts, be the author of the experience in which its objects are encountered. Driven by necessity, he therefore derived them from experience: namely, from a subjective necessity

arising through repeated association in experience, which is finally mistaken for an objective one, that is, from habit. But afterward he proceeded very consistently in declaring it impossible to go beyond the boundary of experience with these concepts and the principles they occasion.

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The empirical derivation that both hit upon, however, cannot be reconciled with the actuality of the scientific a priori cognitions we possess, namely pure mathematics and general natural science, and is thus refuted by the fact.

The first of these two celebrated men opened the door wide to fanaticism, because once reason has entitlements on its side, it can no longer be kept within limits by indefinite commendations of moderation. The second surrendered himself entirely to skepticism, once he believed he had discovered so universal a deception of our cognitive faculty, taken for reason. We are now about to attempt whether human reason can be brought safely between these two reefs, assigned determinate boundaries, and yet have the whole field of its purposeful activity kept open for it.

Beforehand I wish only to supply the explanation of the categories. They are concepts of an object in general through which its intuition is regarded as determined with respect to one of the logical functions for judging. Thus the function of the categorical judgment was that of the relation of the subject to the predicate, for example, "All bodies are divisible." But with regard to the merely logical use of the understanding, the matter remained undetermined.

[B 129]

It was left open which of the two concepts one wished to give the function of subject and which that of predicate. For one can also say, "Some divisible thing is a body." Through the category of substance, however, if I bring the concept of a body under it, it is determined that its empirical intuition in experience must always be regarded only as subject, never as mere predicate; and so with all the other categories.

The Deduction of the Pure Concepts of the Understanding Second Section Transcendental Deduction of the Pure Concepts of the Understanding

§ 15 On the possibility of combination in general

The manifold of representations can be given in an intuition that is merely sensible, that is, nothing but receptivity; and the form of this intuition can lie a priori in our faculty of representation without being anything other than the way the subject is affected. But the combination (conjunctio) of a manifold in general can never come to us through the senses, and thus cannot already be contained in the pure form of sensible intuition.

[B 130]

For it is an act of the spontaneity of the power of representation; and since this, as distinguished from sensibility, must be called understanding, all combination is an act of the understanding, whether we become conscious of it or not, whether it is a combination of the manifold of intuition or of various concepts, and, in the former case, of sensible or nonsensible intuition. We would give this act the general name synthesis, to make clear at the same time that we can represent nothing as combined in the object without having previously combined it ourselves; and that among all representations, combination is the only one that cannot be given through objects but can only be carried out by the subject itself, because it is an act of its self-activity. We readily become aware here that this act must originally be one and equally valid for all combination, and that dissolution, analysis, which seems to be its opposite, nevertheless always presupposes it. For where the understanding has not previously combined anything, it cannot dissolve anything either, since only through it could anything have been given as combined to the power of representation.

But besides the concept of the manifold and of its synthesis, the concept of combination also carries with it that of the manifold's unity. Combination is the representation of the synthetic unity of the manifold*.

[B 131]

The representation of this unity therefore cannot arise from combination; rather, by being added to the representation of the manifold, it first makes the concept of combination possible. This unity, which precedes a priori all concepts of combination, is not the category of unity (§ 10). For all categories are grounded on logical functions in judgments, but in these combination, and hence unity of given concepts, is already thought. The category therefore

already presupposes combination. We must consequently seek this unity (as qualitative, § 12) still higher: namely, in what itself contains the ground of the unity of different concepts in judgments, and hence of the possibility of the understanding, even in its logical use.

* Whether the representations themselves are identical, and one can therefore be thought analytically through the other, is not considered here. Insofar as the manifold is at issue, consciousness of the one must still always be distinguished from consciousness of the other, and only the synthesis of this (possible) consciousness concerns us here.

§ 16 On the original synthetic unity of apperception

The "I think" must be able to accompany all my representations.

[B 132]

For otherwise something would be represented in me that could not be thought at all, which amounts to saying that the representation would either be impossible or at least be nothing for me. The representation that can be given before all thinking is called intuition. Thus all the manifold of intuition has a necessary relation to the "I think" in the same subject in which this manifold is encountered. But this representation is an act of spontaneity, that is, it cannot be regarded as belonging to sensibility. I call it pure apperception, to distinguish it from empirical apperception, or also original apperception. For it is the self-consciousness that, in producing the representation "I think," which must be able to accompany all the others and is one and the same in all consciousness, cannot itself be accompanied by any further representation. I also call its unity the transcendental unity of self-consciousness, to indicate the possibility of a priori cognition from it. For the manifold representations given in a certain intuition would not all be my representations unless they all belonged to one self-consciousness. That is, as my representations, even if I am not conscious of them as such, they must nevertheless necessarily conform to the condition under which alone they can stand together in a universal self-consciousness, since otherwise they would not all belong to me.

[B 133]

Much can be inferred from this original combination.

Namely, this thoroughgoing identity of the apperception of a manifold given in intuition contains a synthesis of representations and is possible only through the consciousness of this synthesis. For the empirical consciousness accompanying different representations is in itself dispersed and without relation to the identity of the subject. This relation therefore does not yet arise through my accompanying each representation with consciousness, but through my adding one representation to another and being conscious of their synthesis. Thus only because I can combine a manifold of given representations in one consciousness is it possible for me to represent to myself the identity of consciousness in these representations themselves. That is, the analytic unity of apperception is possible only on the presupposition of some synthetic unity*.

[B 134]

The thought "These representations given in intuition all belong to me" accordingly means the same as "I unite them in one self-consciousness, or can at least unite them in it." Although this thought is not itself yet the consciousness of the synthesis of representations, it nevertheless presupposes the possibility of that synthesis. That is, only because I can comprehend their manifold in one consciousness do I call them all my representations; otherwise I would have as multicolored and diverse a self as I have representations of which I am conscious. The synthetic unity of the manifold of intuitions, as given a priori, is therefore the ground of the identity of apperception itself, which precedes a priori all my determinate thinking. Combination, however, does not lie in objects and cannot be borrowed from them through perception and thereby first taken up into the understanding.

[B 135]

It is solely an operation of the understanding, which is itself nothing more than the faculty of combining a priori and bringing the manifold of given representations under the unity of apperception. This principle is the supreme one in the whole of human cognition.

* The analytic unity of consciousness attaches to all common concepts as such. For example, if I think red in general, I thereby represent a constitution that (as a mark) can be encountered in something or combined with other representa-

tions. Thus only by virtue of a previously thought possible synthetic unity can I represent analytic unity to myself. A representation that is to be thought as common to different representations is regarded as belonging to ones that also have something different in themselves besides it. Consequently, it must first be thought in synthetic unity with other representations, even if these are only possible, before I can think in it the analytic unity of consciousness that makes it a conceptus communis. And so the synthetic unity of apperception is the highest point to which we must attach every use of the understanding, even the whole of logic and, after it, transcendental philosophy. Indeed, this faculty is the understanding itself.

Now this principle of the necessary unity of apperception is itself indeed identical, hence an analytic proposition; yet it declares a synthesis of the manifold given in an intuition to be necessary, without which that thoroughgoing identity of self-consciousness cannot be thought. For through the I, as a simple representation, no manifold is given. It can be given only in intuition, which is distinct from the I, and thought through combination in one consciousness. An understanding in which all the manifold were given at the same time through self-consciousness would intuit; ours can only think and must seek intuition in the senses. I am therefore conscious of the identical self with regard to the manifold of representations given to me in an intuition, because I call them all my representations, which make up one. But this amounts to my being conscious a priori of a necessary synthesis of them, called the original synthetic unity of apperception.

[B 136]

All representations given to me stand under it, but they must also be brought under it through a synthesis.

§ 17 The principle of the synthetic unity of apperception is the supreme principle of every use of the understanding

According to transcendental aesthetic, the supreme principle of the possibility of all intuition in relation to sensibility was that all its manifold stands under the formal conditions of space and time. The supreme principle of this same possibility in relation to the understanding is that all the manifold of intuition

stands under conditions of the original synthetic unity of apperception*. All manifold representations of intuition stand under the first principle insofar as they are given to us; under the second insofar as they must be capable of being combined in one consciousness.

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For without this nothing can be thought or cognized through them, because the given representations would not have the act of apperception, "I think," in common and would thus not be comprehended in one self-consciousness.

* Space and time, and all their parts, are intuitions, hence singular representations together with the manifold they contain within themselves (see the Transcendental Aesthetic), and hence not mere concepts. In them we encounter not the same consciousness as contained in many representations, but many representations as contained in one, and consciousness of them; thus they are encountered as composite, and consequently the unity of consciousness is encountered as synthetic, yet original. This singularity of theirs is important in application (see § 25).

Understanding, generally speaking, is the faculty of cognitions. These consist in the determinate relation of given representations to an object. An object, however, is that in whose concept the manifold of a given intuition is united. But all unification of representations requires unity of consciousness in their synthesis. Consequently, the unity of consciousness alone constitutes the relation of representations to an object, hence their objective validity, and consequently their becoming cognitions; and on it, therefore, even the possibility of the understanding rests.

The first pure cognition of the understanding, then, on which its entire remaining use is grounded, and which is at the same time wholly independent of all conditions of sensible intuition, is the principle of the original synthetic unity of apperception. Thus the mere form of outer sensible intuition, space, is not yet cognition at all; it gives only the manifold of intuition a priori for a possible cognition.

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But to cognize anything in space, for example a line, I must draw it, and thus synthetically bring about a determinate combination of the given manifold, so that the unity of this act is at the same time the unity of consciousness (in the concept of a line), and only thereby is an object (a determinate space) cognized. The synthetic unity of consciousness is therefore an objective condition of all cognition, not merely a condition I myself need in order to cognize an object, but one under which every intuition must stand in order to become an object for me. For in any other way, and without this synthesis, the manifold would not unite in one consciousness.

This latter proposition, as stated, is itself analytic, although it makes synthetic unity the condition of all thinking. For it says nothing more than that all my representations in any given intuition must stand under the condition under which alone I can count them, as my representations, as belonging to the identical self, and can thus comprehend them, as synthetically combined in one apperception, through the general expression "I think."

But this principle is not a principle for every possible understanding in general, only for one through whose pure apperception in the representation "I am" no manifold is yet given at all.

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An understanding through whose self-consciousness the manifold of intuition were given at the same time—an understanding through whose representation the objects of that representation would at the same time exist—would not require a special act of synthesis of the manifold into the unity of consciousness, as the human understanding, which merely thinks and does not intuit, requires. Yet for the human understanding it is unavoidably the first principle, so that it cannot form even the least concept of another possible understanding, whether one that itself intuited or one that, though having a sensible intuition as its foundation, had one of a kind different from intuition in space and time.

§ 18 What the objective unity of self-consciousness is

The transcendental unity of apperception is that through which all the manifold given in an intuition is united in a concept of the object. It is therefore called objective and must be distinguished from the subjective unity of consciousness, which is a determination of inner sense through which that manifold of intuition is empirically given for such a combination. Whether I can be empirically conscious of the manifold as simultaneous or as successive depends on circumstances or empirical conditions.

[B 140]

Hence the empirical unity of consciousness through the association of representations itself concerns an appearance and is entirely contingent. By contrast, the pure form of intuition in time, merely as intuition in general containing a given manifold, stands under the original unity of consciousness solely through the necessary relation of the manifold of intuition to the one "I think"; thus through the pure synthesis of the understanding, which underlies the empirical synthesis a priori. That unity alone is objectively valid. The empirical unity of apperception, which we are not considering here and which is also derived only from the former under given conditions in concreto, has merely subjective validity. One person combines the representation of a certain word with one thing, another with another thing; and the unity of consciousness in what is empirical is not necessary and universally valid with regard to what is given.

§ 19 The logical form of all judgments consists in the objective unity of apperception of the concepts contained in them

I have never been able to satisfy myself with the explanation logicians give of a judgment in general: it is, as they say, the representation of a relation between two concepts.

[B 141]

Without quarreling with them here over the defect in this explanation—that at most it fits only categorical, not hypothetical and disjunctive judgments, since these latter contain not a relation of concepts but of judgments themselves—although many troublesome consequences have grown out of this oversight in logic,* I note only that what this relation consists in is not determined here.

* The extensive doctrine of the four syllogistic figures concerns only categorical inferences of reason. Although it is nothing more than an art of slipping immediate inferences (consequentiae immediatiae) under the premises of a pure inference of reason to create the illusion of more kinds of inference than that of the first figure, it would not thereby alone have enjoyed any particular success had it not managed to establish the exclusive authority of categorical judgments as those to which all others must be reducible. This, however, is false according to § 9.

But if I examine more closely the relation of given cognitions in every judgment, and distinguish it, as belonging to the understanding, from the relation according to laws of reproductive imagination, which has only subjective validity, I find that a judgment is nothing other than the way of bringing given cognitions to the objective unity of apperception.

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This is what the relational word "is" in judgments aims at: distinguishing the objective unity of given representations from their subjective unity. For it designates their relation to original apperception and its necessary unity, even if the judgment itself is empirical and hence contingent, for example, "Bodies are heavy." By this I do not mean that these representations necessarily belong together in empirical intuition, but that they belong together by virtue of the necessary unity of apperception in the synthesis of intuitions: that is, according to principles of the objective determination of all representations insofar as cognition can arise from them. These principles are all derived from the principle of the transcendental unity of apperception. Only in this way does this relation become a judgment, that is, a relation that is objectively valid and sufficiently distinct from a relation of the very same representations in which there would be merely subjective validity, for example according to laws of association. According to the latter I could say only, "When I carry a body, I feel a pressure of weight," but not, "It, the body, is heavy." The latter means that these two representations are combined in the object, that is, regardless of the state of the subject, and not merely together in perception, however often it may be repeated.

[B 143]

§ 20 All sensible intuitions stand under the categories, as conditions under which alone their manifold can come together in one consciousness

The manifold given in a sensible intuition necessarily falls under the original synthetic unity of apperception, because through this alone the unity of intuition is possible (§ 17). But the act of the understanding through which the manifold of given representations, whether intuitions or concepts, is brought under one apperception in general is the logical function of judgments (§ 19). Thus all the manifold, insofar as it is given in one empirical intuition, is determined with regard to one of the logical functions of judging, namely that through which it is brought to one consciousness in general. But the categories are nothing other than precisely these functions of judging insofar as the manifold of a given intuition is determined with regard to them (§ 13). Therefore the manifold in a given intuition also necessarily stands under categories.

[B 144]

§ 21 Observation

A manifold contained in an intuition that I call mine is represented through the synthesis of the understanding as belonging to the necessary unity of self-consciousness, and this occurs through the category*. The category thus indicates that the empirical consciousness of a given manifold of one intuition stands under a pure a priori self-consciousness, just as empirical intuition stands under a pure sensible intuition, which likewise occurs a priori.—In the above proposition, then, a beginning has been made toward a deduction of the pure concepts of the understanding. In this deduction, since the categories arise in the understanding alone independently of sensibility, I must still abstract from the way the manifold is given for an empirical intuition, to attend only to the unity added to intuition through the category by the understanding. Later (§ 26) the way empirical intuition is given in sensibility will be taken as the basis.

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It will then be shown that its unity is none other than that which, according to the preceding § 20, the category prescribes to the manifold of a given intuition in general. Only then, through explaining its a priori validity with regard to all objects of our senses, will the aim of the deduction be fully attained.

* The ground of proof rests on the represented unity of intuition through which an object is given. This unity always includes a synthesis of the manifold given for an intuition, and already contains the relation of this manifold to the unity of apperception.

But there is one point from which I could not abstract in the above proof: namely, that the manifold for intuition must be given before the synthesis of the understanding and independently of it; how it is given, however, remains undetermined here. For if I wished to think an understanding that itself intuited, such as a divine understanding that did not represent given objects but through whose representation the objects themselves were at the same time given or produced, the categories would have no meaning at all with regard to such cognition. They are only rules for an understanding whose entire capacity consists in thinking: that is, in the act of bringing the synthesis of the manifold given to it from elsewhere in intuition to the unity of apperception. Such an understanding therefore cognizes nothing at all on its own, but merely combines and orders the material for cognition, the intuition that must be given to it through the object. Yet no further ground can be given for this peculiarity of our understanding.

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It brings about a priori unity of apperception only by means of the categories, and only through precisely this kind and number of them. Nor can any ground be given for why we have precisely these and no other functions of judging, or why time and space are the only forms of our possible intuition.

§ 22 The category has no other use for the cognition of things than its application to objects of experience

To think an object and to cognize an object are therefore not the same. Cognition requires two elements: first, the concept through which an object in general is thought (the category); and second, the intuition through which it is

given. For if an intuition corresponding to the concept could not be given at all, the concept would be a thought as regards form, but without any object, and through it no cognition of any thing would be possible. For, so far as I knew, there would be and could be nothing to which my thought could be applied. Now all intuition possible for us is sensible (Aesthetic). Hence, for us, thinking an object in general through a pure concept of the understanding can become cognition only insofar as this concept is related to objects of the senses.
[B 147]
Sensible intuition is either pure intuition (space and time) or empirical intuition of what is immediately represented as actual in space and time through sensation. By determining the former, we can obtain a priori cognitions of objects (in mathematics), but only as regards their form, as appearances. Whether there can be things that must be intuited in this form still remains undecided. Consequently, all mathematical concepts are not in themselves cognitions, except insofar as we presuppose that there are things that can be presented to us only in conformity with the form of that pure sensible intuition. But things in space and time are given only insofar as they are perceptions (representations accompanied by sensation), hence through empirical representation. Consequently, pure concepts of the understanding, even when applied to a priori intuitions (as in mathematics), yield cognition only insofar as these intuitions, and hence also the concepts of the understanding through them, can be applied to empirical intuitions. Consequently, the categories, even by means of intuition, supply us with no cognition of things except through their possible application to empirical intuition: that is, they serve only for the possibility of empirical cognition. This, however, is called experience. Consequently, the categories have no other use for the cognition of things.
[B 148]
Their use extends only so far as these are taken as objects of possible experience.
§ 23
The above proposition is of the greatest importance, for it determines the boundaries of the use of pure concepts of the understanding with regard to objects, just as transcendental aesthetic determined the boundaries of the use of

the pure form of our sensible intuition. Space and time, as conditions of the possibility of how objects can be given to us, hold no further than for objects of the senses, hence only of experience. Beyond these boundaries they represent nothing at all, for they are only in the senses and have no actuality outside them. Pure concepts of the understanding are free from this restriction and extend to objects of intuition in general, whether the intuition is like ours or not, provided only that it is sensible and not intellectual. But this further extension of concepts beyond our sensible intuition is of no help to us. For they are then empty concepts of objects, about which we cannot judge through them whether the objects are even possible or not: mere forms of thought without objective reality. For we have no intuition at hand to which the synthetic unity of apperception, which alone they contain, could be applied, so that they could thereby determine an object.

[B 149]

Our sensible and empirical intuition alone can give them sense and meaning.

If, then, an object of nonsensible intuition is assumed as given, we can certainly represent it through all the predicates already contained in the presupposition that nothing belonging to sensible intuition applies to it: that it is not extended or in space; that its duration is not time; that no alteration (succession of determinations in time) is encountered in it; and so on. But it is no proper cognition if I merely indicate how the intuition of the object is not constituted, without being able to say what is contained in it. For then I have not represented the possibility of an object for my pure concept of the understanding at all, since I could give no intuition corresponding to it, but could only say that ours does not apply to it. The chief point here, however, is that not even a single category could be applied to such a something: for example, the concept of a substance, that is, of something that could exist as subject but never as mere predicate. I do not know at all whether there could be any thing corresponding to this determination of thought unless empirical intuition supplied me with the case of its application. But more of this later.

[B 150]

§ 24 On the application of the categories to objects of the senses in general

Pure concepts of the understanding relate, through the understanding alone, to objects of intuition in general, leaving it undetermined whether this is our intuition or some other, though still sensible, intuition. But for that very reason they are mere forms of thought through which no determinate object is yet cognized. The synthesis or combination of the manifold in them related merely to the unity of apperception and was thereby the ground of the possibility of a priori cognition insofar as it rests on the understanding, and hence was not only transcendental but also purely intellectual. But since a certain form of sensible intuition lies a priori at the foundation in us, resting on the receptivity of the capacity for representation (sensibility), the understanding, as spontaneity, can determine inner sense through the manifold of given representations in accordance with the synthetic unity of apperception. It can thus think a priori the synthetic unity of apperception of the manifold of sensible intuition as the condition under which all objects of our (human) intuition must necessarily stand. In this way the categories, as mere forms of thought, acquire objective reality.

[B 151]

This means application to objects that can be given to us in intuition, but only as appearances; for only of these are we capable of a priori intuition.

This synthesis of the manifold of sensible intuition, which is possible and necessary a priori, can be called figurative (synthesis speciosa), as distinguished from the synthesis that was thought in the mere category with regard to the manifold of an intuition in general and is called combination of the understanding (synthesis intellectualis). Both are transcendental, not merely because they themselves proceed a priori, but also because they ground the possibility of other a priori cognition.

But figurative synthesis, when it relates solely to the original synthetic unity of apperception, that is, this transcendental unity thought in the categories, must be called the transcendental synthesis of imagination, as distinguished from merely intellectual combination. Imagination is the faculty of representing an object in intuition even without its presence. Now, since all our intuition is

sensible, imagination belongs to sensibility because of the subjective condition under which alone it can give the concepts of the understanding a corresponding intuition.

[B 152]

Yet insofar as its synthesis is an exercise of spontaneity, which is determining and not, like sense, merely determinable, and can thus determine sense a priori as regards its form in accordance with the unity of apperception, imagination is to that extent a faculty of determining sensibility a priori. Its synthesis of intuitions, in conformity with the categories, must be the transcendental synthesis of imagination. This is an effect of the understanding on sensibility and its first application, at the same time the ground of all the others, to objects of the intuition possible for us. As figurative, it is distinguished from intellectual synthesis, without any imagination, through the understanding alone. Insofar as imagination is spontaneity, I also sometimes call it productive imagination, thereby distinguishing it from reproductive imagination, whose synthesis is subject solely to empirical laws, namely those of association. The latter therefore contributes nothing to explaining the possibility of a priori cognition, and for that reason belongs not to transcendental philosophy but to psychology.

* * *

Here is the place to make intelligible the paradox that must have struck everyone in the exposition of the form of inner sense (§ 6).

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The paradox is how this sense presents even ourselves to consciousness only as we appear to ourselves, not as we are in ourselves, because we intuit ourselves only as we are inwardly affected. This seems contradictory, since we would have to stand in a passive relation to ourselves. Hence in systems of psychology it is usual to prefer identifying inner sense with the faculty of apperception, which we carefully distinguish.

What determines inner sense is the understanding and its original faculty of combining the manifold of intuition, that is, of bringing it under one apperception (on which even its own possibility rests). Now in us human beings the understanding is not itself a faculty of intuitions, and even if these were given

in sensibility, it cannot take them into itself so as to combine, as it were, the manifold of its own intuition. Its synthesis, considered on its own, is therefore nothing other than the unity of the act of which it is conscious as such even without sensibility, but through which it is itself capable of inwardly determining sensibility with regard to the manifold that may be given to it according to the form of sensibility's intuition. Under the name of a transcendental synthesis of imagination, then, it exercises on the passive subject whose faculty it is that act of which we rightly say that inner sense is affected by it.

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Apperception and its synthetic unity are so far from being identical with inner sense that the former, as the source of all combination, relates to the manifold of intuitions in general under the name of the categories, and to objects in general before all sensible intuition. Inner sense, by contrast, contains the mere form of intuition, but without combination of the manifold in it, hence no determinate intuition at all. Such intuition is possible only through consciousness of the determination of inner sense by the transcendental act of imagination (the synthetic influence of the understanding on inner sense), which I have called figurative synthesis.

We also perceive this in ourselves at all times. We cannot think a line without drawing it in thought, think a circle without describing it, or represent the three dimensions of space without setting three lines perpendicular to one another from the same point. We cannot even represent time without, in drawing a straight line (that is to be the outwardly figurative representation of time), attending merely to the act of synthesizing the manifold through which we successively determine inner sense, and thus to the succession of this determination in it.

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Motion as an act of the subject (not as a determination of an object)*, and hence the synthesis of the manifold in space, first produces even the concept of succession, if we abstract from space and attend merely to the act through which we determine inner sense in conformity with its form. Thus the understanding does not find such a combination of the manifold already in inner

sense, but produces it by affecting that sense. But how the I that thinks is distinct from the I that intuits itself, in that I can at least represent another way of intuiting as possible, and yet is identical with this latter I as the same subject; how I can therefore say, "I, as intelligence and thinking subject, cognize myself as a thought object, insofar as I am also given to myself in intuition, only as I appear to myself, like other phenomena, not as I am before the understanding"—this involves neither more nor less difficulty than how I can be an object to myself at all, indeed an object of intuition and inner perceptions.

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That this must nevertheless actually be so can be clearly demonstrated, if space is admitted to be a mere pure form of the appearances of outer senses, from the following. We cannot represent time, which is no object of outer intuition at all, in any other way than under the image of a line insofar as we draw it; without this manner of presentation we could not cognize the unity of its dimension at all. Likewise, we must always derive the determination of temporal length, or even of positions in time, for all inner perceptions from what outer things present to us as changeable. Consequently, we must order the determinations of inner sense as appearances in time in precisely the same way as we order those of outer senses in space. Hence, if we concede of the latter that through them we cognize objects only insofar as we are outwardly affected, we must also grant of inner sense that through it we intuit ourselves only as we are inwardly affected by ourselves: that is, as regards inner intuition, we cognize our own subject only as appearance, not as it is in itself**.

* Motion of an object in space does not belong to a pure science, and hence not to geometry, because that something is movable cannot be cognized a priori, but only through experience. But motion as the describing of a space is a pure act of the successive synthesis of the manifold in outer intuition in general through productive imagination, and belongs not only to geometry but even to transcendental philosophy.

** I do not see how one can find so many difficulties in inner sense's being affected by ourselves. Every act of attention can give us an example. In it the understanding always determines inner sense, in conformity with the combina-

tion it thinks, to an inner intuition corresponding to the manifold in the synthesis of the understanding. Everyone can perceive in himself how greatly the mind is ordinarily affected by this.

§ 25

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By contrast, in the transcendental synthesis of the manifold of representations in general, and hence in the original synthetic unity of apperception, I am conscious of myself not as I appear to myself, nor as I am in myself, but only that I am. This representation is a thinking, not an intuiting. Now cognition of ourselves requires, besides the act of thinking that brings the manifold of every possible intuition to the unity of apperception, a determinate kind of intuition through which this manifold is given.

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My own existence is therefore indeed not appearance (much less mere illusion), but the determination of my existence* can occur only in conformity with the form of inner sense, according to the particular way the manifold I combine is given in inner intuition. Accordingly, I have no cognition of myself as I am, but merely as I appear to myself. Consciousness of oneself is thus far from being a cognition of oneself, despite all the categories that constitute the thinking of an object in general through combination of the manifold in one apperception. Just as, to cognize an object distinct from me, I still need, besides the thinking of an object in general (in the category), an intuition through which I determine that general concept, so, to cognize myself, I need, besides consciousness or my thinking myself, an intuition of the manifold in me through which I determine this thought. I exist as an intelligence conscious solely of its faculty of combination, but, with regard to the manifold it is to combine, subject to a limiting condition it calls inner sense.

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This intelligence can make that combination intuitable only according to relations of time, which lie entirely outside the proper concepts of the understanding. Hence it can cognize even itself only as, with regard to an intuition that

cannot be intellectual and given through the understanding itself, it merely appears to itself, not as it would cognize itself if its intuition were intellectual.

* The "I think" expresses the act of determining my existence. Existence is therefore already given through it, but the way I am to determine it, that is, posit in myself the manifold belonging to it, is not yet thereby given. This requires self-intuition, which has an a priori given form, time, as its foundation; this form is sensible and belongs to the receptivity of what is determinable. Now if I do not have another self-intuition that gives what determines in me, of whose spontaneity alone I am conscious, before the act of determining, just as time gives what is determinable, then I cannot determine my existence as that of a self-active being. Rather, I represent only the spontaneity of my thinking, that is, of determining, and my existence always remains determinable only sensibly, that is, as the existence of an appearance. Yet this spontaneity makes me call myself an intelligence.

§ 26 Transcendental deduction of the universally possible use in experience of the pure concepts of the understanding

In the metaphysical deduction the a priori origin of the categories in general was demonstrated through their complete coincidence with the universal logical functions of thinking; in the transcendental deduction their possibility as a priori cognitions of objects of an intuition in general was presented (§§ 20, 21). We must now explain the possibility of cognizing a priori, through categories, whatever objects may ever come before our senses, not as regards the form of their intuition but according to the laws of their combination; thus, as it were, of prescribing laws to nature and even making nature possible.

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For without this fitness of the categories it would not be evident how everything that may ever come before our senses must stand under laws that arise a priori from the understanding alone.

First I note that by the synthesis of apprehension I understand the composition of the manifold in an empirical intuition through which perception, that is, empirical consciousness of it (as appearance), becomes possible.

In the representations of space and time we have a priori forms of outer as well as inner sensible intuition, and the synthesis of apprehension of the manifold of appearance must always conform to these, because it can itself occur only according to this form. But space and time are represented a priori not merely as forms of sensible intuition, but as intuitions themselves (containing a manifold), hence with the determination of the unity of this manifold in them (see the Transcendental Aesthetic)*.

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Thus even unity of the synthesis of the manifold, outside us or within us, and hence also a combination to which everything to be represented determinately in space or time must conform, is already given a priori together with (not in) these intuitions, as a condition of the synthesis of all apprehension. But this synthetic unity can be none other than the unity of the combination of the manifold of a given intuition in general in an original consciousness, in conformity with the categories, only applied to our sensible intuition. Consequently, all synthesis through which even perception becomes possible stands under the categories. And since experience is cognition through connected perceptions, the categories are conditions of the possibility of experience, and thus also hold a priori of all objects of experience.

* Space represented as an object, as is actually required in geometry, contains more than the mere form of intuition: namely, the comprehension of the manifold given according to the form of sensibility in one intuitive representation. Thus the form of intuition gives merely the manifold, but formal intuition gives unity of the representation. In the Aesthetic I counted this unity merely as belonging to sensibility, only to point out that it precedes all concepts, although it presupposes a synthesis not belonging to the senses, through which, however, all concepts of space and time first become possible. For since through this synthesis, as the understanding determines sensibility, space or time are first given as intuitions, the unity of this intuition belongs a priori to space and time, not to the concept of the understanding (§ 24).

* * *

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Thus, for example, when I make the empirical intuition of a house into a perception by apprehending its manifold, the necessary unity of space and of outer sensible intuition in general lies at the foundation for me, and I as it were trace its shape in conformity with this synthetic unity of the manifold in space. But this very same synthetic unity, if I abstract from the form of space, has its seat in the understanding and is the category of the synthesis of the homogeneous in an intuition in general: that is, the category of magnitude, to which that synthesis of apprehension, that is, perception, must therefore wholly conform*.

* In this way it is proved that the synthesis of apprehension, which is empirical, must necessarily conform to the synthesis of apperception, which is intellectual and contained entirely a priori in the category. It is one and the same spontaneity that introduces combination into the manifold of intuition, there under the name of imagination, here under that of understanding.

When (in another example) I perceive the freezing of water, I apprehend two states (fluidity and solidity) as standing in a temporal relation to one another.

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But in the time that I place at the foundation of the appearance as inner intuition, I necessarily represent synthetic unity of the manifold, without which that relation could not be given as determined in one intuition with regard to temporal succession. Now this synthetic unity, as the a priori condition under which I combine the manifold of an intuition in general, is, if I abstract from the constant form of my inner intuition, time, the category of cause. Through this category, when I apply it to my sensibility, I determine everything that happens in time in general as regards its relation. Thus apprehension in such an event, and hence the event itself as regards possible perception, stands under the concept of the relation of effects and causes, and so in all other cases.

* * *

Categories are concepts that prescribe laws a priori to appearances, hence to nature as the sum total of all appearances (natura materialiter spectata). Now, since the categories are not derived from nature and do not conform to it as their model, for otherwise they would be merely empirical, the question is how

we can comprehend that nature must conform to them: that is, how they can determine a priori the combination of the manifold of nature without drawing it from nature. Here is the solution to this riddle.

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Now it is no more surprising that the laws of appearances in nature must agree with the understanding and its a priori form, that is, its faculty of combining the manifold in general, than that appearances themselves must agree with the form of sensible intuition a priori. For laws exist in appearances no more than appearances exist in themselves: laws exist only relative to the subject in which appearances inhere, insofar as it has understanding, just as appearances exist only relative to that same being insofar as it has senses. Things in themselves would necessarily possess their conformity to law even apart from an understanding that cognizes them. But appearances are only representations of things that exist uncognized as regards what they may be in themselves. As mere representations, however, they stand under no law of connection except the one prescribed by the connecting faculty. Now what connects the manifold of sensible intuition is imagination, which depends on the understanding as regards the unity of its intellectual synthesis and on sensibility as regards the manifoldness of apprehension. Since all possible perception depends on the synthesis of apprehension, and this empirical synthesis itself depends on the transcendental synthesis and hence on the categories, all possible perceptions, and thus everything that can ever reach empirical consciousness, that is, all appearances of nature, must stand under the categories as regards their combination.

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Nature, considered merely as nature in general, depends on these as the original ground of its necessary conformity to law (as natura formaliter spectata). But the pure faculty of understanding does not suffice to prescribe a priori laws to appearances through mere categories beyond those laws on which a nature in general rests, as conformity to law of appearances in space and time. Particular laws, because they concern empirically determined appearances, cannot be fully derived from those laws, although they all stand under them. Experience must

be added in order to know these particular laws at all. But concerning experience in general, and what can be cognized as an object of it, those a priori laws alone provide instruction.

§ 27 The result of this deduction of the concepts of the understanding

We cannot think an object except through categories; we cannot cognize a thought object except through intuitions corresponding to those concepts. Now all our intuitions are sensible, and this cognition, insofar as its object is given, is empirical. But empirical cognition is experience.

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Consequently, no a priori cognition is possible for us except solely of objects of possible experience*.

* To prevent anyone from taking premature offense at the feared harmful consequences of this proposition, I will merely recall that in thinking the categories are not limited by the conditions of our sensible intuition, but have an unbounded field. Only cognizing what we think, determining the object, requires intuition. Where intuition is lacking, the thought of the object can nevertheless still have its true and useful consequences for the subject's use of reason. But this use, since it is not always directed to determining the object, hence to cognition, but also to determining the subject and its willing, cannot yet be set out here.

But this cognition, restricted solely to objects of experience, is not on that account all borrowed from experience. Rather, both pure intuitions and pure concepts of the understanding are elements of cognition found in us a priori. Now there are only two ways in which a necessary agreement of experience with the concepts of its objects can be thought: either experience makes these concepts possible, or these concepts make experience possible.

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The first does not hold with regard to the categories (nor to pure sensible intuition), for they are a priori concepts and hence independent of experience; asserting an empirical origin would be a kind of generatio aequivoca. Consequently, only the second remains, as it were a system of the epigenesis of pure reason: namely, that the categories contain, on the side of the understand-

ing, the grounds of the possibility of all experience in general. How they make experience possible, however, and what principles of its possibility they supply in their application to appearances, will be taught more fully by the following chapter on the transcendental use of the power of judgment.

If someone wished to propose a middle way between the two sole ways just named—namely, that the categories were neither self-thought first a priori principles of our cognition nor drawn from experience, but subjective predispositions for thinking implanted in us together with our existence, arranged by our author so that their use agreed precisely with the laws of nature according to which experience proceeds, a kind of preformation system of pure reason—then, apart from the fact that under such a hypothesis no end can be seen to how far one might carry the assumption of predetermined predispositions for future judgments, the following would be decisive against this middle way.

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In such a case the categories would lack the necessity that belongs essentially to their concept. For example, the concept of cause, which asserts the necessity of an outcome under a presupposed condition, would be false if it rested only on an arbitrary subjective necessity implanted in us to combine certain empirical representations according to such a rule of relation. I could not say, "The effect is combined with the cause in the object, that is, necessarily," but only, "I am so constituted that I cannot think this representation as connected in any other way." This is precisely what the skeptic most desires. For then all our insight, through the supposed objective validity of our judgments, is nothing but sheer illusion; and there would also be no shortage of people who would not admit to this subjective necessity, which must be felt, in themselves. At least one could not dispute with anyone over what rests merely on the way his subject is organized.

Brief account of this deduction

It is the presentation of the pure concepts of the understanding, and with them of all theoretical a priori cognition, as principles of the possibility of experience. Experience, in turn, is presented as the determination of appearances in space and time in general.

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And this determination, finally, is presented from the principle of the original synthetic unity of apperception, as the form of the understanding in relation to space and time as original forms of sensibility.
* * *
Only up to this point do I consider division into numbered sections necessary, because we have been dealing with elementary concepts. Now that we wish to present their use, the exposition may proceed in a continuous connection without such division.
Transcendental Analytic Second Book
The Analytic of Principles
General logic is built on a plan that coincides precisely with the division of the higher cognitive faculties. These are understanding, power of judgment, and reason. In its analytic, that doctrine therefore treats of concepts, judgments, and inferences, precisely in accordance with the functions and order of those powers of the mind comprehended under the broad name of understanding in general.
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Since this merely formal logic abstracts from all content of cognition, whether pure or empirical, and concerns itself solely with the form of thinking, discursive cognition, in general, it can also include in its analytic part the canon for reason. Reason's form has its secure prescription, which can be understood a priori through mere analysis of the acts of reason into their moments, without considering the particular nature of the cognition used in them.
Transcendental logic, being restricted to a determinate content, namely solely that of pure a priori cognitions, cannot follow general logic in this division. For it becomes apparent that the transcendental use of reason is not objectively valid at all, and hence does not belong to the logic of truth, the analytic, but as a logic of illusion requires a separate part of the scholarly doctrinal structure under the name of transcendental dialectic.

Understanding and power of judgment accordingly have their canon of objectively valid, hence true, use in transcendental logic, and thus belong to its analytic part. But reason is wholly dialectical in its attempts to establish anything a priori about objects and to enlarge cognition beyond the boundaries of possible experience.

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Its illusory assertions do not fit at all into a canon such as the analytic is to contain.

The analytic of principles will therefore be solely a canon for the power of judgment, teaching it to apply to appearances the concepts of the understanding that contain the condition for a priori rules. For this reason, in taking the proper principles of the understanding as my theme, I will employ the name "doctrine of the power of judgment," which designates this business more precisely.

Introduction On the Transcendental Power of Judgment in General

If understanding in general is explained as the faculty of rules, then the power of judgment is the faculty of subsuming under rules, that is, of distinguishing whether something stands under a given rule (casus datae legis), or not. General logic contains no precepts for the power of judgment and cannot contain any. For since it abstracts from all content of cognition, nothing remains for it but one business.

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That business is to unfold analytically the mere form of cognition in concepts, judgments, and inferences, and thereby to establish formal rules for every use of the understanding. If it now wished to show generally how one should subsume under these rules, that is, distinguish whether something stands under them or not, this could happen only through another rule. But precisely because it is a rule, this would in turn require instruction for the power of judgment. It thus becomes apparent that, although the understanding is capable of being instructed and equipped through rules, the power of judgment is a special talent that cannot be taught at all, but only practiced. Hence it is also the distinctive element of so-called native wit, whose lack no schooling can make

good. For although a school can supply a limited understanding with an abundance of rules borrowed from another's insight, and as it were graft them onto it, the capacity to use them correctly must nevertheless belong to the pupil himself; and without such a natural gift, no rule prescribed to him for this purpose is safe from misuse*.

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Thus a physician, a judge, or a statesman may have many excellent pathological, legal, or political rules in his head, to the point of being a thorough teacher of them himself, and yet easily go wrong in applying them. This may be either because he lacks natural power of judgment, though not understanding, and can indeed grasp the universal in abstracto but cannot distinguish whether a case in concreto falls under it, or because he has not been sufficiently trained for this judgment through examples and actual business. This is also the one great benefit of examples: they sharpen the power of judgment. For as regards the correctness and precision of the understanding's insight, examples ordinarily impair it somewhat instead, because they only rarely fulfill the condition of the rule adequately (as casus in terminis). Moreover, they often weaken the effort of the understanding to grasp rules in general, independently of the particular circumstances of experience, as regards their sufficiency, and thus in the end accustom us to using them more as formulas than as principles.

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Examples are therefore the wheeled walking frame of the power of judgment, which anyone lacking its natural talent can never do without.

* Lack of power of judgment is properly what is called stupidity, and there is no remedy at all for such a defect. A dull or limited mind, lacking nothing but the proper degree of understanding and its own concepts, can be very well equipped through learning, even to the point of erudition. But since it then usually also lacks that (the secunda Petri), it is not unusual to encounter very learned men who, in using their science, frequently reveal that never-remediable deficiency.

But although general logic can give the power of judgment no precepts, the situation with transcendental logic is quite different. Indeed, the latter seems to have as its proper business the correction and securing of the power of judgment in the use of the pure understanding through determinate rules. For philosophy seems unnecessary, or rather ill placed, as a doctrine for enlarging the understanding in the field of pure a priori cognitions, since after all previous attempts little or no ground has been gained by it. But as a critique, to prevent the missteps of the power of judgment (lapsus judicii) in using the few pure concepts of the understanding we possess, philosophy is called upon with all its acuteness and art of examination, although its benefit is then merely negative.

Transcendental philosophy, however, has this peculiarity: besides the rule, or rather the universal condition for rules, given in the pure concept of the understanding, it can at the same time indicate a priori the case to which they are to be applied.

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The reason for its advantage in this respect over all other instructive sciences, apart from mathematics, lies precisely in its treating of concepts that are to relate a priori to their objects. Their objective validity therefore cannot be demonstrated a posteriori, for that would leave their distinctive dignity entirely untouched. Rather, it must at the same time set out, in general but sufficient marks, the conditions under which objects can be given in agreement with those concepts; otherwise they would have no content at all and would thus be mere logical forms, not pure concepts of the understanding.

This transcendental doctrine of the power of judgment will now contain two chapters: the first treating of the sensible condition under which alone pure concepts of the understanding can be used, that is, the schematism of the pure understanding; the second, of the synthetic judgments that flow a priori from pure concepts of the understanding under these conditions and underlie all other a priori cognitions, that is, the principles of the pure understanding.

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Transcendental Doctrine of the Power of Judgment (or Analytic of Principles)
First Chapter On the Schematism of the Pure Concepts of the Understanding

In every subsumption of an object under a concept, the representation of the former must be homogeneous with the latter: that is, the concept must contain what is represented in the object to be subsumed under it. For this is precisely what the expression means: an object is contained under a concept. Thus the empirical concept of a plate is homogeneous with the pure geometrical concept of a circle, in that the roundness thought in the former can be intuited in the latter.

But pure concepts of the understanding, compared with empirical, indeed with sensible intuitions in general, are entirely heterogeneous and can never be encountered in any intuition. How, then, is the subsumption of the latter under the former, and hence the application of the category to appearances, possible, since no one will say that a category, for example causality, can also be intuited through the senses and is contained in appearance?

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This very natural and important question is properly the reason that makes a transcendental doctrine of the power of judgment necessary: namely, to show how pure concepts of the understanding can possibly be applied to appearances in general. In all other sciences, where the concepts through which the object is thought generally are not so different and heterogeneous from those that represent it in concreto as it is given, no special exposition concerning the application of the former to the latter is necessary.

Now it is clear that there must be a third thing that must be homogeneous on the one hand with the category and on the other with the appearance, making possible the application of the former to the latter. This mediating representation must be pure (without anything empirical) and yet intellectual on the one hand and sensible on the other. Such a representation is the transcendental schema.

The concept of the understanding contains pure synthetic unity of the manifold in general. Time, as the formal condition of the manifold of inner sense, hence of the connection of all representations, contains an a priori manifold in

pure intuition. Now a transcendental determination of time is homogeneous with the category (which constitutes its unity) insofar as it is universal and rests on an a priori rule.

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But it is, on the other hand, homogeneous with appearance insofar as time is contained in every empirical representation of the manifold. Hence an application of the category to appearances will be possible by means of the transcendental determination of time, which, as the schema of the concepts of the understanding, mediates the subsumption of appearances under the category.

After what has been shown in the deduction of the categories, I hope no one will hesitate to decide the question whether these pure concepts of the understanding have merely an empirical use or also a transcendental one: that is, whether they relate a priori to appearances solely as conditions of a possible experience, or whether, as conditions of the possibility of things in general, they can be extended to objects in themselves (without any restriction to our sensibility). For there we saw that concepts are entirely impossible and cannot have any meaning unless an object is given either to them themselves or at least to the elements of which they consist; hence they cannot relate to things in themselves (without regard to whether and how these may be given to us) at all. Further, we saw that the only way objects are given to us is the modification of our sensibility.

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Finally, pure a priori concepts, besides the function of the understanding in the category, must also contain a priori formal conditions of sensibility (specifically of inner sense), containing the universal condition under which alone the category can be applied to any object. We will call this formal and pure condition of sensibility, to which the concept of the understanding is restricted in its use, the schema of this concept of the understanding, and the understanding's procedure with these schemata the schematism of the pure understanding.

In itself the schema is always only a product of imagination. But since the synthesis of imagination aims not at any singular intuition but solely at unity in the determination of sensibility, the schema must nevertheless be distinguished

from the image. Thus, if I place five points in a row,..... this is an image of the number five. But if I merely think a number in general, which may be five or a hundred, this thinking is more the representation of a method for representing a multitude, for example a thousand, in an image according to a certain concept than it is this image itself, which in the latter case I could hardly survey and compare with the concept.

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This representation of a general procedure of imagination for providing a concept with its image I call the schema for that concept.

In fact, our pure sensible concepts are grounded not on images of objects but on schemata. No image of a triangle would ever be adequate to the concept of a triangle in general. For it would not attain the universality of the concept, which makes it hold for all triangles, right-angled or oblique-angled, and so on, but would always be restricted to only part of this sphere. The schema of the triangle can exist nowhere but in thought, and signifies a rule of the synthesis of imagination with regard to pure shapes in space. Still less does an object of experience or an image of it ever attain the empirical concept. Rather, the latter always relates immediately to the schema of imagination as a rule for determining our intuition according to a certain general concept. The concept of a dog signifies a rule according to which my imagination can trace the shape of a four-footed animal in general, without being restricted to any one particular shape offered to me by experience, or to any possible image I can present in concreto. This schematism of our understanding with regard to appearances and their mere form is a hidden art in the depths of the human soul. Its true operations we are hardly ever likely to succeed in divining from nature.

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Nor are we likely ever to lay them unveiled before our eyes. We can say only this much: the image is a product of the empirical faculty of productive imagination; the schema of sensible concepts, such as figures in space, is a product and, as it were, a monogram of pure a priori imagination, through which and according to which images first become possible. Yet these images must always be connected with the concept only by means of the schema they designate,

and in themselves do not fully coincide with it. By contrast, the schema of a pure concept of the understanding is something that cannot be brought into any image at all. Rather, it is only the pure synthesis according to a rule of unity by concepts in general, which the category expresses. It is a transcendental product of imagination concerning the determination of inner sense in general according to the conditions of its form (time) with regard to all representations insofar as these are to be connected a priori in one concept in conformity with the unity of apperception.

Rather than linger over a dry and tedious analysis of what is required for transcendental schemata of pure concepts of the understanding in general, let us instead present them in the order of the categories and in connection with them.

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The pure image of all magnitudes (quantorum) before outer sense is space; that of all objects of the senses in general, however, is time. But the pure schema of magnitude (quantitatis), as a concept of the understanding is number, a representation comprehending the successive addition of one to one (homogeneous ones). Thus number is nothing other than the unity of the synthesis of the manifold of a homogeneous intuition in general, through my generating time itself in the apprehension of the intuition.

Reality, in the pure concept of the understanding, is what corresponds to a sensation in general; hence that whose concept in itself indicates a being (in time). Negation is that whose concept represents a nonbeing (in time). The opposition of the two thus occurs in the difference of the same time as either filled or empty time. Since time is only the form of intuition, hence of objects as appearances, what corresponds in these to sensation is the transcendental matter of all objects as things in themselves (thinghood, reality). Now every sensation has a degree or magnitude through which it can fill the same time, that is, inner sense with regard to the same representation of an object, more or less, until it ceases in nothing (= 0 = negatio).

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Hence there is a relation and connection, or rather a transition, from reality to negation that represents every reality as a quantum. The schema of a reality, as the quantity of something insofar as it fills time, is precisely this continuous and uniform generation of it in time, as we descend in time from a sensation having a certain degree to its disappearance, or gradually ascend from negation to its magnitude.

The schema of substance is the persistence of the real in time, that is, its representation as a substratum of empirical time-determination in general, which therefore remains while everything else changes. (Time does not elapse; rather, the existence of what is mutable elapses in it. To time, therefore, which is itself unchanging and enduring, there corresponds in appearance what is unchanging in existence, that is, substance. Only by reference to substance can the succession and simultaneity of appearances be determined in time.)

The schema of the cause and of the causality of a thing in general is the real upon which, whenever it is posited at will, something else always follows. It thus consists in the succession of the manifold insofar as this is subject to a rule.

The schema of community (interaction), or of the reciprocal causality of substances with regard to their accidents, is simultaneity.

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This simultaneity is that of the determinations of the one with those of the other, according to a universal rule.

The schema of possibility is the agreement of the synthesis of different representations with the conditions of time in general (for example, since opposites cannot be in one thing simultaneously but only successively), hence the determination of the representation of a thing at some time.

The schema of actuality is existence at a determinate time.

The schema of necessity is the existence of an object at all times.

From all this we now see what the schema of each category contains and represents: that of magnitude, the generation (synthesis) of time itself in the successive apprehension of an object; the schema of quality, the synthesis of sensation (perception) with the representation of time, or the filling of time; that of relation, the relation of perceptions to one another at all times (that is, according to

a rule of time-determination); and finally the schema of modality and its categories, time itself as the correlate of the determination of an object as to whether and how it belongs to time. The schemata are therefore nothing but a priori determinations of time according to rules. These concern, in the order of the categories, the time-series and the content of time.

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They concern also the order of time, and finally the sum total of time with regard to all possible objects.

It is now evident from this that the schematism of the understanding through the transcendental synthesis of imagination amounts to nothing other than the unity of all the manifold of intuition in inner sense, and thus indirectly to the unity of apperception as the function corresponding to inner sense (a receptivity). Thus the schemata of the pure concepts of the understanding are the true and sole conditions for providing these concepts with a relation to objects, and hence with meaning. The categories are therefore ultimately capable of no use other than a possible empirical use. For they serve merely to subject appearances to universal rules of synthesis through grounds of an a priori necessary unity (owing to the necessary unification of all consciousness in one original apperception), and thereby make them fit for thoroughgoing connection in one experience.

But all our cognitions lie within the whole of all possible experience, and transcendental truth, which precedes all empirical truth and makes it possible, consists in the universal relation to that experience.

Yet it is also evident: the schemata of sensibility first realize the categories.

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They nevertheless also restrict them, that is, limit them to conditions lying outside the understanding, namely in sensibility. Hence the schema is properly only the phenomenon, or the sensible concept of an object in agreement with the category. (Numerus est quantitas phaenomenon, sensatio realitas phaenomenon, constans et perdurabile rerum substantia phaenomenon—aeternitas, necessitas, phaenomena and so on.) If we now leave out a restricting condition, we seem to amplify the concept previously limited. Thus the cate-

gories in their pure meaning, without any conditions of sensibility, should hold of things in general as they are, whereas their schemata represent them only as they appear; the categories would thus have a meaning independent of all schemata and extending much further. In fact, even after all sensible conditions have been removed, pure concepts of the understanding certainly retain a meaning, but only a logical one, that of the mere unity of representations. Yet no object is given to these, and hence no meaning that could yield a concept of the object. Thus, for example, if the sensible determination of persistence were omitted, substance would signify nothing more than a something that can be thought as subject (without being a predicate of something else). Now I can make nothing of this representation.

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For it does not indicate at all what determinations the thing that is to count as such a first subject has. Thus without schemata the categories are only functions of the understanding for concepts, but represent no object. This meaning comes to them from sensibility, which realizes the understanding while at the same time restricting it.

Transcendental Doctrine of the Power of Judgment (or Analytic of Principles)

Second Chapter

System of All Principles of the Pure Understanding

In the preceding chapter we considered the transcendental power of judgment only in terms of the general conditions under which it is entitled to use the pure concepts of the understanding for synthetic judgments. Our task now is to present, in systematic combination, the judgments that the understanding actually produces a priori under this critical caution. For this our table of categories must undoubtedly give us the natural and secure guidance. For it is precisely these whose relation to possible experience must constitute all pure a priori cognition of the understanding.

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And their relation to sensibility in general will, for that very reason, set out all the transcendental principles governing the use of the understanding, completely and in a single system.

A priori principles bear this name not merely because they contain the grounds of other judgments, but also because they are not themselves grounded in higher and more general cognitions. Yet this property does not always exempt them from proof. For although the principle could not be proved any further objectively, and rather underlies all cognition of its object, this does not prevent a proof from being possible, and indeed necessary, from the subjective sources of the possibility of cognition of an object in general. Otherwise the proposition would still lie under the gravest suspicion of being a merely surreptitious assertion.

Second, we will confine ourselves to those principles that relate to the categories. The principles of transcendental aesthetic, according to which space and time are the conditions of the possibility of all things as appearances, and likewise the restriction on these principles—namely, that they cannot be applied to things in themselves—thus fall outside our demarcated field of inquiry. Mathematical principles likewise form no part of this system, because they are drawn only from intuition, not from the pure concept of the understanding.

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Yet their possibility, since they are nevertheless synthetic a priori judgments, must necessarily find a place here: not to prove their correctness and apodictic certainty, which they do not need, but only to make the possibility of such evident a priori cognitions intelligible and to deduce it.

We must, however, also discuss the principle of analytic judgments, in contrast to the synthetic judgments with which we are properly concerned. For precisely this contrast frees the theory of the latter from all misunderstanding and clearly displays their distinctive nature.

The System of the Principles of Pure Understanding First Section On the Supreme Principle of All Analytic Judgments

Whatever the content of our cognition, and however it may relate to its object, the universal, though merely negative, condition of all our judgments in general is that they must not contradict themselves. Otherwise these judgments are nothing in themselves, even without regard to the object.

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Yet even if our judgment contains no contradiction, it may still combine concepts in a way that the object does not warrant, or without our being given any ground, either a priori or a posteriori, that would justify such a judgment. Thus a judgment, despite being free from all internal contradiction, may still be either false or groundless.

The proposition that no thing can have a predicate that contradicts it is called the principle of contradiction. It is a universal, though merely negative, criterion of all truth, but it belongs to logic alone, because it holds of cognitions merely as cognitions in general, regardless of their content, and declares that contradiction utterly destroys and nullifies them.

Yet it can also be put to a positive use, that is, not merely to banish falsehood and error insofar as they rest on contradiction, but also to recognize truth. For if a judgment is analytic, whether negative or affirmative, its truth must always be sufficiently recognizable by the principle of contradiction. For of whatever already lies as a concept in the cognition of the object and is thought there, the opposite is always correctly denied, while the concept itself must necessarily be affirmed of it.

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The reason is that the contrary of the concept would contradict the object.

We must therefore recognize the principle of contradiction as the universal and wholly sufficient principle of all analytic cognition; but its authority and usefulness as a sufficient criterion of truth extend no further. That no cognition can conflict with it without destroying itself certainly makes this principle a conditio sine qua non, but not the determining ground of the truth of our cognition. Since we are properly concerned only with the synthetic part of our cognition, we will always take care never to violate this inviolable principle, but can never expect it to shed any light on the truth of cognition of this kind.

There is, however, a formulation of this famous principle, devoid of all content and merely formal though it is, that contains a synthesis carelessly and quite unnecessarily mixed into it. It runs: it is impossible for something both to be and not to be at the same time. Apart from the superfluous addition of apodic-

tic certainty through the word "impossible"—a certainty that must surely follow of itself from the proposition—the proposition is affected by the condition of time.

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It says, as it were: a thing = A that is something = B cannot at the same time be non-B; but it can perfectly well be both B and non-B in succession. For example, a person who is young cannot at the same time be old; but that same person can very well be young at one time and not young, that is, old, at another. As a merely logical principle, however, the principle of contradiction must not restrict its pronouncements to temporal relations. Such a formulation therefore runs directly counter to its purpose. The misunderstanding arises solely because one first separates a predicate of a thing from the concept of that thing, and then connects its opposite with this predicate. This never produces a contradiction with the subject, but only with its predicate, which has been synthetically combined with the subject, and even then only if the first and second predicates are posited at the same time. If I say that a person who is unlearned is not learned, the condition "at the same time" must be included, since someone unlearned at one time may very well be learned at another. But if I say that no unlearned person is learned, the proposition is analytic, because the mark of being unlearned now helps constitute the concept of the subject. The negative proposition then follows immediately from the principle of contradiction, without any need to add the condition "at the same time."

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This is also why I altered its formulation above, so that it clearly expresses the nature of an analytic proposition.

The System of the Principles of Pure Understanding Second Section On the Supreme Principle of All Synthetic Judgments

Explaining the possibility of synthetic judgments is a task with which general logic has nothing to do; it must not even know its name. In a transcendental logic, however, this is the most important business of all, and indeed its only business when the question concerns the possibility of synthetic a priori judg-

ments, together with the conditions and extent of their validity. For once it has completed this task, it can fully accomplish its purpose: determining the scope and boundaries of pure understanding.

In an analytic judgment I remain within the given concept in order to determine something about it. If the judgment is affirmative, I ascribe to this concept only what was already thought in it; if negative, I merely exclude its contrary from it. In synthetic judgments, however, I must go beyond the given concept to consider something quite different from what was thought in it as standing in a relation to it.

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This relation is therefore never one of either identity or contradiction, and neither truth nor error can be discerned in the judgment itself.

Granted, then, that one must go beyond a given concept to compare it synthetically with another, a third thing is needed in which alone the synthesis of two concepts can arise. But what is this third thing, the medium of all synthetic judgments? It is only a sum total in which all our representations are contained: inner sense, and its a priori form, time. The synthesis of representations rests on imagination, but their synthetic unity, which is required for judgment, rests on the unity of apperception. Here, then, we must seek the possibility of synthetic judgments and, since all three contain sources of a priori representations, also the possibility of pure synthetic judgments. Indeed, on these grounds such judgments will even be necessary if there is to be cognition of objects that rests solely on the synthesis of representations.

If a cognition is to have objective reality—that is, to relate to an object and have meaning and significance in it—the object must be capable of being given in some way. Without this, concepts are empty: through them one has, to be sure, thought.

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In fact, however, one has cognized nothing through this thinking, but merely played with representations. To give an object, if this is not meant merely indirectly but as presenting it immediately in intuition, is nothing other than to relate its representation to experience, whether actual or at least possible. Even

space and time, however pure these concepts are of everything empirical, and however certain it is that they are represented entirely a priori in the mind, would lack objective validity, meaning, and significance unless their necessary use for the objects of experience were demonstrated. Indeed, their representation is a mere schema that always relates to the reproductive imagination, which calls up the objects of experience, without which they would have no significance. The same holds for all concepts without exception.

The possibility of experience, then, is what gives all our a priori cognitions objective reality. Now experience rests on the synthetic unity of appearances, that is, on a synthesis according to concepts of the object of appearances in general. Without this it would not even be cognition, but a rhapsody of perceptions that would fit together in no context according to rules of a thoroughly connected possible consciousness, and hence not in the transcendental and necessary unity of apperception either.

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Experience therefore has a priori principles of its form as its foundation: universal rules of unity in the synthesis of appearances. Their objective reality as necessary conditions can always be shown in experience, indeed in its very possibility. Outside this relation, however, synthetic a priori propositions are altogether impossible, since they have no third thing, namely a pure object, in which the synthetic unity of their concepts could demonstrate objective reality.

Thus, although we cognize a great deal a priori in synthetic judgments about space in general, or about the figures that productive imagination draws in it, and actually need no experience whatever for this, such cognition would still be nothing but an occupation with a mere fantasy if space were not to be regarded as the condition of the appearances that constitute the material of outer experience. Those pure synthetic judgments therefore relate, though only indirectly, to possible experience, or rather to its very possibility, and ground the objective validity of their synthesis on this alone.

Since experience, as empirical synthesis, is thus, in its possibility, the only kind of cognition that gives reality to every other synthesis, this other synthesis, as a priori cognition, has truth only in one way.

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Truth, that is agreement with the object, belongs to it solely because it contains nothing beyond what is necessary for the synthetic unity of experience in general.
The supreme principle of all synthetic judgments is therefore this: every object is subject to the necessary conditions of the synthetic unity of the manifold of intuition in a possible experience.
Synthetic a priori judgments are possible in this way: we relate the formal conditions of a priori intuition, the synthesis of imagination, and its necessary unity in a transcendental apperception to a possible empirical cognition in general, and say that the conditions of the possibility of experience in general are at the same time conditions of the possibility of the objects of experience, and for that reason have objective validity in a synthetic a priori judgment.
The System of the Principles of Pure Understanding Third Section Systematic Presentation of All Its Synthetic Principles
That there are principles anywhere at all is due solely to pure understanding.
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It is not only the faculty of rules concerning what happens, but itself the source of principles according to which everything that can ever appear to us as an object necessarily stands under rules, for without such rules appearances could never yield cognition of an object corresponding to them. Even laws of nature, when regarded as fundamental laws of the empirical use of understanding, carry with them an expression of necessity, and hence at least the presumption of a determination from grounds valid a priori and before all experience. But all laws of nature without exception stand under higher principles of the understanding, since they merely apply these to particular cases of appearance. These principles alone, then, provide the concept that contains the condition and, as it were, the exponent of a rule in general; experience supplies the case that falls under the rule.
There can properly be no danger of taking merely empirical principles for principles of pure understanding, or the reverse. The necessity according to concepts that distinguishes the latter, and whose absence is readily perceived in

every empirical proposition, however universally it may hold, can easily prevent this confusion. But there are pure a priori principles that I would nevertheless not attribute specifically to pure understanding, because they are drawn not from pure concepts.

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They are drawn instead from pure intuitions, though through the understanding; and understanding is the faculty of concepts. Mathematics has principles of this kind. Yet their application to experience, and hence their objective validity, indeed the possibility of such synthetic a priori cognition—its deduction—always rests on pure understanding.

I will therefore not count the principles of mathematics among my principles, but rather those on which their possibility and objective validity are grounded a priori, and which must accordingly be regarded as the principle of those principles, proceeding from concepts to intuition and not from intuition to concepts.

In applying the pure concepts of the understanding to possible experience, the use of their synthesis is either mathematical or dynamical: it concerns in part merely the intuition, and in part the existence, of an appearance in general. The a priori conditions of intuition are absolutely necessary with respect to a possible experience; those of the existence of the objects of a possible empirical intuition are in themselves only contingent. Hence the principles of mathematical use will read as unconditionally necessary, that is, apodictic. Those of dynamical use will indeed also bear the character of a priori necessity, but only under the condition of empirical thinking in an experience, and thus only mediately and indirectly.

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Consequently they will not contain the immediate self-evidence peculiar to the former, though this does not impair their certainty as universally related to experience. This will be easier to assess, however, at the conclusion of this system of principles.

The table of categories gives us an entirely natural guide to the table of principles, since these are nothing other than rules for the objective use of the categories. All the principles of pure understanding are accordingly:

1 Axioms of intuition

2 Anticipations of perception

3 Analogies of experience

4 Postulates of empirical thinking in general

I have chosen these names carefully, so that differences in the self-evidence and application of these principles should not pass unnoticed. It will soon become clear, however, how matters stand.

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With respect both to self-evidence and to the a priori determination of appearances according to the categories of magnitude and quality (if one attends merely to the form of the latter), their principles differ markedly from the other two. The former admit of intuitive certainty, the latter of merely discursive certainty, though both admit of complete certainty; I will therefore call the former mathematical and the latter dynamical principles*.

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But it should be carefully noted that here I have in view neither the principles of mathematics in the one case nor the principles of general (physical) dynamics in the other, but only those of pure understanding in relation to inner sense, without distinction among the representations given in it, through which all those principles acquire their possibility. I name them, then, more with regard to their application than to their content, and now turn to consider them in the same order in which the table presents them.

* Every combination (conjunctio) is either composition (compositio) or connection (nexus). The former is the synthesis of a manifold whose elements do not necessarily belong together: for example, the two triangles into which a square is divided by its diagonal do not in themselves necessarily belong together. Such is the synthesis of the homogeneous in everything that can be consid-

ered mathematically. This synthesis can in turn be divided into aggregation and coalition, the former directed toward extensive and the latter toward intensive magnitudes. The second combination (nexus) is the synthesis of a manifold insofar as its elements necessarily belong together, as an accident belongs to a substance, or an effect to its cause. Thus, though heterogeneous, they are nevertheless represented as combined a priori. I call this combination, which is not arbitrary, dynamical because it concerns the combination of the existence of the manifold. This can in turn be divided into the physical combination of appearances with one another and their metaphysical combination a priori in the faculty of cognition.

1 Axioms of Intuition

Their principle is: all intuitions are extensive magnitudes.

Proof

In their form, all appearances contain an intuition in space and time that underlies them all a priori. They can therefore be apprehended—that is, taken up into empirical consciousness—only through the synthesis of the manifold by which the representations of a determinate space or time are generated: through the composition of the homogeneous and the consciousness of the synthetic unity of this homogeneous manifold.

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Now the consciousness of the homogeneous manifold in intuition in general, insofar as it first makes the representation of an object possible, is the concept of a magnitude (quanti). Thus even the perception of an object as appearance is possible only through the same synthetic unity of the manifold of given sensible intuition through which the unity of the composition of the homogeneous manifold is thought in the concept of a magnitude. That is, appearances are all magnitudes, and indeed extensive magnitudes, because as intuitions in space or time they must be represented through the same synthesis by which space and time in general are determined.

I call a magnitude extensive when the representation of its parts makes the representation of the whole possible, and therefore necessarily precedes it. I cannot represent a line, however small, without drawing it in thought: without generating all its parts successively from a point and thereby first tracing this intuition. The same holds for any time, however small. In it I think only the successive advance from one instant to another, through all the parts of time and their addition, until a determinate magnitude of time is finally generated. The mere intuition in all appearances is either space or time.

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Every appearance as intuition is therefore an extensive magnitude, because it can be cognized in apprehension only through successive synthesis, from part to part. All appearances are accordingly already intuited as aggregates—a multitude of previously given parts. This is not the case with every kind of magnitude, but only with those represented and apprehended by us extensively as such.

On this successive synthesis of productive imagination in generating figures rests the mathematics of extension, geometry, with its axioms. These express the a priori conditions of sensible intuition under which alone the schema of a pure concept of outer appearance can come about: for example, between two points only one straight line is possible; two straight lines enclose no space, and so on. These are the axioms that properly concern only magnitudes (quanta) as such.

As for magnitude (quantitas)—that is, the answer to the question how large something is—there are, strictly speaking, no axioms concerning it, although several such propositions are synthetic and immediately certain (indemonstrabilia). For the propositions that equals added to equals, or subtracted from them, give equals are analytic. In them I am immediately conscious of the identity of one generation of magnitude with the other.

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Axioms, however, are supposed to be synthetic a priori propositions. By contrast, the evident propositions concerning numerical relations are indeed synthetic, but are not universal like those of geometry, and for precisely that reason

are not axioms either; they may instead be called numerical formulas. That 7+5=12 is not an analytic proposition. For neither in the representation of 7, nor of 5, nor in the representation of their composition do I think the number 12. Whether I ought to think it in adding the two is not at issue here, since in an analytic proposition the question is only whether I actually think the predicate in the representation of the subject. But although this proposition is synthetic, it is still only a singular proposition. Insofar as we attend here merely to the synthesis of the homogeneous, the units, the synthesis can take place in only one way, although the subsequent use of these numbers is universal. If I say that a triangle can be drawn with three lines, any two of which together are greater than the third, I have here the mere function of productive imagination, which can draw the lines larger or smaller and bring them together at all kinds of arbitrarily chosen angles. By contrast, the number 7 is possible in only one way, as is the number 12 generated through the synthesis of the former with 5. [B 206]

Such propositions must therefore be called not axioms, since otherwise there would be infinitely many, but numerical formulas.

This transcendental principle of the mathematics of appearances greatly extends our a priori cognition. For it alone makes pure mathematics, in all its precision, applicable to objects of experience. Without this principle that applicability might not be so evident in itself, and has indeed occasioned many objections. Appearances are not things in themselves. Empirical intuition is possible only through pure intuition, of space and time; hence what geometry says of the latter also holds incontestably of the former. And the evasions, as if objects of the senses need not conform to the rules of construction in space (for example the infinite divisibility of lines or angles), must fall away. For this denies objective validity to space and, with it, to all mathematics, leaving us no longer knowing why or how far mathematics may be applied to appearances. The synthesis of spaces and times, as the essential form of all intuition, is what also makes possible the apprehension of appearance, hence every outer experi-

ence, and consequently all cognition of its objects. What mathematics proves concerning that synthesis in its pure use necessarily holds of this cognition as well.

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All objections to this are merely the quibbles of a misguided reason, which mistakenly intends to free the objects of the senses from the formal condition of our sensibility and represents them, though they are mere appearances, as objects in themselves given to the understanding. In that case, of course, nothing at all could be synthetically cognized of them a priori, not even through pure concepts of space; and the science that determines these concepts, geometry, would itself be impossible.

2 Anticipations of Perception

Their principle is: in all appearances the real, which is an object of sensation, has intensive magnitude, that is, a degree.

Proof

Perception is empirical consciousness, that is, a consciousness in which sensation is also present. Appearances, as objects of perception, are not pure, merely formal intuitions like space and time, which in themselves cannot be perceived at all. Besides intuition, therefore, they contain the materials for an object in general, through which something existing in space or time is represented: the real of sensation. This is a merely subjective representation, of which one can become conscious only that the subject is affected, and which one relates to an object in general.

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Now a gradual change from empirical to pure consciousness is possible, in which its real element entirely vanishes and there remains a merely formal a priori consciousness of the manifold in space and time. Hence a synthesis generating the magnitude of a sensation is also possible, from its beginning, pure intuition = 0, up to any chosen magnitude of it. Since sensation in itself is not an objective representation at all, and neither the intuition of space nor that of time is found in it, it will indeed have no extensive magnitude. Yet it will have a

magnitude—through its apprehension, in which empirical consciousness can grow in a certain time from nothing = 0 to its given measure—and thus an intensive magnitude. Correspondingly, all objects of perception, insofar as perception contains sensation, must be assigned intensive magnitude, that is, a degree of influence on sense.

Any cognition through which I can cognize and determine a priori what belongs to empirical cognition may be called an anticipation. This is undoubtedly the sense in which Epicurus used his expression προληψις. But there is something in appearances that is never cognized a priori, and that therefore also constitutes the actual distinction between the empirical and cognition a priori.

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This is sensation, as the matter of perception; and it follows that sensation is precisely what cannot be anticipated at all. By contrast, we could call the pure determinations in space and time, with respect both to figure and to magnitude, anticipations of appearances, since they represent a priori whatever may be given a posteriori in experience. Suppose, however, that there were nevertheless something in every sensation, as sensation in general, that could be cognized a priori without any particular sensation being given. This would deserve to be called an anticipation in an exceptional sense, since it seems strange to forestall experience in precisely what concerns its matter, which can be drawn only from experience. And this is in fact the case here.

Apprehension merely through sensation fills only an instant, if, that is, I leave aside the succession of many sensations. As something in appearance whose apprehension is not a successive synthesis proceeding from parts to the whole representation, it therefore has no extensive magnitude. The absence of sensation in that same instant would represent it as empty, hence = 0. Now what corresponds to sensation in empirical intuition is reality (realitas phaenomenon); what corresponds to its absence is negation = 0.

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Every sensation, however, admits of diminution, so that it can decrease and gradually disappear. Hence between reality in appearance and negation there is a continuous connection of many possible intermediate sensations, whose dif-

ference from one another is always smaller than the difference between the given sensation and zero, or complete negation. That is, the real in appearance always has a magnitude, which is not, however, found in apprehension, since apprehension through mere sensation takes place in an instant, not through the successive synthesis of many sensations, and thus does not proceed from parts to whole. It therefore has a magnitude, but not an extensive one.

Now I call a magnitude intensive when it is apprehended only as a unity, and when multiplicity in it can be represented only through approximation to negation = 0. Thus every reality in appearance has intensive magnitude, that is, a degree. If this reality is regarded as a cause, whether of sensation or of another reality in appearance, for example a change, the degree of reality as cause is called a moment, for example the moment of gravity. This is because the degree designates only that magnitude whose apprehension is not successive but instantaneous. I mention this here only in passing, however, since for now I am not yet concerned with causality.

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Every sensation, then, and hence every reality in appearance, however small, has a degree, that is, an intensive magnitude that can always be further diminished. Between reality and negation there is a continuous connection of possible realities and possible smaller perceptions. Every color, red for example, has a degree that, however small, is never the smallest; and the same holds everywhere for heat, the moment of gravity, and so on.

The property of magnitudes by which no part of them is the smallest possible —no part is simple—is called their continuity. Space and time are quanta continua, because no part of them can be given without enclosing it between boundaries, points and instants, and thus only in such a way that this part is itself again a space or a time. Space therefore consists only of spaces, time of times. Points and instants are only boundaries, mere positions marking their limitation. Positions, however, always presuppose the intuitions they are to limit or determine; neither space nor time can be composed of mere positions

as constituents that could be given before space or time. Such magnitudes may also be called flowing, because the synthesis of productive imagination in generating them is an advance in time.

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The continuity of time is commonly designated in particular by the expression of flowing (elapsing).

All appearances in general are accordingly continuous magnitudes: extensive magnitudes in their intuition, and intensive magnitudes in their mere perception, sensation and hence reality. If the synthesis of the manifold of appearance is interrupted, the result is an aggregate of many appearances, not properly an appearance as a quantum. It is generated not by the mere continuation of a productive synthesis of a certain kind, but by the repetition of a synthesis that keeps coming to an end. If I call 13 thalers a quantum of money, I name it correctly insofar as I mean by it the content of one mark of fine silver. This is certainly a continuous magnitude, in which no part is the smallest, but every part could constitute a coin that would always contain material for still smaller ones. But if by that designation I mean 13 round thalers as so many coins, whatever their silver content may be, it is improper to call this a quantum of thalers; I must call it an aggregate, that is, a number of coins. Since unity must nevertheless underlie every number, appearance as unity is a quantum, and as such is always a continuum.

Now all appearances, considered both extensively and intensively, are continuous magnitudes.

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The proposition that all change too—the transition of a thing from one state to another—is continuous could therefore readily be proved here with mathematical self-evidence, were it not that the causality of a change in general lies altogether outside the boundaries of a transcendental philosophy and presupposes empirical principles. For the understanding gives us no a priori disclosure at all of the possibility of a cause that alters the state of things, that is, determines them to the opposite of a given state. This is not merely because it has no insight into that possibility, since such insight is lacking in several a priori cog-

nitions, but because alterability concerns only certain determinations of appearances that experience alone can teach, whereas their cause is to be found in the unalterable. Here, however, we have nothing available to use but the pure fundamental concepts of all possible experience, among which there must be nothing empirical whatever. We therefore cannot anticipate general natural science, which is built on certain basic experiences, without violating the unity of the system.

Nevertheless, we do not lack evidence of the great influence our principle has in anticipating perceptions, and even in compensating for their absence far enough to bar every false inference that might be drawn from it.

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If all reality in perception has a degree, between which and negation there lies an infinite succession of ever smaller degrees, while every sense must nevertheless have a determinate degree of receptivity to sensations, then no perception, and hence no experience, is possible that could prove a complete absence of everything real in appearance, either directly or indirectly, by whatever roundabout inference. That is, no proof of empty space or empty time can ever be drawn from experience. For, first, the complete absence of the real in sensible intuition cannot itself be perceived; second, it cannot be inferred from any single appearance or from the difference in the degree of its reality, nor may it ever be assumed to explain that appearance. For even if the entire intuition of a determinate space or time is real throughout, that is, no part of it is empty, there must nevertheless be infinitely different degrees with which space or time is filled, because every reality has its degree, which can decrease by infinite stages to nothing (the void) while the extensive magnitude of the appearance remains unchanged; and the intensive magnitude in different appearances can be smaller or larger even though the extensive magnitude of the intuition is equal.

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Let us give an example. Nearly all natural philosophers, on perceiving a great difference in the quantity of matter of different kinds within equal volumes—partly through the moment of gravity or weight, partly through the moment of resistance to other moving matter—unanimously conclude that this volume,

the extensive magnitude of appearance, must be empty in all matter, though to different extents. Yet who among these investigators of nature, mostly mathematicians and mechanists, would ever have considered that they base this inference solely on a metaphysical presupposition, the very thing they claim so emphatically to avoid? They assume that the real in space—I will not call it impenetrability or weight here, since these are empirical concepts—is everywhere of one and the same kind, and can differ only in extensive magnitude, that is, in amount. Against this presupposition, for which they could have no ground in experience and which is therefore merely metaphysical, I set a transcendental proof. It is not intended to explain the difference in the filling of spaces, but it entirely removes the supposed necessity of that presupposition: that the difference in question can be explained only by assuming empty spaces. It has the merit of at least freeing the understanding to think this diversity in another way as well.

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It may do so should the explanation of nature make some hypothesis necessary for the purpose. For we see here that, although equal spaces may be completely filled by different kinds of matter, so that neither contains a point where its matter is not present, everything real of the same quality nevertheless has its degree, of resistance or of weight. This can become infinitely smaller without any diminution of extensive magnitude or amount, before passing into the void and disappearing. Thus an expansion filling a space, heat for example, and likewise every other reality in appearance, can decrease infinitely in its degrees without leaving the smallest part of that space empty in the least, and can nevertheless fill the space with these smaller degrees just as well as another appearance does with greater ones. My purpose here is by no means to assert that this is actually how matters stand with the diversity of matter in its specific gravity. It is only to show, from a principle of pure understanding, that the nature of our perceptions makes such an explanation possible; and that it is a mistake to assume that the real in appearance is equal in degree and differs only in aggregation and its extensive magnitude, and even to claim this, supposedly, through an a priori principle of the understanding.

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Yet this anticipation of perception always has something striking about it for an investigator accustomed to transcendental inquiry and made cautious by it. It raises some concern that the understanding should advance such a synthetic proposition as that concerning the degree of everything real in appearances, and hence the possibility of an internal difference in sensation itself when we abstract from its empirical quality. It is therefore still a question not unworthy of solution: how can the understanding here pronounce synthetically on appearances a priori, and anticipate them even in what is properly and merely empirical, namely in what concerns sensation?

The quality of sensation is always merely empirical and cannot be represented a priori at all, as with colors, taste, and so on. But the real that corresponds to sensations in general, in contrast to negation = 0, represents only something whose concept in itself contains being, and signifies nothing but synthesis in an empirical consciousness in general. In inner sense, namely, empirical consciousness can be raised from 0 to any greater degree, so that the very same extensive magnitude of intuition, for example an illuminated surface, arouses as much sensation as an aggregate of many other, less illuminated surfaces together.

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We can therefore abstract entirely from the extensive magnitude of appearance and still represent in the mere sensation of an instant a synthesis of uniform increase from 0 to the given empirical consciousness. All sensations as such are therefore indeed given only a posteriori, but their property of having a degree can be cognized a priori. It is remarkable that in magnitudes in general we can cognize a priori only a single quality, continuity; while in all quality, the real of appearances, we can cognize a priori nothing beyond its intensive quantity, namely that it has a degree. Everything else is left to experience.

3 Analogies of Experience

Their principle is: experience is possible only through the representation of a necessary connection of perceptions.

Proof

Experience is an empirical cognition, that is, a cognition that determines an object through perceptions. It is therefore a synthesis of perceptions that is not itself contained in perception, but contains the synthetic unity of their manifold in one consciousness. This unity constitutes the essential element of a cognition of objects of the senses, that is, of experience, not merely of the intuition or sensation of the senses.

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Now in experience perceptions, to be sure, come together only contingently, so that no necessity of their connection is or can be evident from the perceptions themselves. For apprehension is only an assembling of the manifold of empirical intuition; it contains no representation of the necessity of the combined existence in space and time of the appearances it assembles. But since experience is a cognition of objects through perceptions, and must therefore represent in it the relation in the existence of the manifold, not as it is assembled in time but as it objectively is in time, and since time itself cannot be perceived, the existence of objects in time can be determined only through their combination in time in general, and thus only through concepts connected a priori. Since these always carry necessity with them as well, experience is possible only through a representation of the necessary connection of perceptions.

The three modi of time are persistence, succession, and simultaneity. Hence three rules of all temporal relations of appearances, according to which the existence of each can be determined with respect to the unity of all time, will precede all experience and first make it possible.

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The general principle of all three analogies rests on the necessary unity of apperception with respect to all possible empirical consciousness, perception, at every time. Consequently, since that unity underlies it a priori, the principle rests on the synthetic unity of all appearances according to their relation in time. For original apperception relates to inner sense (the sum total of all representations), and indeed relates a priori to its form: the relation of the manifold empirical consciousness in time. Now in original apperception all this manifold is to be united in its temporal relations. This is what its transcendental unity

declares a priori, the unity under which everything must stand that is to belong to my cognition—my single cognition—and thus become an object for me. This a priori determined synthetic unity in the temporal relation of all perceptions is therefore the law that all empirical determinations of time must stand under rules of general determination of time. The analogies of experience, which we are now to discuss, must be rules of this kind.

These principles have the peculiarity that they consider not appearances and the synthesis of their empirical intuition, but only their existence and their relation to one another with respect to that existence.

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Now the manner in which something is apprehended in appearance can be determined a priori in such a way that the rule of its synthesis can at the same time supply this intuition a priori in any given empirical instance, that is, produce it from the rule. But the existence of appearances cannot be cognized a priori. And even if we could arrive by this route at an inference to some existence, we could still not cognize it determinately, that is, anticipate what distinguishes its empirical intuition from others.

The previous two principles, which I called mathematical because they authorize the application of mathematics to appearances, concerned appearances as to their mere possibility. They taught how appearances could be generated, both in their intuition and in the real of their perception, according to rules of a mathematical synthesis. Hence numerical magnitudes, and with them the determination of appearance as magnitude, can be used in both cases. Thus, for example, I will be able to compose the degree of the sensations of sunlight from some 200,000 illuminations by the moon, and give it determinately a priori, that is, construct it. We can therefore call those first principles constitutive.

Matters must be quite different with those principles that are to bring the existence of appearances under a priori rules. For existence cannot be constructed.

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They will therefore concern only the relation of existence and can supply none but merely regulative principles. Here, then, neither axioms nor anticipations are in question. Rather, if a perception is given to us in a temporal relation to

other, though indeterminate, perceptions, we cannot say a priori what other perception, or how great a perception, is involved, but only how, in this modo of time, it is necessarily combined in existence with the given perception. In philosophy analogies mean something very different from what they represent in mathematics. In mathematics they are formulas expressing the equality of two quantitative relations, and are always constitutive: if two terms of the proportion are given, the third is thereby also given, that is, can be constructed. In philosophy, however, analogy is not the equality of two quantitative but of two qualitative relations. From three given terms I can cognize and supply a priori only the relation to a fourth, not this fourth term itself. Yet I do have a rule for seeking it in experience and a mark by which to find it there. An analogy of experience will therefore be only a rule according to which unity of experience is to arise from perceptions (not as perception itself arises, as empirical intuition in general). As a principle concerning objects of appearances it will hold not constitutively, but merely regulatively.

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The very same will also hold of the postulates of empirical thinking in general, which together concern the synthesis of mere intuition, the form of appearance; of perception, its matter; and of experience, the relation of these perceptions. They too are only regulative principles and differ from the mathematical principles, which are constitutive, not in certainty, which is established a priori in both, but in the kind of self-evidence, that is, in its intuitive character, and hence also in demonstration.

What was noted concerning all synthetic principles, and must be especially stressed here, is this: these analogies have their sole meaning and validity as principles not of the transcendental but merely of the empirical use of understanding, and can therefore be proved only as such. Consequently appearances must be subsumed not under the categories outright, but only under their schemata. For if the objects to which these principles are to relate were things in themselves, it would be quite impossible to cognize anything of them synthetically a priori. But they are nothing but appearances, whose complete cognition, to

which all a priori principles must ultimately lead, is simply possible experience. Consequently these principles can aim at nothing beyond the conditions of the unity of empirical cognition in the synthesis of appearances.

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This unity is thought only in the schema of the pure concept of the understanding; the category contains the function of its unity as a synthesis in general, unrestricted by any sensible condition. Through these principles, then, we will be entitled to put appearances together only by analogy with the logical and universal unity of concepts. In the principle itself we will therefore indeed employ the category; but in carrying it out, in applying it to appearances, we will put its schema in its place as the key to its use—or rather place the schema alongside the category as a restrictive condition, under the name of a formula of the category.

A. First Analogy

Principle of the Persistence of Substance

In all change of appearances substance persists, and its quantity in nature is neither increased nor diminished.

Proof

All appearances are in time. In time alone, as substrate, as the persistent form of inner intuition, can both simultaneity and succession be represented.

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Thus the time in which all change of appearances is to be thought remains and does not change, because it is that in which succession or simultaneity can be represented only as its determinations. Now time by itself cannot be perceived. Consequently there must be found in the objects of perception, that is, in appearances, the substrate that represents time in general, and in relation to which all change or simultaneity can be perceived in apprehension through the relation of appearances to it. But the substrate of everything real, of everything belonging to the existence of things, is substance; in it everything belonging to existence can be thought only as a determination. Consequently the persistent, in relation to which alone all temporal relations of appearances can be deter-

mined, is substance in appearance: its real element, which as the substrate of all change always remains the same. Since substance therefore cannot change in its existence, its quantity in nature can neither be increased nor diminished.

Our apprehension of the manifold of appearance is always successive, and thus always changing. Through it alone, therefore, we can never determine whether this manifold, as an object of experience, is simultaneous or successive, unless something underlies it that always is: something lasting and persistent.

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All change and simultaneity are merely so many ways (modi of time) in which this persistent exists. Thus temporal relations are possible only in the persistent, since simultaneity and succession are the only relations in time. That is, the persistent is the substrate of the empirical representation of time itself, in which alone all determination of time is possible. Persistence expresses time in general as the constant correlate of all existence of appearances, of all change and all concomitance. For change does not affect time itself, but only appearances in time, just as simultaneity is not a modus of time itself, in which no parts are simultaneous but all are successive. If one tried to ascribe a succession to time itself, one would have to think yet another time in which this succession was possible. Through the persistent alone, existence in different successive parts of the temporal series acquires a magnitude called duration. For in mere succession alone existence is always disappearing and beginning, and never has the least magnitude. Without this persistent element there is therefore no temporal relation. Now time in itself cannot be perceived; hence this persistent element in appearances is the substrate of all determination of time, and consequently also the condition of the possibility of all synthetic unity of perceptions, that is, of experience.

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In this persistent element all existence and all change in time can be regarded only as a modus of the existence of what remains and persists. Thus in all appearances the persistent is the object itself, that is, substance (phaenomenon); everything that changes or can change belongs only to the way in which this substance or these substances exist, and hence to their determinations.

I find that at all times not only philosophers but even common understanding have presupposed this persistence as a substrate of all change in appearances, and will always accept it as unquestionable. The philosopher merely expresses the matter somewhat more precisely, saying: through all alterations in the world substance remains, and only accidents change. Yet nowhere do I find even an attempt to prove this thoroughly synthetic proposition. Indeed, it rarely even stands, as it ought, at the head of the pure laws of nature that hold entirely a priori. In fact, the proposition that substance persists is tautological. For this persistence alone is why we apply the category of substance to appearance; what should have been proved is that in all appearances there is something persistent, of which the changeable is nothing but a determination of its existence. But such a proof can never be conducted dogmatically, that is, from concepts, since it concerns a synthetic a priori proposition.

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And no one ever considered that propositions of this kind are valid only in relation to possible experience, and hence can be proved only through a deduction of the possibility of experience. It is therefore no wonder that this proposition has indeed been made the basis of all experience, because its necessity for empirical cognition is felt, but has never been proved.

A philosopher was asked, "How much does smoke weigh?" He replied, "Subtract the weight of the remaining ash from the weight of the wood that was burned, and you have the weight of the smoke." He thus presupposed as incontestable that even in fire matter, substance, does not perish, but only undergoes an alteration of form. Likewise the proposition "Nothing comes from nothing" was only another consequence of the principle of persistence, or rather of the perpetual existence of the actual subject in appearances. For if what we wish to call substance in appearance is to be the actual substrate of all determination of time, then all existence in past as well as future time must be determinable in it alone. We can therefore give an appearance the name of substance only because we presuppose its existence at all times. This is not even well expressed by the word "persistence."

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That word points more toward future time. Yet the inner necessity of persisting is inseparably combined with the necessity of always having been, and the expression may therefore stand. Gigni de nihilo nihil, in nihilum nil posse reverti were two propositions the ancients inseparably connected. They are now sometimes separated through misunderstanding, because people imagine they concern things in themselves, and that the first might conflict with the world's dependence on a supreme cause, even as to its substance. This concern is unnecessary, since we are speaking here only of appearances in the field of experience. Their unity would never be possible if we allowed new things, as substances, to arise. For then what alone can represent the unity of time would disappear: the identity of the substrate in which alone all change has thoroughgoing unity. This persistence, however, is still nothing more than the way we represent to ourselves the existence of things in appearance.

The determinations of a substance, which are nothing other than particular ways in which it exists, are called accidents. They are always real, because they concern the existence of substance; negations are only determinations expressing the nonbeing of something in the substance.

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If one assigns a distinct existence to this real element in substance, for example to motion as an accident of matter, this existence is called inherence, in distinction from the existence of substance, which is called subsistence. But this gives rise to many misinterpretations, and it is more precise and correct to designate the accident only through the way in which the existence of a substance is positively determined. Yet under the conditions governing the logical use of our understanding, it is unavoidable that we should, as it were, separate what can change in the existence of a substance while the substance remains, and consider it in relation to what properly persists and underlies it. Hence this category too stands under the heading of relations, more as their condition than as itself containing a relation.

This persistence also grounds the correction of the concept of alteration. Arising and perishing are not alterations of what arises or perishes. Alteration is one way of existing that succeeds another way of existing of the very same

object. Hence everything that undergoes alteration remains, and only its state changes. Since this change therefore concerns only determinations that can cease or begin, we may say, in an expression that seems somewhat paradoxical: only the persistent (substance) is altered.

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The changeable undergoes no alteration, but a change, as some determinations cease and others begin.

Alteration can therefore be perceived only in substances. Arising or perishing outright, without merely concerning a determination of the persistent, can be no possible perception at all. For precisely this persistent element makes possible the representation of a transition from one state to another, and from nonbeing to being; these can therefore be empirically cognized only as changing determinations of what remains. Suppose something begins to be outright: you must have a point in time at which it was not. But to what will you attach this point, if not to something already there? For an empty time preceding it is no object of perception. If, however, you connect this arising with things that existed before and continue up to what arises, then the latter was only a determination of the former as the persistent. The same holds for perishing, since it presupposes the empirical representation of a time when an appearance no longer is.

Substances in appearance are the substrates of all determinations of time. The arising of some and the perishing of others would abolish the sole condition of the empirical unity of time itself.

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Appearances would then relate to two different times in which existence flowed side by side, which is absurd. For there is only one time, in which all different times must be posited not simultaneously but successively.

Persistence is therefore a necessary condition under which alone appearances, as things or objects, are determinable in a possible experience. What the empirical criterion of this necessary persistence, and with it of the substantiality of appearances, may be, we will have occasion to discuss as needed in what follows.

B. Second Analogy

Principle of Temporal Succession According to the Law of Causality

All alterations occur according to the law of the connection of cause and effect.

Proof

(The preceding principle has shown that all appearances in temporal succession are merely alterations: a successive being and nonbeing of the determinations of a substance that persists. Consequently the being of substance itself following its nonbeing, or its nonbeing following its existence, does not occur.

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In other words, the arising or perishing of substance itself does not take place. That principle could also have been expressed as follows: all change, succession, of appearances is only alteration. For the arising or perishing of substance is not an alteration of it, since the concept of alteration presupposes the very same subject as existing with two opposed determinations, and hence as persisting.—After this preliminary reminder, the proof follows.)

I perceive that appearances follow one another: that a state of things exists at one time whose opposite existed in the preceding state. Thus I am actually connecting two perceptions in time. Now connection is not the work of mere sense and intuition, but here the product of a synthetic faculty of imagination that determines inner sense with regard to temporal relations. Yet imagination can combine the two states in question in two ways, letting either one precede the other in time. For time cannot be perceived in itself, nor can what precedes and what follows in the object be determined, as it were empirically, in relation to it. I am therefore conscious only that my imagination posits one before and the other afterward, not that in the object one state precedes the other.

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In other words, mere perception leaves the objective relation of successive appearances undetermined. For this relation to be cognized as determined, the relation between the two states must be thought in such a way that it necessarily determines which must be posited before and which after, and not the reverse. But a concept carrying with it a necessity of synthetic unity can only be a pure concept of the understanding, not one lying in perception. Here it is the

concept of the relation of cause and effect, in which the former determines the latter in time as its consequence, not as something that could merely precede in imagination, or perhaps not be perceived at all. Thus only by subjecting the succession of appearances, and hence all alteration, to the law of causality is experience itself, that is, empirical cognition of them, possible. Consequently they themselves, as objects of experience, are possible only according to this same law.

The apprehension of the manifold of appearance is always successive. The representations of the parts follow one another. Whether they also follow one another in the object is a second point of reflection, not contained in the first. Now everything, and even every representation insofar as we are conscious of it, can indeed be called an object.

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But what this word is to mean in the case of appearances, not insofar as they themselves are objects as representations, but insofar as they merely designate an object, requires deeper investigation. Insofar as they are merely representations and at the same time objects of consciousness, they are not at all distinct from apprehension, that is, from being taken up into the synthesis of imagination. We must therefore say that the manifold of appearances is always generated successively in the mind. If appearances were things in themselves, no one could infer from the succession of representations of their manifold how that manifold is combined in the object. For we are concerned only with our representations; how things may be in themselves, without regard to the representations through which they affect us, lies entirely beyond our sphere of cognition. Now although appearances are not things in themselves, they are nevertheless the only things that can be given to us for cognition. I must therefore indicate what combination in time belongs to the manifold in appearances themselves, while its representation in apprehension is always successive. For example, the apprehension of the manifold in the appearance of a house standing before me is successive. The question is whether the manifold of this house is itself also successive within it, which certainly no one will concede.

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Yet as soon as I raise my concepts of an object to transcendental significance, the house is no thing in itself at all, but only an appearance, a representation whose transcendental object is unknown. What, then, do I mean by asking how the manifold may be combined in the appearance itself, which is after all nothing in itself? Here what lies in successive apprehension is regarded as representation, while the appearance given to me, although nothing more than a sum total of these representations, is regarded as their object, with which my concept drawn from the representations of apprehension is to agree. We soon see that, since truth is the agreement of cognition with the object, the question here can concern only the formal conditions of empirical truth. In contrast with the representations of apprehension, appearance can be represented as their object, distinct from them, only if it stands under a rule that distinguishes it from every other apprehension and makes a manner of combining the manifold necessary. That in appearance which contains the condition of this necessary rule of apprehension is the object.

Let us now proceed with our task. That something happens—that something, or a state, comes to be that was not before—cannot be empirically perceived unless an appearance precedes it that does not contain this state.

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For an actuality following an empty time, and hence an arising preceded by no state of things, can no more be apprehended than empty time itself. Every apprehension of an event is therefore a perception following another. But since this holds of every synthesis of apprehension, as I showed above with the appearance of a house, it does not yet distinguish this apprehension from others. Yet I also note that, if in an appearance containing an occurrence I call the preceding state of perception A and the succeeding one B, then B can only follow A in apprehension, whereas perception A cannot follow B but can only precede it. For example, I see a ship drifting downstream. My perception of its position farther downstream follows my perception of its position farther upstream, and it is impossible that, in apprehending this appearance, the ship should be perceived first downstream and afterward upstream. Here, then, the order in the succession of perceptions in apprehension is determined, and

apprehension is bound to it. In the previous example of a house, my perceptions in apprehension could begin at its top and end at the ground, but could also begin below and end above.

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Likewise I could apprehend the manifold of empirical intuition from right or left. In the series of these perceptions, then, there was no determinate order making it necessary where I had to begin in apprehension in order to combine the manifold empirically. But this rule is always found in the perception of what happens, and makes necessary the order of the successive perceptions in the apprehension of this appearance.

In our case, then, I must derive the subjective succession of apprehension from the objective succession of appearances, because otherwise the former is entirely undetermined and distinguishes no appearance from another. It alone proves nothing about the connection of the manifold in the object, since it is entirely arbitrary. The objective succession will therefore consist in the order of the manifold of appearance according to which the apprehension of one thing, what happens, follows that of another, what precedes, according to a rule. Only in this way can I be entitled to say of the appearance itself, and not merely of my apprehension, that a succession is found in it. This means that I cannot conduct the apprehension otherwise than in precisely this succession.

According to such a rule, therefore, what precedes an event in general must contain the condition of a rule.

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According to this rule the event always and necessarily follows. Conversely, however, I cannot go backward from the event and determine through apprehension what precedes it. For no appearance goes back from the succeeding point in time to the preceding one, though it does relate to some preceding point; from a given time, by contrast, the advance to the determinate succeeding time is necessary. Hence, since there is after all something that follows, I must necessarily relate it to something else in general that precedes it and on

which it follows according to a rule, that is, necessarily. The event, as the conditioned, thus reliably points to some condition, while this condition determines the event.

Suppose that nothing preceded an event on which it had to follow according to a rule. All succession of perception would then lie solely in apprehension and be merely subjective, without thereby objectively determining which of the perceptions must properly be preceding and which succeeding. We would thus have only a play of representations relating to no object at all: through our perception no appearance would be distinguished from any other in its temporal relation. For succession in apprehending is everywhere the same, and there would thus be nothing in appearance that determines it so as to make a particular succession objectively necessary.

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I would therefore not say that two states follow one another in the appearance, but only that one apprehension follows another. This is merely subjective and determines no object, and hence cannot count as cognition of any object, not even in appearance.

Whenever we experience that something happens, then, we always presuppose that something precedes it on which it follows according to a rule. Without this I would not say of the object that it follows, because mere succession in my apprehension, unless determined through a rule in relation to something preceding, warrants no succession in the object. Thus it is always with reference to a rule according to which appearances in their succession, that is, as they happen, are determined by the preceding state that I make my subjective synthesis of apprehension objective. Only under this presupposition alone is even the experience of something happening possible.

Admittedly, this seems to contradict all the observations ever made about the course of our use of understanding. According to these, only by perceiving and comparing the corresponding successions of many events after preceding appearances have we been led to discover a rule.

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By this rule certain events always follow certain appearances, and we were thereby first prompted to form the concept of cause. On this footing the concept would be merely empirical, and the rule it supplies, that everything that happens has a cause, would be just as contingent as experience itself. Its universality and necessity would then be merely invented and have no true universal validity, since they would rest not on a priori grounds but only on induction. The situation here, however, is the same as with other pure a priori representations, such as space and time, which we can extract from experience as clear concepts only because we had put them into experience, and thereby first brought experience about through them. Certainly the logical clarity of this representation of a rule determining the series of events, as a concept of cause, is possible only once we have made use of it in experience. Yet reference to this rule, as the condition of the synthetic unity of appearances in time, was the ground of experience itself, and thus preceded it a priori.

What matters, then, is to show by an example that even in experience we never ascribe succession to the object—the succession of an event in which something happens that was not before—and distinguish it from the subjective succession of our apprehension, except where a rule underlies it.

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This rule compels us to observe this order of perceptions rather than another; indeed, this compulsion is precisely what first makes the representation of a succession in the object possible.

We have representations within us, of which we can also become conscious. But however extensive, exact, or precise this consciousness may be, they still remain only representations: inner determinations of our mind in this or that temporal relation. How, then, do we come to posit an object for these representations, or, beyond their subjective reality as modifications, to ascribe to them some further objective reality, I do not know what kind? Objective significance cannot consist in a relation to another representation, of what one wished to call the object; otherwise the question arises again: how does this representation in turn go beyond itself and acquire objective significance in addition to the subjective significance proper to it as a determination of the state of mind?

If we investigate what new character relation to an object gives our representations, and what standing they thereby acquire, we find that it does nothing more than make their combination necessary in a certain way and subject them to a rule.

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Conversely, objective significance is conferred on them only because a certain order in the temporal relation of our representations is necessary.

In the synthesis of appearances the manifold of representations is always successive. This does not represent any object at all, since this succession, common to all apprehensions, distinguishes nothing from anything else. But as soon as I perceive, or presuppose, that in this succession there is a relation to the preceding state from which the representation follows according to a rule, something is represented as an event, as something that happens. That is, I cognize an object that I must place at a certain determinate position in time, a position that cannot be assigned to it otherwise in view of the preceding state. Thus when I perceive that something happens, this representation contains, first, that something precedes it, because it is precisely in relation to this that the appearance acquires its temporal relation: existing after a preceding time in which it was not. But it can acquire its determinate position in time within this relation only by something being presupposed in the preceding state on which it always follows, that is, follows according to a rule. From this it follows, first, that I cannot reverse the series and place what happens before that on which it follows; second, that when the preceding state is posited, this determinate event follows inevitably and necessarily.

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In this way an order arises among our representations in which the present, insofar as it has come to be, points to some preceding state as a correlate, though still undetermined, of this given occurrence. This correlate, however, relates determinately to the occurrence as its consequence, and necessarily connects it with itself in the temporal series.

Now if it is a necessary law of our sensibility, and hence a formal condition of all perceptions, that preceding time necessarily determines succeeding time, since I can reach the latter only through the former, then it is also an indispensable law of the empirical representation of the temporal series that appearances of past time determine every existence in the time that follows. These later appearances, as events, take place only insofar as the former determine their existence in time, that is, establish it according to a rule. For only in appearances can we empirically cognize this continuity in the connection of times.

Understanding belongs to all experience and its possibility. Its first contribution is not to make the representation of objects distinct, but to make the representation of an object in general possible.

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It does this by transferring temporal order to appearances and their existence, assigning to each as a consequence a position in time determined a priori with respect to preceding appearances. Without this, appearance would not agree with time itself, which determines the position of all its parts a priori. This determination of position cannot be borrowed from the relation of appearances to absolute time, since absolute time is no object of perception. Rather, appearances must conversely determine one another's positions in time itself and make them necessary in the temporal order. That is, what follows or happens must follow according to a universal rule upon what was contained in the preceding state. The result is a series of appearances that, through the understanding, produces and makes necessary in the series of possible perceptions precisely the same order and continuous connection as is found a priori in the form of inner intuition, time, in which all perceptions must have their positions.

That something happens is thus a perception belonging to a possible experience. This experience becomes actual when I regard the appearance as determined in its position in time, and hence as an object that can always be found according to a rule in the connection of perceptions.

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But this rule for determining something according to temporal succession is that what precedes must contain the condition under which the event always, that is, necessarily, follows. The principle of sufficient reason is therefore the ground of possible experience: of the objective cognition of appearances with respect to their relation in temporal succession.

The proof of this proposition rests solely on the following considerations. All empirical cognition involves a synthesis of the manifold through imagination, which is always successive: its representations always follow one another. But in imagination this succession is not at all determined as to its order, as to what must precede and what follow; the series of successive representations can be taken backward just as well as forward. If, however, this synthesis is a synthesis of apprehension, of the manifold of a given appearance, then the order is determined in the object. More precisely, there is in it an order of successive synthesis that determines an object, according to which something must necessarily precede and, when this is posited, the other must necessarily follow. If, therefore, my perception is to contain cognition of an event, of something actually happening, it must be an empirical judgment in which the succession is thought as determined: as presupposing another appearance in time upon which it follows necessarily, or according to a rule.

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Otherwise, if I posited the preceding appearance and the event did not necessarily follow it, I would have to regard it as merely a subjective play of my imaginings; and if I nevertheless represented something objective by it, I would call it a mere dream. Thus the relation of appearances as possible perceptions, according to which what follows, what happens, is necessarily determined in its existence and according to a rule in time by something preceding it—the relation of cause to effect—is the condition of the objective validity of our empirical judgments concerning the series of perceptions, hence of their empirical truth, and thus of experience. The principle of the causal relation in the succession of appearances therefore also holds for all objects of experience under the conditions of succession, because it is itself the ground of the possibility of such experience.

But a difficulty still arises here that must be removed. In our formulation the principle of causal connection among appearances is restricted to their succession. Yet its use shows that it also applies to their concomitance, and that cause and effect can be simultaneous. For example, there is warmth in a room that is not found in the open air.

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I look for the cause and find a heated stove. Now this, as cause, is simultaneous with its effect, the warmth of the room. Here, then, there is no temporal succession between cause and effect; they are simultaneous, and yet the law holds. Most efficient causes in nature are simultaneous with their effects, and the temporal succession of the latter is occasioned only by the cause's inability to produce its entire effect in an instant. But at the instant when the effect first arises it is always simultaneous with the causality of its cause, since if that causality had ceased an instant earlier, the effect would not have arisen at all. Here we must carefully note that the issue concerns the order of time, not its passage. The relation remains even if no time has elapsed. The time between the causality of the cause and its immediate effect may vanish, so that they are simultaneous, but the relation of one to the other still always remains determinable in time. If I regard a ball resting on a stuffed cushion and pressing a hollow into it as a cause, it is simultaneous with its effect. Yet I still distinguish the two through the temporal relation of their dynamical connection. For when I place the ball on the cushion, the hollow follows its previously smooth shape.

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But if the cushion has a hollow (I do not know from where), a lead ball does not follow upon it.

Thus temporal succession is indeed the sole empirical criterion of an effect in relation to the causality of the cause that precedes it. The glass is the cause of the water's rising above its horizontal surface, although both appearances are simultaneous. For as soon as I draw water with the glass from a larger vessel, something follows: its horizontal level there changes into the concave one it assumes in the glass.

This causality leads to the concept of action, this to the concept of force, and thereby to the concept of substance. Since I do not wish to mix my critical undertaking, which concerns solely the sources of synthetic a priori cognition, with analyses concerned merely with clarifying concepts, not extending them, I leave their detailed discussion to a future system of pure reason. Such analysis, however, is already found abundantly in the familiar textbooks of this kind. But I cannot leave untouched the empirical criterion of a substance insofar as it seems to reveal itself not through the persistence of appearance, but better and more easily through action.

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Where there is action, and hence activity and force, there is also substance; in substance alone must we seek the seat of this fertile source of appearances. That is very well said. But if one must explain what one understands by substance, while avoiding a vicious circle, the answer is not so easy. How is one to infer straight from action the persistence of what acts, which is after all so essential and distinctive a mark of substance (phaenomenon)? After what we have said, however, solving the question presents no such difficulty, although on the usual method of proceeding merely analytically with one's concepts it would be quite insoluble. Action already signifies the relation of the subject of causality to the effect. Since every effect consists in what happens, and thus in the changeable that marks time in succession, its ultimate subject is the persistent, as the substrate of everything changing, that is, substance. For according to the principle of causality, actions are always the first ground of all change in appearances, and thus cannot lie in a subject that itself changes, since otherwise other actions and another subject determining this change would be required. By virtue of this, action, as a sufficient empirical criterion, proves substantiality.

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There is no need for me first to seek its persistence by comparing perceptions; nor could this be done by that route with the completeness required by the scope and strict universal validity of the concept. For that the primary subject

of the causality of all arising and perishing cannot itself arise and perish in the field of appearances is a secure inference. It leads to empirical necessity and persistence in existence, and hence to the concept of a substance as appearance.

When something happens, its mere arising, without regard to what arises, is already in itself an object of investigation. The transition from the nonbeing of a state into that state, even supposing the state contained no quality in appearance, already requires investigation on its own. As was shown under A, this arising concerns not substance, which does not arise, but its state. It is therefore merely alteration, not origination from nothing. If this origination is regarded as the effect of an external cause, it is called creation. Creation cannot be admitted as an event among appearances, since its mere possibility would abolish the unity of experience. Yet things might be considered not as phenomena but as things in themselves.

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As objects of mere understanding they could then, although they are substances, nevertheless be regarded as dependent for their existence on an external cause. This, however, would entail quite different meanings of words and would not apply to appearances as possible objects of experience.

How anything can be altered at all—how it is possible for a state at one point in time to be followed by an opposite state at another—we have not the least a priori concept. This requires acquaintance with actual forces, which can be given only empirically: for example, moving forces, or, what amounts to the same thing, certain successive appearances, as motions, that indicate such forces. But the form of every alteration, the condition under which alone it can occur as the arising of another state (whatever its content, that is, the state that is altered, may be), and hence the succession of states itself (what has happened), can nevertheless be considered a priori according to the law of causality and the conditions of time*.

* Note carefully that I am speaking not of a change in certain relations in general, but of an alteration of state. Thus when a body moves uniformly, it does not alter its state of motion at all; it does so, however, when its motion increases or decreases.

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When a substance passes from a state a into another b, the point in time of the second differs from and follows that of the first state. Likewise the second state, as reality in appearance, differs from the first, in which this reality was not, as b differs from zero. That is, even if state b differed from state a only in magnitude, the alteration is an arising of b−a, which was not in the preceding state, and with respect to which that state is = 0.

The question, then, is how a thing passes from one state = a into another = b. Between two instants there is always a time, and between two states at those instants there is always a difference that has a magnitude, since all parts of appearances are always magnitudes in turn. Thus every transition from one state to another occurs in a time contained between two instants, the first determining the state the thing leaves, the second the state it reaches. Both, then, are boundaries of the time of an alteration, and hence of the intermediate state between the two states, and as such belong to the entire alteration. Now every alteration has a cause that manifests its causality throughout the time in which the alteration takes place.

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This cause therefore produces its alteration not suddenly, all at once or in an instant, but in a time, so that as the time increases from the initial instant a to its completion in b, the magnitude of reality, b−a, is also generated through all the smaller degrees contained between the first and the last. All alteration is therefore possible only through a continuous action of causality, which, insofar as it is uniform, is called a moment. Alteration does not consist of these moments, but is generated through them as their effect.

This, then, is the law of the continuity of all alteration. Its ground is that neither time nor appearance in time consists of smallest parts, and yet in its alteration the state of the thing passes through all these parts, as elements, to its second state. No difference in the real in appearance is the smallest, just as no difference in the magnitude of times is the smallest. Thus the new state of reality

grows from the first, in which this reality was not, through all its infinitely many degrees, whose differences from one another are all smaller than the difference between 0 and a.

What use this proposition may have in investigating nature does not concern us here. But how such a proposition, which seems so greatly to extend our cognition of nature, is possible entirely a priori very much requires our examination, even though direct observation proves it actual and correct.

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One might therefore think oneself excused from asking how it was possible. For there are so many unfounded pretensions to extending our cognition through pure reason that it must be adopted as a general principle to be thoroughly distrustful in this regard, and to believe or accept nothing of the kind, even on the clearest dogmatic proof, without documents that can supply a sound deduction.

Every increase in empirical cognition and every advance of perception is nothing but an extension of the determination of inner sense, an advance in time, whatever the objects may be, whether appearances or pure intuitions. This advance in time determines everything and is itself determined by nothing further; that is, its parts are given only in time and through the synthesis of time, not before it. Accordingly every transition in perception to something following in time is a determination of time through the generation of this perception. Since time, always and in all its parts, is a magnitude, this is the generation of a perception as a magnitude through all degrees, none of which is the smallest, from zero up to its determinate degree. This makes clear the possibility of cognizing a law of alterations a priori as to their form.

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We anticipate only our own apprehension, whose formal condition, since it is present in us before any given appearance, must certainly be capable of being cognized a priori.

Thus, just as time contains the sensible a priori condition of the possibility of a continuous advance from what exists to what follows, so understanding, through the unity of apperception, is the a priori condition of the possibility of

continuously determining all positions for appearances in this time through the series of causes and effects. The causes inevitably entail the existence of their effects, and thereby make the empirical cognition of temporal relations valid for every time, universally, and hence objectively.

C. Third Analogy

Principle of Simultaneity According to the Law of Interaction, or Community

All substances, insofar as they can be perceived in space as simultaneous, are in thoroughgoing interaction.

Proof

Things are simultaneous when in empirical intuition the perception of one can follow the perception of the other.

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It can do so reciprocally (which, as was shown with the second principle, cannot happen in the temporal succession of appearances). Thus I can direct my perception first to the moon and afterward to the earth, or conversely first to the earth and then to the moon. Because the perceptions of these objects can follow one another reciprocally, I say they exist simultaneously. Now simultaneity is the existence of the manifold at the same time. But time itself cannot be perceived, so as to infer from things being posited in the same time that their perceptions can follow one another reciprocally. The synthesis of imagination in apprehension would therefore merely indicate each of these perceptions as present in the subject when the other is not, and conversely. It would not indicate that the objects are simultaneous: that when one is, the other is also at the same time, and that this is necessary if the perceptions are to follow one another reciprocally. Consequently a concept of the understanding concerning the reciprocal succession of the determinations of these things existing simultaneously outside one another is required, in order to say that the reciprocal succession of perceptions is grounded in the object, and thereby to represent simultaneity as objective.

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Now the relation of substances in which one contains determinations whose ground is contained in the other is the relation of influence; and when each reciprocally contains the ground of determinations in the other, it is the relation of community or interaction. Thus the simultaneity of substances in space can be cognized in experience only on the presupposition of their interaction with one another. This is therefore also the condition of the possibility of the things themselves as objects of experience.

Things are simultaneous insofar as they exist in one and the same time. But how do we recognize that they are in one and the same time? When the order in the synthesis of apprehension of this manifold is indifferent, that is, when it can proceed from A through B, C, D to E, or conversely from E to A. For if they were successive in time, in the order beginning with A and ending with E, it would be impossible to begin apprehension in perception with E and proceed backward to A, because A belongs to past time and can therefore no longer be an object of apprehension.

Suppose now that in a manifold of substances as appearances each were completely isolated: none acted on another or reciprocally received influences from it.

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I say that their simultaneity would be no object of a possible perception, and the existence of one could lead by no route of empirical synthesis to the existence of another. For if you imagine them separated by a completely empty space, perception advancing in time from one to another would indeed determine the existence of the latter through a subsequent perception, but could not distinguish whether the appearance objectively followed the first or was instead simultaneous with it.

There must therefore be something besides mere existence through which A determines B's position in time, and conversely B determines A's. Only under this condition can the substances in question be empirically represented as existing simultaneously. Now only what is the cause of another thing or its determinations determines that thing's position in time. Thus every substance, since it can be a consequence only in respect of its determinations, must con-

tain both the causality of certain determinations in the other and the effects of the other's causality within itself. That is, they must stand in dynamical community, directly or indirectly, if simultaneity is to be cognized in any possible experience. But everything without which experience of objects would itself be impossible is necessary with respect to objects of experience.

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Thus all substances in appearance, insofar as they are simultaneous, must necessarily stand in a thoroughgoing community of interaction with one another.

The word "community" in our language is ambiguous: it can mean either communio or commercium. We use it here in the latter sense, as a dynamical community, without which even spatial community (communio spatii) could never be empirically cognized. It is easy to observe in our experiences that only continuous influences throughout space can guide our sense from one object to another; that the light playing between our eye and the heavenly bodies can bring about an indirect community between us and them, thereby proving their simultaneity; that we can make no empirical change of place (perceive this change) unless matter everywhere makes the perception of our position possible; and that matter can show its simultaneity, and thereby its coexistence even with the most distant objects, though only indirectly, solely through its reciprocal influence. Without community every perception of an appearance in space is cut off from every other, and the chain of empirical representations, that is, experience, would begin entirely afresh with a new object.

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The previous one would not be in the least connected with it, nor could it stand in any temporal relation to it. I do not intend by this to refute empty space at all; it may well exist where perceptions do not reach and hence no empirical cognition of simultaneity takes place. But it is then no object at all for any of our possible experience.

The following may serve to clarify this. In our mind all appearances, as contained in a possible experience, must stand in a community (communio) of apperception. Insofar as objects are to be represented as connected in simultaneous existence, they must reciprocally determine their positions in one time

and thereby constitute a whole. If this subjective community is to rest on an objective ground, or be related to appearances as substances, the perception of one must, as ground, make the perception of another possible, and conversely, so that the succession that is always present in perceptions as apprehensions is not ascribed to the objects, but these can be represented as existing simultaneously. This, however, is a reciprocal influence, a real community (commercium) of substances, without which the empirical relation of simultaneity could not occur in experience.

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Through this commercium appearances, insofar as they stand outside one another yet in connection, constitute a composite (compositum reale), and such composita become possible in many ways. The three dynamical relations from which all others arise are therefore those of inherence, consequence, and composition.

* * *

These, then, are the three analogies of experience. They are nothing other than principles for determining the existence of appearances in time according to all three of its modi: the relation to time itself as a magnitude (the magnitude of existence, that is, duration); the relation in time as a series (one after another); and finally the relation in it as a sum total of all existence (at the same time). This unity of temporal determination is thoroughly dynamical. That is, time is not regarded as that in which experience immediately determines a position for each existence, which is impossible because absolute time is no object of perception with which appearances could be compared. Rather, the rule of understanding, through which alone the existence of appearances can acquire synthetic unity according to temporal relations, determines for each its position in time, and does so a priori and validly for each and every time.

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By nature in the empirical sense we understand the connection of appearances in their existence according to necessary rules, that is, laws. Thus there are certain laws, indeed a priori laws, that first make a nature possible. Empirical laws can occur and be discovered only through experience, and in accordance with

those original laws through which experience itself first becomes possible. Our analogies therefore properly present the unity of nature in the connection of all appearances under certain exponents. These express nothing but the relation of time, insofar as it contains all existence, to the unity of apperception, which can occur only in synthesis according to rules. Together, then, they say that all appearances lie in one nature, and must lie in it, because without this a priori unity no unity of experience, and hence no determination of objects in it, would be possible.

A remark must be made, however, about the method of proof we have employed for these transcendental laws of nature and its distinctive character. It must also be very important as a prescription for every other attempt to prove propositions that are both intellectual and synthetic a priori. Suppose we had wished to prove these analogies dogmatically, that is, from concepts.

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We should then have had to prove that everything existing is found only in what persists; that every event presupposes something in the preceding state on which it follows according to a rule; and finally that in the simultaneous manifold the states are simultaneous in relation to one another according to a rule (stand in community). All our effort would have been utterly in vain. For from one object and its existence one cannot arrive at the existence of another, or at its way of existing, through mere concepts of these things, however one analyzes them. What, then, remained to us? The possibility of experience, as a cognition in which all objects must ultimately be capable of being given to us if their representation is to have objective reality for us. In this third thing, whose essential form consists in the synthetic unity of the apperception of all appearances, we found a priori conditions of the thoroughgoing and necessary temporal determination of all existence in appearance, without which even empirical determination of time would be impossible. We found rules of a priori synthetic unity through which we could anticipate experience. The lack of this method, and the delusion of wishing to prove dogmatically synthetic proposi-

tions recommended as principles by the experiential use of understanding, explain why proof of the principle of sufficient reason has been attempted so often, yet always in vain.

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No one thought of the other two analogies, though they were always tacitly employed*, because the guiding thread of the categories was missing. This alone can discover and expose every gap in the understanding, in concepts as well as principles.

* The unity of the world as a whole, in which all appearances are to be connected, is plainly a mere consequence of the tacitly accepted principle of the community of all simultaneous substances. For if they were isolated, they would not constitute a whole as its parts; and if their connection, the interaction of the manifold, were not already necessary on account of simultaneity, one could not infer that real relation from this merely ideal one. We have shown in the appropriate place, however, that community is properly the ground of the possibility of an empirical cognition of coexistence, and that one therefore actually infers backward only from this cognition to community as its condition.

4 The Postulates of Empirical Thinking in General

1 What agrees with the formal conditions of experience (as to intuition and concepts) is possible.

2 [B 266]

What is connected with the material conditions of experience (of sensation) is actual.

3 That whose connection with the actual is determined according to universal conditions of experience is (exists) necessarily.

Elucidation

The categories of modality have the peculiarity that, as determinations of the object, they do not in the least enlarge the concept to which they are added as predicates, but express only its relation to the faculty of cognition. Even when the concept of a thing is already entirely complete, I can still ask of this object

whether it is merely possible or also actual, or, if actual, whether it is also necessary. No further determinations are thereby thought in the object itself. The question is only how it, together with all its determinations, relates to the understanding and its empirical use, to the empirical power of judgment, and to reason in its application to experience.

For this very reason the principles of modality are nothing further than explanations of the concepts of possibility, actuality, and necessity in their empirical use. At the same time they restrict all categories to merely empirical use, without admitting or permitting their transcendental use.

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For if these categories are not to have a merely logical meaning, analytically expressing the form of thinking, but are to concern things and their possibility, actuality, or necessity, they must relate to possible experience and its synthetic unity, in which alone objects of cognition are given.

The postulate of the possibility of things therefore requires that their concept agree with the formal conditions of an experience in general. These conditions, the objective form of experience in general, contain all the synthesis required for cognition of objects. A concept containing a synthesis must be regarded as empty, and relates to no object, if this synthesis does not belong to experience. It may belong to experience either as borrowed from it, in which case the concept is called empirical, or as a synthesis on which experience in general, its form, rests as an a priori condition. In the latter case it is a pure concept that nevertheless belongs to experience, because its object can be found only there. For where would one obtain the mark of the possibility of an object thought through a synthetic a priori concept, if not from the synthesis constituting the form of empirical cognition of objects?

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That such a concept must contain no contradiction is indeed a necessary logical condition, but is far from sufficient for the concept's objective reality, that is, the possibility of an object such as the concept thinks. Thus there is no contradiction in the concept of a figure enclosed by two straight lines, for the concepts of two straight lines and their meeting contain no negation of a figure.

Rather, the impossibility rests not on the concept in itself but on its construction in space, on the conditions of space and its determination. These in turn have their objective reality, that is, they relate to possible things, because they contain a priori the form of experience in general.

Let us now display the extensive use and influence of this postulate of possibility. If I represent a thing that persists, so that everything changing belongs merely to its state, I can never cognize from such a concept alone that such a thing is possible. Or I represent something as so constituted that, when it is posited, something else always and inevitably follows. This may certainly be thought without contradiction; but whether such a property, as causality, is to be found in any possible thing cannot thereby be judged.

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Finally, I can represent different things, substances, so constituted that the state of one entails a consequence in the state of the other, and reciprocally. But whether such a relation can belong to any things cannot at all be gathered from these concepts, which contain a merely arbitrary synthesis. Only because these concepts express a priori the relations of perceptions in every experience do we cognize their objective reality, that is, their transcendental truth. We do so independently of experience, certainly, but not independently of all relation to the form of an experience in general and to the synthetic unity in which alone objects can be empirically cognized.

But if one wished to fashion entirely new concepts of substances, forces, and interactions from the material perception offers us, without borrowing from experience itself an example of their connection, one would fall into sheer fantasies whose possibility has no distinguishing mark whatever. For here one neither accepts experience as teacher nor borrows these concepts from it. Unlike the categories, such invented concepts cannot acquire the mark of their possibility a priori as conditions on which all experience depends, but only a posteriori as concepts given through experience itself.

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Their possibility must be cognized either a posteriori and empirically or not at all. A substance persistently present in space yet not filling it, like the intermediate entity between matter and thinking beings that some have wished to introduce; a special fundamental power of our mind to intuit the future in advance, not merely infer it; or finally a faculty of the mind for sharing thoughts with other people, however distant they may be: these are concepts whose possibility is entirely groundless. It cannot be grounded on experience and its known laws, and without them it is an arbitrary combination of thoughts that, though containing no contradiction, can claim no objective reality, and hence no possibility of an object such as one intends to think here. As for reality, it is surely self-evidently forbidden to think it in concreto without enlisting experience, because it can concern only sensation as the matter of experience, not the form of relation with which one might perhaps play in inventions.

But I pass over everything whose possibility can be gathered only from actuality in experience, and consider here only the possibility of things through a priori concepts.

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Of these I continue to maintain that they can never establish possibility by themselves alone, but always only as formal and objective conditions of an experience in general.

It does indeed seem as though the possibility of a triangle could be cognized from its concept in itself, which is certainly independent of experience. For we can in fact give it an object entirely a priori, that is, construct it. But since this is only the form of an object, it would still remain merely a product of imagination whose object's possibility remained doubtful. Something more is required: that such a figure be thought solely under conditions on which all objects of experience rest. That space is an a priori formal condition of outer experiences, and that the very same formative synthesis through which we construct a triangle in imagination is entirely identical with the synthesis we exercise in apprehending an appearance in order to form an experiential concept of it: this alone connects with that concept the representation of the possibility of such a thing. Likewise the possibility of continuous magnitudes, indeed of magnitudes in

general, since their concepts are all synthetic, becomes clear not from the concepts themselves, but only from them as formal conditions for determining objects in experience in general.

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And where else would we seek objects corresponding to concepts, if not in experience, through which alone objects are given to us? We can indeed cognize and characterize the possibility of things without first supplying experience itself, merely in relation to the formal conditions under which something in experience is determined as an object in general, and thus entirely a priori—but still only in relation to experience and within its boundaries.

The postulate for cognizing the actuality of things requires perception, and hence sensation of which one is conscious. It does not require immediate perception of the very object whose existence is to be cognized, but does require that object's connection with some actual perception according to the analogies of experience, which set out all real connection in an experience in general.

In the mere concept of a thing no mark of its existence can be found. For however complete it may be, so that nothing whatever is lacking for thinking a thing with all its inner determinations, existence has nothing at all to do with any of this. It concerns only the question whether such a thing is given to us, so that its perception could, if need be, precede its concept.

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For the concept's preceding perception signifies its mere possibility; perception, however, which supplies the material for the concept, is the sole mark of actuality. Yet we can also cognize a thing's existence before perceiving it, and thus comparatively a priori, provided it is connected with some perceptions according to the principles of their empirical connection, the analogies. For then the thing's existence is still connected with our perceptions in a possible experience, and by following those analogies we can arrive from our actual perception at the thing in the series of possible perceptions. Thus we cognize the existence of a magnetic matter penetrating all bodies from the perception of attracted iron filings, although the constitution of our organs makes immediate perception of this matter impossible for us. For according to the laws of sensibility and the

context of our perceptions, we would in general also encounter an immediate empirical intuition of it in an experience if our senses were finer. Their coarseness does not affect the form of possible experience in general. Thus our cognition of the existence of things extends as far as perception and what follows from it according to empirical laws.

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If we do not begin with experience, or do not proceed according to laws of the empirical connection of appearances, we boast in vain of wishing to guess or investigate the existence of anything. Idealism, however, raises a powerful objection to these rules for proving existence indirectly, and this is the proper place for its refutation.

Refutation of Idealism

Idealism—I mean material idealism—is the theory that declares the existence of objects in space outside us either merely doubtful and unprovable, or false and impossible. The former is the problematic idealism of Descartes, who declares only one empirical assertion (assertio), namely "I am," indubitable. The second is the dogmatic idealism of Berkeley, who declares space, together with all the things to which it is attached as an inseparable condition, something impossible in itself, and therefore declares things in space to be mere imaginings. Dogmatic idealism is unavoidable if space is regarded as a property that is to belong to things in themselves; for then it, together with everything for which it serves as a condition, is a nonentity. We have, however, removed the ground of this idealism in the transcendental aesthetic.

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Problematic idealism asserts nothing on this matter, but merely alleges our inability to prove an existence other than our own through immediate experience. It is reasonable and accords with a thorough philosophical cast of mind: to allow no decisive judgment before a sufficient proof has been found. The proof demanded must therefore show that we have experience, not merely imagination, of outer things. This can hardly be accomplished otherwise than by proving that even our inner experience, which Descartes regards as indubitable, is possible only on the presupposition of outer experience.

Theorem

The mere, but empirically determined, consciousness of my own existence proves the existence of objects in space outside me.

Proof

I am conscious of my existence as determined in time. All determination of time presupposes something persistent in perception. But this persistent something cannot be something in me, because my existence in time can be determined in the first place only through this persistent something 1). Thus the perception of this persistent something is possible only through a thing outside me, not through the mere representation of a thing outside me. Consequently the determination of my existence in time is possible only through the existence of actual things that I perceive outside me.

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Now consciousness in time is necessarily combined with consciousness of the possibility of this determination of time. Thus it is also necessarily combined with the existence of things outside me as the condition of the determination of time. That is, consciousness of my own existence is at the same time an immediate consciousness of the existence of other things outside me.

1 According to Kant's preface to this second edition, the sentence is to be altered as follows: "But this persistent something cannot be an intuition in me. For all the determining grounds of my existence that can be found in me are representations, and as such themselves require something persistent distinct from them, in relation to which their change, and hence my existence in the time in which they change, can be determined."

Remark 1. In the preceding proof we notice that the game idealism played is turned back against it with greater justice. Idealism assumed that the only immediate experience is inner experience, and that outer things are merely inferred from it, but unreliably, as always when one infers determinate causes from given effects. For the cause of the representations we ascribe, perhaps falsely, to outer things may also lie in ourselves. Here, however, it is proved that outer experience is properly immediate*.

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Only through it is possible, not indeed consciousness of our own existence, but its determination in time, that is, inner experience. Certainly the representation "I am," expressing the consciousness that can accompany all thinking, is what immediately includes the existence of a subject, but not yet any cognition of it, and hence no empirical cognition, that is, no experience. For besides the thought of something existing, cognition also requires intuition, here inner intuition, with respect to which, that is, to time, the subject must be determined. For this, outer objects are absolutely required, so that inner experience itself is consequently possible only indirectly, and only through outer experience.

* The immediate consciousness of the existence of outer things is not presupposed in the preceding theorem but proved, whether or not we can understand the possibility of this consciousness. The question concerning its possibility would be whether we have only an inner sense and no outer sense, but merely outer imagination. It is clear, however, that even to imagine something as external, that is, to present it to sense in intuition, we must already have an outer sense, and thereby immediately distinguish the mere receptivity of an outer intuition from the spontaneity characterizing every act of imagination. For merely to imagine even an outer sense would destroy the very faculty of intuition that imagination is supposed to determine.

Remark 2. All experiential use of our faculty of cognition in determining time agrees perfectly with this. Not only can we determine all time solely through change in outer relations (motion) in relation to what persists in space (for example, the sun's motion in relation to objects on earth).

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We even have nothing persistent at all that we could place as intuition beneath the concept of a substance except matter. Even this persistence is not drawn from outer experience, but presupposed a priori as a necessary condition of all determination of time, and hence also of the determination of inner sense concerning our own existence through the existence of outer things. Consciousness of myself in the representation "I" is no intuition at all, but a

merely intellectual representation of the self-activity of a thinking subject. Hence this "I" has not the least predicate of intuition that, as persistent, could serve as a correlate for determining time in inner sense, as impenetrability does in matter as empirical intuition.

Remark 3. That the existence of outer objects is required for the possibility of a determinate consciousness of ourselves does not imply that every intuitive representation of outer things also includes their existence. Such a representation may very well be merely the effect of imagination, in dreams as well as in madness. But it is so only through the reproduction of former outer perceptions, which, as has been shown, are possible only through the actuality of outer objects. All that was to be proved here is that inner experience in general is possible only through outer experience in general.

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Whether this or that supposed experience is not mere imagination must be established from its particular determinations and by comparison with the criteria of all actual experience.

* * *

Finally, the third postulate concerns material necessity in existence, not merely formal and logical necessity in the connection of concepts. Now no existence of objects of the senses can be cognized wholly a priori, though it can be cognized comparatively a priori in relation to another existence already given. Even then, however, one can arrive only at an existence that must be contained somewhere in the connection of experience of which the given perception is a part. Thus the necessity of existence can never be cognized from concepts, but always only from connection with what is perceived, according to universal laws of experience. Now no existence can be cognized as necessary under the condition of other given appearances except the existence of effects from given causes according to laws of causality. Thus it is not the existence of things, substances, but only that of their state whose necessity we can cognize.

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And we cognize it from other states given in perception, according to empirical laws of causality. It follows that the criterion of necessity lies solely in the law of possible experience: that everything happening is determined a priori by its cause in appearance. Hence we cognize only the necessity of effects in nature whose causes are given to us. The mark of necessity in existence extends no further than the field of possible experience, and even there it does not apply to the existence of things as substances, since these can never be regarded as empirical effects, or as something that happens and arises. Necessity therefore concerns only the relations of appearances according to the dynamical law of causality, and the possibility grounded on this of inferring a priori from some given existence, a cause, to another existence, the effect. Everything that happens is hypothetically necessary: this is a principle that subjects alteration in the world to a law, a rule of necessary existence, without which there would not even be nature. Hence the proposition "Nothing happens by blind chance" (in mundo non datur casus) is an a priori law of nature; likewise, "No necessity in nature is blind, but conditioned and hence intelligible necessity" (non datur fatum).

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Both are laws through which the play of alterations is subjected to a nature of things as appearances, or, what is the same, to the unity of understanding, in which alone they can belong to an experience as the synthetic unity of appearances. Both principles are dynamical. The first is properly a consequence of the principle of causality among the analogies of experience. The second belongs to the principles of modality, adding to causal determination the concept of necessity, though a necessity subject to a rule of understanding. The principle of continuity forbade in the series of appearances (alterations) every leap (in mundo non datur saltus), but also in the sum total of all empirical intuitions in space every gap or chasm between two appearances (non datur hiatus). For this is how one can express the proposition that nothing can enter experience that would prove a vacuum, or even admit it as a part of empirical synthesis. As for the void one might think outside the field of possible experience, the world, it does not fall under the jurisdiction of mere understanding. Understanding

decides only questions concerning the use of given appearances for empirical cognition. The void is a problem for ideal reason, which goes beyond the sphere of possible experience.

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It wishes to judge what surrounds and bounds experience itself, and must therefore be considered in the transcendental dialectic. These four propositions (in mundo non datur hiatus, non datur saltus, non datur casus, non datur fatum) could easily be presented in their order, like all principles of transcendental origin, according to the order of the categories, with each assigned its proper place by proof. But the reader, now practiced, will do this unaided or readily discover the guiding thread. They all unite, however, solely in allowing nothing in empirical synthesis that could impair or disrupt understanding and the continuous connection of all appearances, that is, the unity of its concepts. For in understanding alone is the unity of experience possible, in which all perceptions must have their place.

Whether the field of possibility is greater than the field containing everything actual, and this in turn greater than the multitude of what is necessary: these are engaging questions, requiring a synthetic solution, but they fall solely under the jurisdiction of reason. They amount approximately to asking whether all things as appearances belong together in the sum total and context of a single experience, of which every given perception is a part that can therefore be combined with no other appearances.

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Or they ask whether my perceptions can belong to more than one possible experience in their general connection. Understanding gives experience in general a priori only its rule, according to the subjective and formal conditions of both sensibility and apperception that alone make it possible. Other forms of intuition than space and time, and likewise other forms of understanding than the discursive form of thinking or cognition through concepts, even if possible, cannot in any way be devised or made intelligible by us. But even if we could do so, they would still not belong to experience as the sole cognition in which objects are given to us. Whether there could be perceptions other than those

belonging in general to our entire possible experience, and hence an entirely different field of matter, understanding cannot decide: it is concerned only with the synthesis of what is given. Otherwise the poverty of our usual inferences, through which we produce a vast realm of possibility of which everything actual, every object of experience, is only a small part, is glaringly obvious. Everything actual is possible; from this there naturally follows, according to the logical rules of conversion, only the particular proposition that something possible is actual.

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This seems to mean that much is possible that is not actual. It does indeed seem that one could also directly increase the number of possible things beyond that of actual things, because something must be added to possibility to constitute actuality. But I do not know this addition to the possible. For what was to be added beyond it would be impossible. Something can be added only for my understanding beyond agreement with the formal conditions of experience: connection with some perception. What is connected with this according to empirical laws is actual, even if it is not immediately perceived. But that another series of appearances, and hence more than one single all-embracing experience, is possible in thoroughgoing connection with what is given to me in perception cannot be inferred from what is given, still less without anything being given, since without material nothing at all can be thought. What is possible only under conditions that are themselves merely possible is not possible in every respect. Yet it is in this sense that the question is taken when one wishes to know whether the possibility of things extends further than experience can reach.

I have mentioned these questions only to leave no gap in what, according to common opinion, belongs to the concepts of the understanding.

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In fact, however, absolute possibility, valid in every respect, is no mere concept of the understanding and can have no empirical use whatever. It belongs solely to reason, which goes beyond every possible empirical use of understanding.

Here we have therefore had to content ourselves with a merely critical remark, while otherwise leaving the matter in darkness until our further proceedings.

As I am about to conclude this fourth number, and with it the system of all principles of pure understanding, I must still give the reason why I have called the principles of modality precisely postulates. I do not wish to take the expression here in the sense some recent philosophical writers have given it, contrary to the sense of the mathematicians to whom it properly belongs: namely, that to postulate means to proclaim a proposition immediately certain without justification or proof. For if we were to concede of synthetic propositions, however self-evident, that they may be imposed on unconditional assent without deduction, on the authority of their own declaration, all critique of the understanding is lost. There is no lack of bold pretensions, and even common belief, which is no credential, does not refuse them.

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Our understanding would then stand open to every delusion, unable to refuse assent to pronouncements that, though illegitimate, demand admission in the same confident tone as actual axioms. Thus whenever a determination is synthetically added a priori to the concept of a thing, such a proposition must unfailingly be accompanied, if not by a proof, then at least by a deduction of the legitimacy of its assertion.

The principles of modality, however, are not objectively synthetic, because the predicates of possibility, actuality, and necessity do not in the least enlarge the concept of which they are asserted by adding anything to the representation of the object. Yet since they are still always synthetic, they are so only subjectively. They add to the concept of a real thing, about which they otherwise say nothing, the cognitive power in which it arises and has its seat. Thus if the concept is connected merely in understanding with the formal conditions of experience, its object is called possible. If it is connected with perception, sensation as the matter of the senses, and determined through perception by means of understanding, the object is actual. If it is determined through the connection of perceptions according to concepts, the object is called necessary.

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Thus the principles of modality state concerning a concept nothing other than the action of the faculty of cognition through which it is generated. Now in mathematics a postulate means a practical proposition containing nothing but the synthesis through which we first give ourselves an object and generate its concept: for example, with a given line to describe a circle from a given point on a plane. Such a proposition cannot be proved, because the procedure it demands is precisely what first generates our concept of such a figure. With precisely the same right, then, we can postulate the principles of modality, because they do not enlarge their concept of things in general*, but merely indicate how it is combined with the cognitive power in general.

* Through the actuality of a thing I certainly posit more than its possibility, but not in the thing; for it can never contain more in actuality than was contained in its complete possibility. Rather, since possibility was merely a positing of the thing in relation to understanding and its empirical use, actuality is at the same time a connection of it with perception.

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General Remark on the System of Principles

It is very remarkable that we cannot understand the possibility of any thing through the mere category, but must always have an intuition at hand in which to exhibit the objective reality of the pure concept of the understanding. Take, for example, the categories of relation. How 1) something can exist only as subject, not as a mere determination of other things, that is, be substance; or how 2) because something is, something else must be, and hence how anything can be a cause at all; or 3) how, when several things exist, something follows for the others from the existence of one of them, and reciprocally, so that a community of substances can take place: none of this can be understood from mere concepts. The same holds of the other categories: for example, how a thing together with many others can be one, that is, a magnitude, and so on. As long as intuition is lacking, then, we do not know whether through the categories we are thinking an object, or whether any object whatever can correspond to them. This confirms that in themselves they are not cognitions at all, but mere forms of thought for making cognitions out of given intuitions.

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This also explains why no synthetic proposition can be made from mere categories. For example: in all existence there is substance, something that can exist only as subject and not as mere predicate; or every thing is a quantum, and so on. Here there is nothing that could serve us in going beyond a given concept and connecting another with it. Hence it has never been possible to prove a synthetic proposition from mere pure concepts of the understanding, for example the proposition that everything contingently existing has a cause. One could never get further than proving that without this relation we could not comprehend the existence of the contingent at all, could not cognize a priori through understanding the existence of such a thing. But it does not follow that this relation is also the condition of the possibility of the things themselves. If we look back at our proof of the principle of causality, we will therefore see that we could prove it only of objects of possible experience: everything that happens, every event, presupposes a cause. Moreover, we could prove it only as a principle of the possibility of experience, and hence of cognition of an object given in empirical intuition, not from mere concepts. It cannot be denied that everyone nevertheless finds the proposition "Everything contingent must have a cause" clearly evident from mere concepts.

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But then the concept of the contingent has already been framed so as to contain not the category of modality, as something whose nonbeing can be thought, but that of relation, as something that can exist only as a consequence of something else. Then, of course, the proposition "What can exist only as a consequence has its cause" is an identical proposition. In fact, when we are to give examples of contingent existence, we always appeal to alterations, not merely to the possibility of thinking the opposite*. Alteration, however, is an event.

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As such it is possible only through a cause, and its nonbeing is therefore possible in itself. Thus we recognize contingency from something's being able to exist only as an effect of a cause. If a thing is therefore assumed to be contin-

gent, saying that it has a cause is an analytic proposition.

* The nonbeing of matter is easy to think, yet the ancients did not infer its contingency from this. But even the alternation of being and nonbeing of a given state of a thing, in which all alteration consists, does not at all prove the contingency of this state, as though from the actuality of its opposite. For example, a body's rest following its motion does not yet prove the contingency of that motion merely because the former is the opposite of the latter. For this opposite is here opposed to the other only logically, not realiter. To prove the contingency of its motion, one would have to prove that instead of moving at the preceding point in time the body could then have been at rest, not that it rests afterward; for then both opposites can very well coexist.

Still more remarkable is that, to understand the possibility of things according to the categories and thus exhibit the objective reality of the latter, we need not merely intuitions, but always outer intuitions. If, for example, we take the pure concepts of relation, we find that 1) to give something persistent in intuition corresponding to the concept of substance, and thereby exhibit the objective reality of this concept, we need an intuition in space, of matter, because space alone is persistently determined, while time, and hence everything in inner sense, constantly flows. To present alteration as the intuition corresponding to the concept of causality, we must take motion, as alteration in space, as our example. Indeed, through this alone can we make alterations intuitive to ourselves, although no pure understanding can comprehend their possibility. Alteration is the combination of contradictorily opposed determinations in the existence of one and the same thing.

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How a state opposed to a given state of the same thing can follow from it, no reason can make comprehensible to itself without an example, or even intelligible without intuition. This intuition is that of a point's motion in space, whose existence in different places, as a succession of opposed determinations, alone first makes alteration intuitive to us. For afterward, even to make inner alterations thinkable, we must represent time, as the form of inner sense, figuratively by a line, and inner alteration by the drawing of this line, motion. We

must thus make our own successive existence in different states intelligible through outer intuition. The actual ground of this is that all alteration presupposes something persistent in intuition even to be perceived as alteration, whereas no persistent intuition whatever is found in inner sense.—Finally, the category of community cannot be comprehended in its possibility through mere reason at all; hence the objective reality of this concept cannot be understood without intuition, specifically outer intuition in space. For how is one to think the possibility that, when several substances exist, something as an effect can follow reciprocally from the existence of one to the existence of the others, so that because something is in the first there must also be something in the others that cannot be understood from the latter's existence alone?

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This is required for community, but is quite incomprehensible among things each completely isolated by its subsistence. Thus Leibniz, in ascribing community to the substances of the world solely as understanding thinks them, needed a deity to mediate it; for he rightly found it incomprehensible from their existence alone. But we can very well make the possibility of community among substances as appearances intelligible to ourselves if we represent them in space, and thus in outer intuition. For space already contains a priori formal outer relations as conditions of the possibility of real relations in action and reaction, and hence of community.—Likewise it can easily be shown that the possibility of things as magnitudes, and thus the objective reality of the category of magnitude, can be exhibited only in outer intuition, and only through this subsequently applied to inner sense as well. But to avoid prolixity I must leave examples of this to the reader's reflection.

This entire remark is of great importance for confirming our preceding refutation of idealism.

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It is of still greater importance when self-cognition from mere inner consciousness and the determination of our nature without the aid of outer empirical intuitions comes under discussion, for it shows us the limits of the possibility of such cognition.

The final conclusion of this entire section is therefore this: all principles of pure understanding are nothing more than a priori principles of the possibility of experience. All synthetic a priori propositions relate solely to experience; indeed, their very possibility rests entirely on this relation.

The Transcendental Doctrine of the Power of Judgment (Analytic of Principles) Third Chapter

On the Ground of the Distinction of All Objects in General into Phaenomena and Noumena

We have now not only traveled through the land of pure understanding and carefully inspected every part of it, but also measured it and assigned everything within it its place. This land, however, is an island, enclosed by nature itself within unalterable boundaries.

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It is the land of truth—an alluring name—surrounded by a vast and stormy ocean, the true home of illusion, where many a fogbank and many an ice floe soon to melt away falsely promise new lands. Ceaselessly deceiving the seafarer roaming in search of discovery with empty hopes, they entangle him in adventures he can neither abandon nor ever bring to an end. Before we venture onto this sea, however, to search it in every latitude and learn for certain whether anything is to be hoped for there, it will be useful first to cast another glance at the map of the land we are about to leave. We should ask, first, whether we might not after all be content with what it contains, or must be content from necessity if there is nowhere else any ground on which we could settle; and second, by what title we possess even this land and can consider ourselves secure against every hostile claim. Although we have already answered these questions sufficiently in the course of the analytic, a summary survey of their solutions may still strengthen conviction by bringing their grounds together at a single point.

We have seen, namely, that everything understanding draws from itself without borrowing it from experience is nevertheless at its disposal for no purpose other than use in experience.

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The principles of pure understanding, whether constitutive a priori, like the mathematical principles, or merely regulative, like the dynamical ones, contain nothing but, as it were, the pure schema for possible experience. For experience has its unity only from the synthetic unity that understanding originally and of itself gives to the synthesis of imagination in relation to apperception, and to which appearances, as data for a possible cognition, must already stand in relation and agreement a priori. Now although these rules of understanding are not only true a priori but even the source of all truth, that is, of the agreement of our cognition with objects, because they contain the ground of the possibility of experience as the sum total of all cognition in which objects may be given to us, it still seems insufficient merely to be told what is true rather than what we wish to know. If this critical investigation teaches us nothing more than what we would quite naturally have practiced in the merely empirical use of understanding, even without such subtle inquiry, the advantage drawn from it seems not worth the expense and preparation. One can indeed reply that no inquisitiveness is more harmful to the extension of our cognition than that which always wants to know the benefit in advance.

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It wants this before embarking on investigations, and before one could form even the slightest concept of that benefit, even if it were set before one's eyes. Yet there is an advantage that can be made intelligible, and at the same time important, even to the most difficult and reluctant student of such transcendental inquiry. It is this: understanding occupied solely with its empirical use, without reflecting on the sources of its own cognition, can indeed make very good progress, but cannot accomplish one thing—determine for itself the boundaries of its use and know what may lie within or outside its entire sphere. For precisely this requires the deep investigations we have undertaken. But if it cannot distinguish whether certain questions lie within its horizon or not, it is never secure in its claims and possessions. It can expect only repeated humiliating corrections as it incessantly, and inevitably, oversteps the boundaries of its territory and strays into delusion and deception.

That understanding can make no use of any of its a priori principles, indeed of any of its concepts, except an empirical and never a transcendental use, is therefore a proposition that, if it can be cognized with conviction, promises important consequences.

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The transcendental use of a concept in any principle consists in its being related to things in general and in themselves; its empirical use consists in its being related merely to appearances, objects of a possible experience. That only the latter use is possible anywhere can be seen as follows. Every concept requires, first, the logical form of a concept, of thinking, in general, and second, the possibility of giving it an object to which it relates. Without the latter it has no sense and is entirely empty of content, although it may still contain the logical function of making a concept out of whatever data may be available. Now an object can be given to a concept only in intuition. Even if a pure intuition is possible a priori before the object, this intuition itself can acquire its object, and hence objective validity, only through empirical intuition, of which it is the mere form. Thus all concepts, and with them all principles, however possible they may be a priori, nevertheless relate to empirical intuitions, data for possible experience. Without this they have no objective validity whatever, but are a mere play of imagination or of understanding with their respective representations. Take only the concepts of mathematics as an example, first in their pure intuitions.

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Space has three dimensions; between two points there can be only one straight line, and so on. Although all these principles, and the representation of the object with which that science is concerned, are generated entirely a priori in the mind, they would still mean nothing whatever if we could not always exhibit their significance in appearances, empirical objects. Thus we also require that an abstract concept be made sensible, that is, that its corresponding object be exhibited in intuition. Without this the concept would remain, as we say, without sense, that is, without significance. Mathematics fulfills this demand by constructing the figure, which is an appearance present to the sens-

es, though produced a priori. In the same science the concept of magnitude seeks its support and sense in number, and number in the fingers, the beads of the counting board, or the strokes and points placed before our eyes. The concept, together with the synthetic principles or formulas drawn from such concepts, always remains generated a priori. But their use and relation to supposed objects can ultimately be sought nowhere but in experience, whose possibility as to form they contain a priori.

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That this is also the case with all categories and the principles spun from them is clear from the following: we cannot give a real definition of a single one of them, that is, make the possibility of its object intelligible, without immediately descending to conditions of sensibility, and hence to the form of appearances. Consequently they must be restricted to appearances as their only objects. For if this condition is removed, all significance, all relation to an object, disappears; and no example can make intelligible even to ourselves what sort of thing is actually meant by such concepts.

No one can explain the concept of magnitude in general except perhaps as that determination of a thing through which one can think how many times a unit is posited in it. But this "how many times" rests on successive repetition, and hence on time and the synthesis of the homogeneous in it. Reality can be explained in contrast to negation only if one thinks of a time (as the sum total of all being) that is either filled with something or empty. If I omit persistence, existence at all times, nothing remains to me for the concept of substance but the logical representation of a subject. I imagine I make this real by representing something that can occur only as subject, without being a predicate of anything.

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Yet not only do I know no conditions under which this logical prerogative would belong to any thing; nothing further can be made of it, not the slightest consequence drawn, because no object of the use of this concept is thereby determined. Thus we do not know at all whether it means anything whatever. From the concept of cause, if I omit the time in which something follows

something else according to a rule, I would find in the pure category nothing beyond its being something from which the existence of another can be inferred. Not only could cause and effect thereby not be distinguished at all, but since this ability to infer soon requires conditions of which I know nothing, the concept would contain no determination of how it fits any object. The supposed principle "Everything contingent has a cause" certainly presents itself with considerable gravity, as though it possessed its own dignity within itself. But if I ask what you understand by "contingent," and you answer "That whose nonbeing is possible," I would like to know how you intend to recognize this possibility of nonbeing unless you represent a succession in the series of appearances, and in it an existence following nonbeing, or the reverse, hence a change. For that the nonbeing of a thing does not contradict itself is a feeble appeal.

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What it appeals to is a logical condition, necessary indeed for the concept, but far from sufficient for real possibility. I can in thought abolish every existing substance without contradicting myself, yet cannot infer from this its objective contingency in existence, the possibility of its nonbeing in itself. As for the concept of community, it is easy to judge that, since the pure categories of substance and causality admit no explanation determining the object, reciprocal causality in the relation of substances to one another (commercium) is equally incapable of it. No one has ever been able to explain possibility, existence, and necessity except through manifest tautology when trying to draw their definitions solely from pure understanding. For the deception of substituting the logical possibility of a concept, its not contradicting itself, for the transcendental possibility of things, an object's corresponding to the concept, can mislead and satisfy only the inexperienced*.

* In a word, none of these concepts can be supported by anything, and their real possibility thereby demonstrated, if all sensible intuition, the only intuition we have, is removed. Only logical possibility then remains: that the concept, the thought, is possible. But this is not the question; the question is whether it relates to an object and thus means anything.

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From this it follows incontestably that the pure concepts of the understanding can never have a transcendental but always only an empirical use, and that the principles of pure understanding can be related only to objects of the senses in reference to the universal conditions of a possible experience, never to things in general without regard to the way we may intuit them.
The transcendental analytic therefore has this important result: understanding can never accomplish more a priori than to anticipate the form of a possible experience in general. Since what is not appearance cannot be an object of experience, understanding can never overstep the limits of sensibility, within which alone objects are given to us. Its principles are merely principles for the exposition of appearances. The proud name of an ontology that presumes to supply synthetic a priori cognitions of things in general in a systematic doctrine, for example the principle of causality, must give way to the modest name of a mere analytic of pure understanding.
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Thinking is the act of relating a given intuition to an object. If the kind of intuition is in no way given, the object is merely transcendental, and the concept of the understanding has no other than a transcendental use: the unity of thinking a manifold in general. Through a pure category, then, in which abstraction is made from every condition of sensible intuition as the only intuition possible for us, no object is determined. Only the thinking of an object in general is expressed in various modi. Now the use of a concept also requires a function of the power of judgment by which an object is subsumed under it, and hence at least the formal condition under which something can be given in intuition. If this condition of the power of judgment, the schema, is lacking, all subsumption falls away, since nothing is given that could be subsumed under the concept. The merely transcendental use of the categories is therefore in fact no use at all, and has no determinate object, nor even one determinable in form. It follows that the pure category is also insufficient for any synthetic a priori principle, and that the principles of pure understanding have only empirical, never transcendental use.

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Beyond the field of possible experience there can be no synthetic a priori principles whatever.
It may therefore be advisable to express the matter thus: the pure categories, without the formal conditions of sensibility, have merely transcendental significance but no transcendental use, because such use is itself impossible. They lack all the conditions for any use in judgments, namely the formal conditions for subsuming any supposed object under these concepts. Since, then, as merely pure categories they are not to have empirical use, and cannot have transcendental use, they have no use at all when separated from all sensibility. That is, they cannot be applied to any supposed object. Rather, they are merely the pure form of the use of understanding concerning objects in general and of thinking, without our being able through them alone to think or determine any object.
Yet a deception that is difficult to avoid underlies this. In their origin the categories are not grounded on sensibility, as are the forms of intuition, space and time; they therefore seem to permit an application extending beyond all objects of the senses. But they in turn are nothing but forms of thought, containing merely the logical capacity to unite a priori in one consciousness the manifold given in intuition.
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Thus if one removes from them the only intuition possible for us, they can have even less significance than those pure sensible forms through which at least an object is given. By contrast, a way of combining the manifold peculiar to our understanding means nothing whatever unless the intuition in which alone this manifold can be given is added.—Nevertheless, it is already implicit in our concept, when we call certain objects, as appearances, beings of sense (phenomena), distinguishing our way of intuiting them from their character in themselves, that we set over against them, as it were, either these same objects in their character in themselves, though we do not intuit them in that character, or other possible things that are not objects of our senses at all. We regard these as objects thought merely through understanding and call them beings of

understanding (noumena). The question now is whether our pure concepts of the understanding have significance with respect to these latter objects and could be a way of cognizing them.

But an ambiguity appears here at once that can occasion great misunderstanding. When understanding calls an object in one relation merely a phenomenon, it simultaneously forms, outside this relation, a representation of an object in itself.

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It therefore imagines that it can also form concepts of such an object, and that, since understanding supplies none but the categories, the object in the latter sense must at least be capable of being thought through these pure concepts of the understanding. This leads it to take the entirely undetermined concept of a being of understanding, as something in general outside our sensibility, for a determinate concept of a being that we can in some way cognize through understanding.

If by noumenon we understand a thing insofar as it is not an object of our sensible intuition, abstracting from our way of intuiting it, this is a noumenon in the negative sense. But if we understand by it an object of a nonsensible intuition, we assume a special kind of intuition, intellectual intuition, which is not ours and whose possibility we cannot even understand. This would be the noumenon in the positive sense.

The doctrine of sensibility is therefore also the doctrine of noumena in the negative sense: of things that understanding must think without this relation to our way of intuiting, and hence not merely as appearances but as things in themselves. Yet in thus separating them understanding also comprehends that it can make no use of its categories in considering them this way.

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The reason is that the categories have significance only in relation to the unity of intuitions in space and time. They can determine precisely this unity a priori through universal concepts of combination only because of the mere ideality of space and time. Where this temporal unity cannot be found, and hence in the case of the noumenon, all use, indeed all significance, of the categories entirely

ceases. For even the possibility of things that are supposed to correspond to the categories cannot be understood at all. Here I need only appeal to what I stated at the very beginning of the general remark on the preceding chapter. Now the possibility of a thing can never be proved merely from the noncontradiction of its concept, but only by supporting the concept with a corresponding intuition. If, therefore, we wished to apply the categories to objects not regarded as appearances, we would have to base them on an intuition other than sensible intuition, and the object would then be a noumenon in the positive sense. Since such intuition, intellectual intuition, lies absolutely outside our faculty of cognition, the use of the categories can in no way extend beyond the boundary of objects of experience.

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Beings of understanding do indeed correspond to beings of sense, and there may also be beings of understanding to which our sensible faculty of intuition has no relation at all. But our concepts of the understanding, as mere forms of thought for our sensible intuition, do not reach these in the least. What we call noumenon must therefore, as such, be understood only in the negative sense.

If I remove all thinking through categories from an empirical cognition, no cognition of any object remains. For through mere intuition nothing is thought, and that this affection of sensibility is in me constitutes no relation of such a representation to any object. If, on the other hand, I omit all intuition, the form of thinking still remains: the manner of determining an object for the manifold of a possible intuition. To this extent the categories therefore extend further than sensible intuition, because they think objects in general without yet attending to the particular manner (of sensibility) in which these may be given. But they do not thereby determine a larger sphere of objects, because we cannot assume that such objects can be given without presupposing as possible a kind of intuition other than sensible intuition, which we are in no way entitled to do.

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I call a concept problematic when it contains no contradiction and is also connected with other cognitions as a delimitation of given concepts, but its objective reality cannot be cognized in any way. The concept of a noumenon, of a thing that is to be thought not at all as an object of the senses but as a thing in itself, solely through a pure understanding, is not contradictory at all. For one cannot assert of sensibility that it is the only possible kind of intuition. Further, this concept is necessary to prevent sensible intuition from being extended to things in themselves, and thus to restrict the objective validity of sensible cognition. For the remaining things, to which sensible cognition does not reach, are called noumena precisely to indicate that these cognitions cannot extend their territory over everything understanding thinks. In the end, however, the possibility of such noumena cannot be understood at all, and the region outside the sphere of appearances is empty for us. That is, we have an understanding that problematically extends further than appearances, but no intuition, not even the concept of a possible intuition, through which objects could be given to us outside the field of sensibility and understanding could be used assertorically beyond it.

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The concept of a noumenon is therefore merely a boundary concept, intended to restrict the pretensions of sensibility, and hence of merely negative use. Yet it is not arbitrarily invented, but is connected with the limitation of sensibility, without being able to posit anything positive outside its domain.

The division of objects into phaenomena and noumena, and of the world into a world of sense and a world of understanding, can therefore in no way be admitted in a positive sense, although concepts certainly admit division into sensible and intellectual. For no object can be determined for the latter, and they therefore cannot be proclaimed objectively valid. If we depart from the senses, how shall we make it comprehensible that our categories, which would be the only concepts remaining for noumena, still mean anything at all? For their relation to any object requires that something more than mere unity of thinking be given: a possible intuition to which they can be applied. Nevertheless, taken merely problematically, the concept of a noumenon

remains not only admissible but also unavoidable as a concept setting limits to sensibility. But it is then no special intelligible object for our understanding. Rather, an understanding to which it would belong is itself a problem.

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The problem is that of cognizing its object not discursively through categories but intuitively in a nonsensible intuition, of whose possibility we cannot form the slightest representation. In this way our understanding receives a negative extension, that is, it is not limited by sensibility, but rather limits sensibility by calling things in themselves, not regarded as appearances, noumena. Yet it immediately sets boundaries to itself as well, by cognizing them through no categories and hence thinking them only under the name of an unknown something.

In the writings of recent thinkers, however, I find an entirely different use of the expressions mundi sensibilis and intelligibilis*, one departing completely from the sense of the ancients. It presents no difficulty, certainly, but also amounts to nothing but empty wordmongering. In this usage some have chosen to call the sum total of appearances, insofar as it is intuited, the world of sense, but insofar as its connection is thought according to universal laws of understanding, the world of understanding.

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Theoretical astronomy, presenting mere observation of the starry heavens, would represent the former; contemplative astronomy (explained perhaps according to the Copernican system of the world, or even according to Newton's laws of gravitation) would represent the latter, namely an intelligible world. But such twisting of words is a merely sophistical evasion of a troublesome question, by lowering its meaning to one's convenience. Understanding and reason can certainly be used with respect to appearances. But the question is whether they still have any use when the object is not appearance, a noumenon. It is taken in this sense when thought in itself as merely intelligible, given solely to understanding and not at all to the senses. Thus the question is

whether, beyond that empirical use of understanding, even in the Newtonian representation of the universe, a transcendental use is also possible that relates to the noumenon as an object. We have answered this question negatively.

* One must not replace this expression with "intellectual world," as is commonly done in German exposition. For only cognitions are intellectual or sensitive. What can be an object only of one or the other kind of intuition, and hence the objects, must be called intelligible or sensible, despite the awkward sound.

Thus when we say that the senses represent objects to us as they appear, but understanding as they are, the latter must be taken not in a transcendental but merely in an empirical sense: as objects of experience must be represented in the thoroughgoing connection of appearances.

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They are not to be represented as what they may be apart from relation to possible experience, and hence to senses in general, as objects of pure understanding. For this will always remain unknown to us, so much so that even whether such transcendental, extraordinary cognition is possible at all remains unknown, at least as a cognition falling under our ordinary categories. In us, understanding and sensibility can determine objects only in combination. If we separate them, we have intuitions without concepts or concepts without intuitions, but in both cases representations that we can relate to no determinate object.

If anyone still hesitates, after all these discussions, to renounce the merely transcendental use of the categories, let him try them in some synthetic assertion. An analytic assertion takes understanding no further. Since understanding is then concerned only with what is already thought in the concept, it leaves undecided whether the concept in itself relates to objects or merely signifies the unity of thinking in general, which abstracts entirely from the manner in which an object may be given. It is enough for understanding to know what lies in its concept; what the concept itself may relate to is indifferent to it.

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Let him therefore try some synthetic and supposedly transcendental principle, such as: everything that is exists as substance or as a determination attaching to it; everything contingent exists as an effect of another thing, its cause; and so on. Now I ask: where will he obtain these synthetic propositions, since the concepts are supposed to hold not in relation to possible experience but of things in themselves, noumena? Where is the third thing always required for a synthetic proposition, in which to connect concepts that have no logical, analytic kinship at all? He will never prove his proposition; indeed, more than that, he will not even be able to justify the possibility of such a pure assertion without referring to the empirical use of understanding, thereby completely renouncing a pure judgment free from the senses. Thus the concept of pure, merely intelligible objects is entirely devoid of all principles for its application, because no way can be devised in which they should be given. The problematic thought that nevertheless leaves a place open for them serves only, like an empty space, to restrict empirical principles, without containing or exhibiting any other object of cognition outside their sphere.

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Appendix On the Amphiboly of Concepts of Reflection Through the Confusion of the Empirical Use of Understanding with Its Transcendental Use

Reflection (reflexio) is not concerned with objects themselves in order to obtain concepts directly from them. It is rather the state of mind in which we first prepare to discover the subjective conditions under which we can arrive at concepts. It is the consciousness of the relation of given representations to our various sources of cognition, through which alone their relation to one another can be correctly determined. The first question before any further treatment of our representations is: in which faculty of cognition do they belong together? Is it in understanding or in the senses that they are connected or compared? Many a judgment is accepted from habit or linked through inclination; but because no reflection precedes it, or at least follows it critically, it passes for a judgment originating in understanding. Not all judgments require investigation, that is, attention to the grounds of truth.

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For if they are immediately certain—for example, between two points there can be only one straight line—no closer mark of their truth can be indicated than what they themselves express. But all judgments, indeed all comparisons, require reflection, that is, a distinction of the cognitive power to which the given concepts belong. The act by which I hold the comparison of representations in general together with the cognitive power in which it is carried out, and by which I distinguish whether they are compared with one another as belonging to pure understanding or to sensible intuition, I call transcendental reflection. The relations in which concepts can belong to one another in a state of mind are those of identity and difference, agreement and opposition, the inner and the outer, and finally the determinable and determination, matter and form. The correct determination of these relations depends on the cognitive power in which the concepts subjectively belong together, whether in sensibility or in understanding. For the difference between these faculties makes a great difference to how the concepts should be thought.

Before all objective judgments we compare concepts for identity (many representations under one concept), in order to form universal judgments; or for their difference, in order to produce particular judgments.

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We compare them likewise for agreement, from which affirmative judgments can arise, and for opposition, from which negative judgments can arise, and so on. For this reason it seems that we should call the concepts listed above concepts of comparison (conceptus comparationis). But when the question concerns not the logical form but the content of concepts—whether the things themselves are identical or different, in agreement or opposed, and so on—things can have a twofold relation to our cognitive power, to sensibility and to understanding. How they are to belong to one another depends on the place in which they belong. Thus transcendental reflection, the relation of given representations to one or the other kind of cognition, alone can determine their relation to one another. Whether things are identical or different, in agreement or opposed, and so on, cannot be settled immediately from the concepts themselves through mere comparison (comparatio), but only through distinguishing

the kind of cognition to which they belong, by means of transcendental reflection (reflexio). We could therefore indeed say that logical reflection is mere comparison: in it we abstract entirely from the cognitive power to which the given representations belong, and thus treat them as homogeneous in respect of their seat in the mind.

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Transcendental reflection, however, which concerns the objects themselves, contains the ground of the possibility of objectively comparing representations with one another. It is therefore very different from mere comparison, because the cognitive power to which they belong is not the same. This transcendental reflection is a duty no one can renounce who wishes to judge anything about things a priori. Let us now undertake it; it will shed no little light on the determination of the understanding's proper business.

1 Identity and Difference. If an object is presented to us several times, but each time with exactly the same inner determinations (qualitas et quantitas), then, if regarded as an object of pure understanding, it is always the very same object: not many things but only one (numerica identitas). But if it is appearance, comparison of concepts is not at issue. However identical everything may be in this respect, the difference of the locations of this appearance at the same time is nevertheless sufficient ground for the numerical difference of the object of the senses itself. Thus with two drops of water we can abstract entirely from every inner difference of quality and quantity; their being intuited simultaneously in different places is enough to regard them as numerically different.

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Leibniz took appearances as things in themselves, hence as intelligibilia, objects of pure understanding, although he called them phenomena because of the confused character of their representations. On that basis his principle of the indiscernible (principium identitatis indiscernibilium) certainly could not be disputed. But since they are objects of sensibility, and understanding has not a pure but merely an empirical use with respect to them, plurality and numerical difference are already supplied by space itself as the condition of outer appear-

ances. For a part of space, although it may be completely similar and equal to another, is nevertheless outside it, and precisely thereby a part distinct from the first, added to it to constitute a greater space. This must therefore hold of everything simultaneously occupying the various positions of space, however similar and equal it may otherwise be.

2 Agreement and Opposition. If reality is represented only through pure understanding (realitas noumenon), no opposition can be thought between realities: no relation in which, combined in one subject, they cancel one another's consequences, so that 3−3=0.

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By contrast, the real in appearance (realitas phaenomenon) can certainly be in mutual opposition; united in the same subject, one reality can wholly or partly destroy the consequence of the other. Thus two moving forces in the same straight line may pull or push a point in opposite directions; or a pleasure may counterbalance pain.

3 The Inner and the Outer. In an object of pure understanding only what has no relation in its existence to anything different from it is inner. By contrast, the inner determinations of a substantia phaenomenon in space are nothing but relations, and the substance itself is entirely a sum total of mere relations. We know substance in space only through forces active there, either driving other substances into it, attraction, or preventing them from entering it, repulsion and impenetrability. We know no other properties constituting the concept of substance that appears in space and that we call matter. As an object of pure understanding, however, every substance must have inner determinations and forces directed toward inner reality. But what inner accidents can I think other than those offered by my inner sense: what is either itself thinking or analogous to it?

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Hence Leibniz, because he represented all substances as noumena, made them —even the constituents of matter—simple subjects endowed with powers of representation, in a word, monads, after he had in thought removed from them

everything signifying outer relation, and hence composition as well.

[4] Matter and Form. These are two concepts underlying all other reflection, so inseparably are they combined with every use of understanding. The first signifies the determinable in general, the second its determination, both in the transcendental sense, abstracting from every difference in what is given and in how it is determined. Logicians formerly called the universal matter, and the specific difference form. In every judgment the given concepts may be called the logical matter for the judgment, and their relation through the copula the form of the judgment. In every being its constituents (essentialia) are the matter; the manner in which they are connected in a thing is the essential form. Likewise, with respect to things in general, unbounded reality was regarded as the matter of all possibility, and its limitation (negation) as the form through which one thing differs from another according to transcendental concepts.
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Understanding, namely, first demands that something be given, at least in the concept, in order to determine it in a certain way. Hence in the concept of pure understanding matter precedes form. Leibniz therefore first assumed things, monads, and internally a power of representation in them, in order afterward to ground on this their outer relation and the community of their states, their representations. Thus space was possible only through the relation of substances, and time through the connection of their determinations with one another as grounds and consequences. This would indeed have to be so if pure understanding could relate immediately to objects and if space and time were determinations of things in themselves. But if they are merely sensible intuitions in which we determine all objects solely as appearances, the form of intuition, as a subjective constitution of sensibility, precedes all matter, sensations. Hence space and time precede all appearances and all data of experience, and indeed first make them possible. The intellectual philosopher could not tolerate form's preceding things themselves and determining their possibility. This was an entirely justified criticism if he assumed that we intuit things as they are, albeit with confused representation.

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But since sensible intuition is a quite special subjective condition underlying all perception a priori, and its form is original, form is given by itself alone. Far from matter, or the things themselves that appear, having to underlie it, as we would have to judge from mere concepts, their possibility rather presupposes a formal intuition, time and space, as given.

Remark on the Amphiboly of Concepts of Reflection

Allow me to call the position we assign a concept either in sensibility or in pure understanding its transcendental location. Judging the position belonging to every concept according to the difference in its use, and providing instructions according to rules for determining this location for all concepts, would thus be transcendental topics. Such a doctrine would thoroughly guard against the surreptitious claims of pure understanding and the deceptions arising from them, by always distinguishing the cognitive power to which concepts properly belong. Every concept, every heading under which many cognitions belong, can be called a logical location. On this rests Aristotle's logical topics, which teachers of the schools and orators could employ.

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By means of them they could look under certain headings of thought for what best suited the subject at hand, and then reason speciously or chatter at length about it with an illusion of thoroughness.

Transcendental topics, by contrast, contains no more than the four headings of all comparison and distinction listed above. They differ from categories because they present, not the object in terms of what constitutes its concept, magnitude or reality, but only the comparison of representations that precedes the concept of things, in all its variety. This comparison, however, first requires reflection, that is, determining the location to which the representations of the things being compared belong, whether pure understanding thinks them or sensibility gives them in appearance.

Concepts can be compared logically without concern for where their objects belong, whether as noumena for understanding or as phenomena for sensibility. But if we wish to proceed with these concepts to objects, transcendental

reflection is first necessary to determine for which cognitive power they are to be objects, whether for pure understanding or for sensibility. Without this reflection I make a very uncertain use of these concepts.

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Supposed synthetic principles arise that critical reason cannot recognize, grounded solely on a transcendental amphiboly, that is, a confusion of the pure object of understanding with appearance.

Lacking such transcendental topics, and hence misled by the amphiboly of concepts of reflection, the celebrated Leibniz erected an intellectual system of the world—or rather believed he cognized the inner constitution of things by comparing all objects solely with understanding and the abstract formal concepts of its thinking. Our table of concepts of reflection affords us the unexpected advantage of setting before our eyes the distinctive features of his doctrine in all its parts, together with the guiding ground of this peculiar cast of mind, which rested on nothing but a misunderstanding. He compared all things with one another merely through concepts and naturally found no differences other than those through which understanding distinguishes its pure concepts from one another. He did not regard the conditions of sensible intuition, which carry their own differences with them, as original. For to him sensibility was only a confused way of representing, not a special source of representations. Appearance was for him the representation of the thing in itself, though distinguished in logical form from cognition through understanding.

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For appearance, owing to its usual lack of analysis, draws a certain mixture of accompanying representations into the concept of the thing, which understanding knows how to separate from it. In a word, Leibniz intellectualized appearances, just as Locke, in a system of noogony, if I may use these expressions, had sensualized all concepts of the understanding, proclaiming them nothing but empirical or abstract concepts of reflection. Instead of seeking in understanding and sensibility two entirely different sources of representations that could judge things with objective validity only in connection, each of these

great men held to only one of the two, which in his opinion related immediately to things in themselves, while the other did nothing but confuse or order the representations of the first.

Leibniz accordingly compared objects of the senses with one another as things in general merely in understanding. First, insofar as understanding is to judge them identical or different. Since he thus had in view only their concepts, not their position in the intuition in which alone objects can be given, and entirely disregarded the transcendental location of these concepts—whether the object was to be counted among appearances or things in themselves—the outcome could only be this.

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He extended his principle of the indiscernible, which holds merely of concepts of things in general, to objects of the senses (mundus phaenomenon), and believed he had thereby achieved no slight extension of the cognition of nature. Certainly, if I know a drop of water as a thing in itself in all its inner determinations, I cannot regard any one drop as different from another if its entire concept is identical with the other's. But if it is appearance in space, it has its location not merely in understanding, under concepts, but in outer sensible intuition, in space. There, physical locations are entirely indifferent to the inner determinations of things: a location = b can receive a thing completely similar and equal to another in location = a just as well as if it differed from it internally to the greatest extent. The difference of locations by itself, without further conditions, makes the plurality and distinction of objects as appearances not merely possible but necessary. Thus that apparent law is no law of nature. It is merely an analytic rule, or comparison of things through mere concepts.

Second, the principle that realities, as mere affirmations, never logically oppose one another is an entirely true proposition concerning the relation of concepts.

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It means nothing whatever, however, with respect to nature, or indeed to any thing in itself, of which we have no concept. For real opposition occurs everywhere that A−B=0: where one reality, combined with another in a subject, cancels the other's effect. All the obstacles and counteractions in nature constantly

display this before our eyes; yet because they rest on forces, they must be called realitates phaenomena. General mechanics can even state the empirical condition of this opposition in an a priori rule by attending to the opposition of directions, a condition of which the transcendental concept of reality knows nothing. Although Herr von Leibniz did not announce this proposition with the pomp of a new principle, he nevertheless used it for new assertions, and his successors expressly incorporated it into their Leibnizian-Wolfian systems. According to this principle, for example, all evils are nothing but consequences of the limitations of creatures, that is, negations, because these are the only things opposed to reality. In the mere concept of a thing in general this is indeed so, but not in things as appearances. Likewise his followers find it not merely possible but natural to unite all reality in one being without any opposition to be feared.

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For they know no opposition other than contradiction, through which the very concept of a thing is abolished. They do not know reciprocal impairment, where one real ground cancels the effect of another, and for which we find the conditions of representing it only in sensibility.

Third, Leibniz's monadology has no other ground than that this philosopher represented the distinction between inner and outer merely in relation to understanding. Substances in general must have something inner, free from all outer relations and consequently from composition as well. The simple is therefore the foundation of the inner in things in themselves. But the inner aspect of their state cannot consist in location, shape, contact, or motion, all of which are determinations of outer relations. Hence we can ascribe to substances no inner state other than that through which we inwardly determine our own sense: the state of representations. Thus the monads were fashioned, which are to constitute the fundamental material of the entire universe, but whose active force consists solely in representations, through which they are properly active only within themselves.

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For this very reason his principle of the possible community of substances with one another had to be a predetermined harmony, and could not be physical influence. Since everything is occupied only inwardly, with its own representations, the state of representations of one substance could stand in no effective combination whatever with that of another. Rather, some third cause influencing them all had to make their states correspond to one another: not indeed through occasional assistance specially applied in each individual case (systema assistentiae), but through the unity of the idea of a cause valid for all, in which they must all receive their existence and persistence, and hence also their mutual correspondence, according to universal laws.

Fourth, his celebrated doctrine of time and space, in which he intellectualized these forms of sensibility, sprang solely from the same deception of transcendental reflection. If I wish to represent outer relations of things through mere understanding, I can do so only by means of a concept of their reciprocal action; and if I am to connect one state of the same thing with another, this can occur only in the order of grounds and consequences. Thus Leibniz thought space as a certain order in the community of substances, and time as the dynamical succession of their states.

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The distinctive character and independence from things that both seem to possess in themselves he ascribed to the confusion of these concepts. This confusion makes what is merely a form of dynamical relations seem a special, self-subsistent intuition preceding things themselves. Space and time were therefore the intelligible form of the connection of things, substances and their states, in themselves. The things, however, were intelligible substances (substantiae noumena). Nevertheless, he intended these concepts to hold for appearances, because he granted sensibility no kind of intuition of its own, but sought all representation of objects, even empirical representation, in understanding, leaving the senses only the contemptible business of confusing and distorting the representations of understanding.

But even if we could say something synthetically about things in themselves through pure understanding, which is nevertheless impossible, this could not at all be applied to appearances, which do not represent things in themselves. In this latter case, then, I must always compare my concepts in transcendental reflection only under the conditions of sensibility. Space and time will thus be determinations not of things in themselves but of appearances. What things may be in themselves I do not know, nor do I need to know.

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For a thing can never come before me otherwise than in appearance.

I proceed in the same way with the other concepts of reflection. Matter is substantia phaenomenon. I seek what belongs to it inwardly in all parts of the space it occupies and in all the effects it produces, which of course can always be only appearances of outer senses. Thus I have nothing absolutely inner, but only something comparatively inner that itself consists in outer relations in turn. But what is absolutely inner in matter according to pure understanding is also a mere fancy. For matter is no object of pure understanding at all; the transcendental object that may be the ground of this appearance we call matter is a mere something, of which we would not even understand what it was if someone could tell us. For we can understand nothing but what brings with it in intuition something corresponding to our words. If the complaints "We have no insight into the inner nature of things" are to mean that we do not comprehend through pure understanding what the things appearing to us may be in themselves, they are entirely unjust and unreasonable. For they demand that we be able to cognize, hence intuit, things without senses, and consequently that we possess a faculty of cognition entirely different from the human one, not merely in degree but even in intuition and kind.

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Thus we are to be not human beings but beings of whom we ourselves cannot say whether they are even possible, much less how they are constituted. Observation and analysis of appearances penetrate into the interior of nature, and we cannot know how far this may go in time. But those transcendental questions that go beyond nature we could still never answer, even if all nature

were revealed to us, since we are not even given the ability to observe our own mind with any intuition other than that of our inner sense. For in the mind lies the secret of the origin of our sensibility. Its relation to an object, and the transcendental ground of this unity, undoubtedly lie too deeply hidden for us, who know even ourselves only through inner sense and hence as appearance, to use so unsuitable an instrument of inquiry to discover anything other than appearances again and again, though it is their nonsensible cause we would like to investigate.

What makes this critique of inferences from mere acts of reflection exceedingly useful is that it clearly demonstrates the nullity of all inferences concerning objects compared with one another solely in understanding.

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At the same time it confirms what we have chiefly insisted on: although appearances are not included as things in themselves among the objects of pure understanding, they are nevertheless the only objects in which our cognition can have objective reality, namely where intuition corresponds to concepts.

When we reflect merely logically, we compare our concepts solely with one another in understanding: whether both contain the very same thing; whether or not they contradict one another; whether something is contained inwardly in the concept or is added to it; and which of the two is to count as given, which merely as a way of thinking the given one. But if I apply these concepts to an object in general in the transcendental sense, without determining further whether it is an object of sensible or intellectual intuition, restrictions immediately appear against going beyond this concept. These overturn all empirical use of the concepts and thereby prove that the representation of an object as a thing in general is not merely insufficient, but, without its sensible determination and independently of empirical conditions, internally conflicting. Thus one must either abstract from every object, as in logic, or, if one assumes an object, think it under conditions of sensible intuition.

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Consequently the intelligible would require a quite special intuition that we do not have, and in its absence is nothing for us; conversely, appearances cannot be objects in themselves either. For if I think merely things in general, the difference of outer relations certainly cannot constitute a difference of the things themselves, but rather presupposes it. If the concept of one is not at all internally distinguished from that of another, I merely place one and the same thing in different relations. Further, by adding one mere affirmation, reality, to another, the positive is increased and nothing is taken away from or canceled in it. Hence the real in things in general cannot be opposed to itself, and so on.

* * *

As we have shown, through a certain misinterpretation the concepts of reflection exert such influence on the use of understanding that they were even able to lead one of the most penetrating of all philosophers into a supposed system of intellectual cognition that undertakes to determine its objects without the addition of the senses. For precisely this reason, uncovering the deceptive cause of the amphiboly of these concepts in occasioning false principles is of great use in reliably determining and securing the boundaries of understanding.

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We must indeed say that what belongs to or contradicts a concept universally also belongs to or contradicts everything particular contained under that concept (dictum de Omni et Nullo). But it would be absurd to alter this logical principle to read: what is not contained in a universal concept is also not contained in the particular concepts standing under it. For these are particular concepts precisely because they contain more than is thought in the universal concept. Yet Leibniz's entire intellectual system is in fact built on this latter principle. It therefore falls with it, together with all the ambiguity in the use of understanding arising from it.

The principle of the indiscernible was properly grounded on the presupposition that, if a certain distinction is not found in the concept of a thing in general, it is also not found in the things themselves. Consequently all things that do not already differ from one another in their concept, as to quality or quantity, are completely identical (numero eadem). But since the mere concept of any

thing abstracts from many necessary conditions of an intuition, a peculiar haste leads to taking what has been abstracted from as something not to be found anywhere.

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Nothing is allowed the thing but what is contained in its concept.

The concept of a cubic foot of space is in itself completely identical wherever and however often I may think it. Yet two cubic feet in space are distinguished merely by their locations (numero diversa). These are conditions of the intuition in which the object of this concept is given; they belong not to the concept, but nevertheless to sensibility as a whole. Likewise there is no opposition in the concept of a thing if nothing negative has been combined with something affirmative, and merely affirmative concepts in combination can produce no cancellation. But in the sensible intuition in which reality, for example motion, is given, conditions are found—opposite directions—from which the concept of motion in general had abstracted. These make possible an opposition that is certainly not logical: a zero = 0 resulting from nothing but positives. One could not say, then, that all reality is mutually in agreement merely because no opposition is found among its concepts*.

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According to mere concepts, the inner is the substrate of all relations or outer determinations. If, therefore, I abstract from all conditions of intuition and hold solely to the concept of a thing in general, I can abstract from every outer relation, and a concept must nevertheless remain of what signifies no relation at all but merely inner determinations. It now seems to follow that in every thing, substance, there is something absolutely inner that precedes all outer determinations by first making them possible. This substrate would therefore be something containing no further outer relations, and consequently simple, since corporeal things are always only relations, at least of parts outside one another. And because we know no absolutely inner determinations except through our inner sense, this substrate would be not only simple but also, by analogy with our inner sense, determined through representations.

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That is, all things would properly be monads, simple beings endowed with representations. All this would be correct if the conditions under which alone objects of outer intuition can be given to us did not involve more than the concept of a thing in general, from which the pure concept abstracts. For here it becomes clear that a persistent appearance in space, impenetrable extension, can contain nothing but relations and nothing absolutely inner, and nevertheless be the primary substrate of all outer perception. Through mere concepts I certainly cannot think anything outer without something inner, precisely because concepts of relation presuppose things given absolutely and are impossible without them. But intuition contains something not found at all in the mere concept of a thing in general, and supplies the substrate that could never be cognized through mere concepts: a space that, with everything it contains, consists solely of formal or also real relations. Thus I cannot say that, because no thing can be represented through mere concepts without something absolutely inner, there is also nothing outer in the things themselves contained under these concepts and in their intuition that does not rest on something absolutely inner.

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For suppose we have abstracted from all conditions of intuition. Then nothing indeed remains for us in the mere concept but the inner in general and its mutual relation, through which alone the outer is possible. But this necessity, grounded solely on abstraction, does not apply to things insofar as they are given in intuition with determinations expressing mere relations without an inner foundation, because they are not things in themselves but merely appearances. Even what we know in matter is nothing but relations; what we call its inner determinations is only comparatively inner. Yet among these are self-subsistent and persistent relations through which a determinate object is given to us. That, if I abstract from these relations, I have nothing further to think does not abolish the concept of a thing as appearance, nor even that of an object in abstracto, but it does abolish every possibility of an object determinable through mere concepts, a noumenon. Certainly it is startling to hear that a

thing is to consist entirely of relations. But such a thing is also mere appearance and cannot be thought through pure categories at all; it consists in the mere relation of something in general to the senses.

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Likewise, if we begin with mere concepts, we can hardly think the relations of things in abstracto otherwise than as one's being the cause of determinations in another, for this is our concept of the understanding of relations themselves. But since we then abstract from all intuition, an entire way in which the manifold can determine its members' locations falls away: the form of sensibility, space, which nevertheless precedes all empirical causality.

* If one wished to use the usual evasion here, that at least realitates noumena cannot counteract one another, one would still have to give an example of such pure reality free from sense, so that we could understand whether it represents anything at all or nothing whatever. But no example can be taken from anywhere except experience, which never offers more than phenomena. Thus the proposition means nothing further than that a concept containing nothing but affirmations contains nothing negative: a proposition we have never doubted.

If by merely intelligible objects we understand things thought through pure categories without any schema of sensibility, such things are impossible. For the condition of the objective use of all our concepts of the understanding is solely our kind of sensible intuition, through which objects are given to us. If we abstract from this, those concepts have no relation to any object whatever. Indeed, even if we were to assume a kind of intuition other than our sensible one, our functions of thinking would still have no significance at all in relation to it. If we understand by intelligible objects only objects of a nonsensible intuition, to which our categories admittedly do not apply, and of which we can therefore never have any cognition, neither intuition nor concept, then noumena must certainly be admitted in this merely negative sense. They then say nothing more than that our kind of intuition relates not to all things but merely to objects of our senses.

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Consequently its objective validity is bounded, leaving room for some other kind of intuition, and hence also for things as its objects. But the concept of a noumenon is then problematic, that is, the representation of a thing of which we can say neither that it is possible nor that it is impossible, since we know no kind of intuition except our sensible one and no kind of concepts except the categories, neither of which is suited to an extrasensible object. We therefore cannot positively extend the field of objects of our thinking beyond the conditions of our sensibility, and assume, besides appearances, objects of pure thinking, noumena, because they have no positive significance that can be specified. For we must admit of the categories that by themselves they are insufficient for cognition of things in themselves, and without the data of sensibility would be merely subjective forms of the unity of understanding, but without an object. Thinking is indeed not in itself a product of the senses and to that extent is not limited by them; but it does not thereby immediately have a use of its own, pure and without the contribution of sensibility, because it would then be without an object. Nor can the noumenon be called such an object.

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For this signifies precisely the problematic concept of an object for an entirely different intuition and an entirely different understanding from ours, which is therefore itself a problem. Thus the concept of the noumenon is not the concept of an object, but the question unavoidably connected with the limitation of our sensibility: whether there may not be objects entirely detached from its intuition. This question can be answered only indeterminately: since sensible intuition does not relate to all things without distinction, room remains for more and different objects. These therefore cannot be denied outright, but, lacking a determinate concept, since no category is suited to them, neither can they be asserted as objects for our understanding.

Understanding accordingly bounds sensibility without thereby extending its own field. In warning sensibility not to presume to relate to things in themselves but solely to appearances, it thinks an object in itself, but only as a transcendental object that is the cause of appearance and hence not itself appearance. This cannot be thought as magnitude, reality, substance, and so on,

because these concepts always require sensible forms in which they determine an object. It is therefore wholly unknown whether this object is to be found in us or outside us, whether it would be abolished together with sensibility or would remain if we removed sensibility.

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If we wish to call this object noumenon because its representation is not sensible, we are free to do so. But since we can apply none of our concepts of the understanding to it, this representation still remains empty for us and serves only to mark the boundaries of our sensible cognition and leave a space that we can fill neither through possible experience nor through pure understanding.

The critique of this pure understanding therefore does not permit it to create a new field of objects beyond those that can encounter it as appearances, or to wander into intelligible worlds, not even into their concept. The error that leads to this in the most plausible way, and can indeed be excused though not justified, lies in making the use of understanding transcendental, contrary to its vocation, so that objects, possible intuitions, must conform to concepts, instead of concepts conforming to possible intuitions, on which alone their objective validity rests. The cause of this in turn is that apperception, and with it thinking, precedes every possible determinate arrangement of representations. Thus we think something in general, and determine it sensibly on one side.

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Yet we distinguish the object represented universally and in abstracto from this way of intuiting it. There then remains for us a way of determining it merely through thinking, which is indeed a mere logical form without content, but nevertheless seems to us a way in which the object exists in itself (noumenon), without regard to intuition, which is limited to our senses.

* * *

Before leaving the transcendental analytic, we must add something that, although of no special importance in itself, may nevertheless seem necessary for the completeness of the system. The highest concept with which a transcendental philosophy is commonly begun is usually the division into the possible and

the impossible. But since every division presupposes a concept being divided, a still higher one must be specified: the concept of an object in general, taken problematically, without deciding whether it is something or nothing. Since the categories are the only concepts relating to objects in general, distinguishing whether an object is something or nothing will proceed according to their order and guidance.

1 [B 347]
Opposed to the concepts of all, many, and one is the concept that cancels everything: none. Thus the object of a concept to which no specifiable intuition corresponds is = nothing, a concept without an object, as with noumena, which cannot be counted among possibilities, though they need not on that account be declared impossible either (ens rationis). The same holds, for example, of certain newly conceived fundamental powers, thought without contradiction but also without an example from experience, and therefore not to be counted among possibilities.

2 Reality is something; negation is nothing, namely a concept of the absence of an object, as with shadow or cold (nihil privativum).

3 The mere form of intuition without substance is in itself no object, but the merely formal condition of an object as appearance, as with pure space and pure time. These are indeed something as forms of intuiting, but are not themselves objects intuited (ens imaginarium).

4 [B 348]
The object of a concept that contradicts itself is nothing, because the concept is nothing: the impossible, such as a rectilinear figure with two sides (nihil negativum).
The table of this division of the concept of nothing—the parallel division of something follows of itself—would therefore have to be arranged as follows:
Nothing, as

1 Empty concept without an object, ens rationis.

2 Empty object of a concept, nihil privativum.

3 Empty intuition without an object, ens imaginarium.

4 Empty object without a concept, nihil negativum.

We see that a thought-entity, no. 1, is distinguished from a nonentity, no. 4, in that the former may not be counted among possibilities because it is mere invention, though not contradictory, whereas the latter is opposed to possibility because the concept even cancels itself. Both, however, are empty concepts. [B 349]

By contrast, the nihil privativum, no. 2, and the ens imaginarium, no. 3, are empty data for concepts. If light had not been given to the senses, one could not represent darkness; and if extended beings had not been perceived, one could not represent space. Negation, as well as the mere form of intuition, is no object without something real.

Transcendental Dialectic

Transcendental Logic Second Division Transcendental Dialectic

Introduction

I. On Transcendental Illusion

Above we called dialectic in general a logic of illusion. This does not mean that it is a doctrine of probability. Probability is truth cognized through insufficient grounds; cognition of it is therefore deficient, but not on that account deceptive, and hence need not be separated from the analytic part of logic. Still less may appearance and illusion be regarded as identical.

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For truth or illusion lies not in the object insofar as it is intuited, but in the judgment about it insofar as it is thought. Thus one can indeed correctly say that the senses do not err, but not because they always judge correctly: rather, because they do not judge at all. Hence truth as well as error, and therefore illusion as the inducement to error, are to be found only in judgment, only in the relation of the object to our understanding. In a cognition agreeing throughout with the laws of understanding there is no error. Nor is there error in a representation of the senses, because it contains no judgment at all. No force of nature, however, can deviate of itself from its own laws. Thus neither understanding alone, without the influence of another cause, nor the senses by themselves would err. Understanding would not, because when it acts merely according to its laws, the effect, the judgment, must necessarily agree with those

laws. Agreement with the laws of understanding constitutes the formal element of all truth. In the senses there is no judgment at all, either true or false. Since we have no sources of cognition other than these two, it follows that error is produced only through the unnoticed influence of sensibility on understanding.

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Through this influence the subjective grounds of judgment merge with the objective grounds and cause them to deviate from their determination*, just as a moving body would by itself always maintain a straight line in the same direction, but moves in a curve when another force simultaneously influences it in another direction. To distinguish the understanding's own action from the force interfering with it, we must therefore regard an erroneous judgment as the diagonal between two forces determining judgment in two different directions, enclosing, as it were, an angle. We must resolve that composite effect into the simple effects of understanding and sensibility. In pure a priori judgments this must be done through transcendental reflection, which, as already indicated, assigns each representation its place in the cognitive power appropriate to it and thus also distinguishes the influence of that power on the representation.

* Sensibility, placed beneath understanding as the object to which it applies its function, is the source of real cognitions. But this same sensibility, insofar as it influences the very action of understanding and determines it to judge, is the ground of error.

Our business here is not to discuss empirical illusion, optical illusion for example.

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This occurs in the empirical use of otherwise correct rules of understanding, and through it the power of judgment is misled by the influence of imagination. We are concerned solely with transcendental illusion. This influences principles whose use is not even directed toward experience, where we would at least have a touchstone of their correctness. Instead, despite all the warnings of critique, it leads us entirely beyond the empirical use of the categories and holds out to us the deceptive prospect of extending pure understanding. We will call

principles whose application remains wholly within the limits of possible experience immanent, and those that are to fly beyond these boundaries transcendent principles. By the latter, however, I do not mean the transcendental use or misuse of categories, which is merely an error of the power of judgment insufficiently restrained by critique, failing to attend adequately to the boundary of the ground on which alone pure understanding is permitted to operate. I mean actual principles urging us to tear down all those boundary markers and lay claim to an entirely new territory that recognizes no demarcation anywhere. Thus transcendental and transcendent are not the same.

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The principles of pure understanding set out above are to have merely empirical and not transcendental use, that is, use reaching beyond the boundary of experience. But a principle removing these limits, indeed commanding us to overstep them, is called transcendent. If our critique can succeed in exposing the illusion of these pretended principles, the principles of merely empirical use can, in contrast to them, be called immanent principles of pure understanding.

Logical illusion, which consists in the mere imitation of the form of reason, the illusion of fallacies, arises solely from a lack of attention to the logical rule. As soon as attention is sharpened upon the case at hand, it therefore disappears entirely. Transcendental illusion, by contrast, does not cease even after it has been exposed and its nullity clearly understood through transcendental critique: for example, the illusion in the proposition that the world must have a beginning in time. The cause is that in our reason, considered subjectively as a human faculty of cognition, there lie fundamental rules and maxims of its use that have entirely the appearance of objective principles. Through these the subjective necessity of a certain connection of our concepts for the benefit of understanding is taken for an objective necessity in the determination of things in themselves.

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This is an illusion that cannot be avoided at all, any more than we can avoid the sea's appearing higher in the middle than at the shore because we see the former through higher rays of light than the latter; or, still more, any more than even

the astronomer can prevent the moon from appearing larger as it rises, although he is not deceived by this illusion.

Transcendental dialectic will therefore content itself with exposing the illusion in transcendent judgments and at the same time preventing it from deceiving us. But that it should also disappear like logical illusion, and cease to be an illusion, is something dialectic can never bring about. For we are dealing with a natural and unavoidable illusion, itself resting on subjective principles that it passes off as objective, whereas logical dialectic, in resolving fallacies, deals only with an error in following principles, or an artificial illusion in imitating them. Thus there is a natural and unavoidable dialectic of pure reason: not one in which a bungler becomes entangled through lack of knowledge, or one artificially devised by some sophist to confuse reasonable people, but one inseparably attached to human reason. Even after we have exposed its deception, it will still not cease to beguile reason.

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It will continually thrust reason into momentary aberrations that always need to be removed.

II. On Pure Reason as the Seat of Transcendental Illusion

A. On Reason in General

All our cognition begins with the senses, proceeds from there to understanding, and ends with reason. Nothing higher is found in us for working on the material of intuition and bringing it under the highest unity of thinking. Now that I am to give an explanation of this supreme cognitive power, I find myself in some difficulty. As with understanding, it has a merely formal, logical use, in which reason abstracts from all content of cognition, but also a real use, in which reason itself contains the origin of certain concepts and principles that it borrows neither from the senses nor from understanding. Logicians have of course long since explained the first faculty as the faculty of making mediate inferences, in distinction from immediate inferences (consequentiis immediatis); but the second, which itself generates concepts, is not yet understood through this.

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Since reason is here divided into a logical and a transcendental faculty, a higher concept of this source of cognition must be sought that includes both concepts under it. Meanwhile, by analogy with the concepts of the understanding, we may expect the logical concept to supply the key to the transcendental concept, and the table of functions of the former to supply the genealogy of concepts of reason.

In the first part of our transcendental logic we explained understanding as the faculty of rules. Here we distinguish reason from it by calling reason the faculty of principles.

The expression "principle" is ambiguous, and commonly signifies only a cognition that can be used as a principle, although in itself and in its own origin it is not a principle. Every universal proposition, even one drawn from experience through induction, can serve as the major premise in a syllogism, but is not on that account itself a principle. Mathematical axioms, for example that between two points there can be only one straight line, are even universal a priori cognitions, and are therefore rightly called principles relative to the cases that can be subsumed under them.

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Yet I cannot on that account say that I cognize this property of straight lines in general and in itself from principles, but only in pure intuition.

I would therefore call cognition from principles that cognition in which I cognize the particular in the universal through concepts. Every syllogism is thus a form of deriving a cognition from a principle. For the major premise always supplies a concept such that everything subsumed under its condition is cognized from it according to a principle. Now since every universal cognition can serve as the major premise in a syllogism, and understanding offers such universal propositions a priori, these too can be called principles in respect of their possible use.

But if we consider these principles of pure understanding in themselves as to their origin, they are anything but cognitions from concepts. For they would not even be possible a priori unless we brought in pure intuition, in mathematics, or the conditions of a possible experience in general. That everything hap-

pening has a cause cannot at all be inferred from the concept of what happens in general. Rather, the principle shows how we can first obtain a determinate experiential concept of what happens.

Understanding therefore cannot supply synthetic cognitions from concepts at all.

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These are properly what I call principles without qualification, whereas all universal propositions in general can be called principles comparatively.

It is an old wish, which may one day be fulfilled, who knows how late, that instead of the endless variety of civil laws their principles might at last be sought. In this alone can lie the secret of simplifying legislation, as the saying goes. But laws here are also only restrictions of our freedom to conditions under which it agrees thoroughly with itself. They thus concern something entirely our own work, of which we ourselves can be the cause through these concepts. But how objects in themselves, how the nature of things, should stand under principles and be determined according to mere concepts is, if not impossible, at least a very unreasonable demand. However matters may stand here, since the investigation still lies before us, this at least is clear: cognition from principles, in itself, is something entirely different from mere cognition through understanding. The latter can indeed also precede other cognitions in the form of a principle, but in itself, insofar as it is synthetic, neither rests on mere thinking nor contains a universal according to concepts.

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If understanding is a faculty for the unity of appearances by means of rules, reason is the faculty for the unity of the rules of understanding under principles. Thus it never relates immediately to experience or to any object, but to understanding, in order to give its manifold cognitions unity a priori through concepts. This may be called unity of reason and is of a wholly different kind from the unity understanding can provide.

This is the general concept of the faculty of reason, insofar as it could be made comprehensible in the complete absence of examples, which are to be supplied only later.

B. On the Logical Use of Reason

A distinction is made between what is cognized immediately and what is only inferred. That a figure bounded by three straight lines has three angles is cognized immediately; that these angles together equal two right angles is only inferred. Because we constantly need inference and thereby finally become entirely accustomed to it, we eventually cease to notice this distinction and often take something as immediately perceived that we have only inferred, as in the so-called deception of the senses.

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In every inference there is a proposition laid down as ground, another proposition, the conclusion drawn from it, and finally the consequence according to which the truth of the latter is inevitably connected with the truth of the former. If the inferred judgment already lies in the first in such a way that it can be derived without the mediation of a third representation, the inference is called immediate (consequentia immediata); I would rather call it an inference of understanding. But if, besides the cognition laid down as ground, another judgment is needed to bring about the consequence, the inference is called a syllogism. In the proposition "All human beings are mortal" there already lie the propositions "Some human beings are mortal," "Some mortals are human beings," and "Nothing immortal is a human being"; these are therefore immediate conclusions from the first. By contrast, the proposition "All scholars are mortal" does not lie in the underlying judgment, since the concept of scholars does not occur in it at all; it can be inferred from it only through an intermediate judgment.

In every syllogism I first think a rule (major) through understanding. Second, through the power of judgment I subsume a cognition under the condition of the rule (minor). Finally, I determine my cognition through the predicate of the rule (conclusio), and hence a priori through reason.

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The relation that the major premise, as rule, represents between a cognition and its condition therefore constitutes the different kinds of syllogism. There are accordingly exactly three kinds, just as with judgments in general insofar as

they differ in how they express the relation of cognition in understanding: categorical, hypothetical, or disjunctive syllogisms.

When, as usually happens, the conclusion is given as a judgment in order to see whether it follows from judgments already given, through which an entirely different object is thought, I search understanding for the assertion of this concluding proposition, to see whether it is found there under certain conditions according to a universal rule. If I now find such a condition, and the object of the concluding proposition can be subsumed under the given condition, the proposition is inferred from the rule, which also holds for other objects of cognition. From this we see that in inference reason seeks to bring the great manifold of understanding's cognition under the smallest number of principles, universal conditions, and thereby bring about its highest unity.

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C. On the Pure Use of Reason

Can reason be isolated, and is it then still a source of its own of concepts and judgments arising solely from it, through which it relates to objects? Or is it merely a subordinate faculty for giving given cognitions a certain form called logical, through which the cognitions of understanding are merely subordinated to one another, and lower rules to higher ones whose condition includes the condition of the former within its sphere, insofar as comparing them can accomplish this? This is the question with which we are now concerned only provisionally. In fact, a manifold of rules and unity of principles is a demand of reason for bringing understanding into thoroughgoing connection with itself, just as understanding brings the manifold of intuition under concepts and thereby brings that manifold into connection. But such a principle prescribes no law to objects and contains no ground of the possibility of cognizing and determining them as such in general. It is merely a subjective law for managing the stock of our understanding: by comparing its concepts, to reduce their universal use to the smallest possible number of them.

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This does not entitle us to demand from the objects themselves such an accord as would promote the convenience and extension of our understanding, and thereby give that maxim objective validity as well. In a word, the question is whether reason in itself, pure reason, contains synthetic a priori principles and rules, and what these principles may consist in.

Its formal and logical procedure in syllogisms already gives us sufficient guidance as to the ground on which its transcendental principle in synthetic cognition through pure reason will rest.

First, a syllogism relates not to intuitions in order to bring them under rules, as understanding does with its categories, but to concepts and judgments. Thus even if pure reason relates to objects, it has no immediate relation to them and their intuition, but only to understanding and its judgments, which turn immediately to the senses and their intuition in order to determine their object for them. Unity of reason is therefore not unity of a possible experience, but is essentially different from the latter as unity of understanding. That everything happening has a cause is no principle cognized and prescribed by reason. It makes the unity of experience possible and borrows nothing from reason.

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Without this relation to possible experience, reason could not have commanded such synthetic unity from mere concepts.

Second, in its logical use reason seeks the universal condition of its judgment, the concluding proposition. A syllogism itself is nothing other than a judgment made by subsuming its condition under a universal rule, the major premise. Since this rule is in turn exposed to the same attempt by reason, and the condition of the condition must therefore be sought through a prosyllogism as far as possible, it is clear that reason's distinctive principle in general, in its logical use, is to find for the conditioned cognition of understanding the unconditioned through which its unity is completed.

But this logical maxim can become a principle of pure reason only by assuming that, if the conditioned is given, the entire series of conditions subordinated to one another, which is therefore itself unconditioned, is also given (that is, contained in the object and its connection).

Such a principle of pure reason is manifestly synthetic. For the conditioned relates analytically to some condition, but not to the unconditioned. Various synthetic propositions must also arise from this principle, of which pure understanding knows nothing.

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It is concerned only with objects of a possible experience, whose cognition and synthesis are always conditioned. But the unconditioned, if it actually occurs, can be considered separately according to all the determinations distinguishing it from everything conditioned, and must thereby provide material for many synthetic a priori propositions.

The principles arising from this supreme principle of pure reason will, however, be transcendent with respect to all appearances: no empirical use adequate to it can ever be made of it. It will therefore differ entirely from all principles of understanding, whose use is wholly immanent since their sole theme is the possibility of experience. Is that principle—that the series of conditions, in the synthesis of appearances or even in thinking things in general, extends to the unconditioned—objectively correct or not, and what consequences flow from it for the empirical use of understanding? Or is there, rather, no such objectively valid proposition of reason anywhere, but merely a logical prescription to approach completeness by ascending to ever higher conditions, and thereby to bring into our cognition the highest unity of reason possible for us?

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Has this need of reason, I say, been taken through a misunderstanding for a transcendental principle of pure reason, one that hastily postulates such unlimited completeness of the series of conditions in the objects themselves? And what misinterpretations and delusions may creep, even in this case, into syllogisms whose major premise is taken from pure reason (and is perhaps more a petition than a postulate), and which ascend from experience to its conditions? This will be our business in transcendental dialectic. We will now develop it from its sources, deeply hidden in human reason. We will divide it into two chapters, the first treating the transcendent concepts of pure reason, the second its transcendent and dialectical syllogisms.

Transcendental Dialectic First Book On the Concepts of Pure Reason

Whatever the possibility of concepts from pure reason may involve, they are not merely reflected but inferred concepts.

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Concepts of the understanding are also thought a priori before experience and for its sake, but contain nothing beyond the unity of reflection on appearances insofar as these must necessarily belong to a possible empirical consciousness. Through these concepts alone do cognition and determination of an object become possible. They therefore first provide material for inference, and no a priori concepts of objects precede them from which they could be inferred. Their objective reality, however, rests solely on this: because they constitute the intellectual form of all experience, their application must always be capable of being shown in experience.

The designation "concept of reason," however, already provisionally indicates that it will not allow itself to be confined within experience, because it concerns a cognition of which every empirical cognition is only a part, perhaps the whole of possible experience or of its empirical synthesis. No actual experience ever fully reaches this whole, though it always belongs to it. Concepts of reason serve for comprehension, as concepts of the understanding serve for understanding perceptions. If they contain the unconditioned, they concern something under which all experience belongs, but which is never itself an object of experience: something to which reason leads in its inferences from experience, and according to which it estimates and measures the degree of its empirical use, but which never constitutes a member of empirical synthesis.

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If such concepts nevertheless have objective validity, they can be called conceptus ratiocinati (correctly inferred concepts); if not, they have at least been surreptitiously obtained through an illusion of inference and may be called conceptus ratiocinantes (speciously reasoning concepts). Since this can be settled only in the chapter on the dialectical inferences of pure reason, we cannot yet take it into account. Provisionally, just as we called pure concepts of the under-

standing categories, we will give the concepts of pure reason a new name, calling them transcendental ideas, and will now explain and justify this designation.

First Book of Transcendental Dialectic First Section On Ideas in General

Despite the great wealth of our languages, a thinking mind often finds itself at a loss for an expression exactly fitting its concept, without which it cannot make itself properly intelligible to others or even to itself.

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To coin new words is a presumption to legislate in language that rarely succeeds. Before resorting to this desperate remedy, it is advisable to look in a dead and learned language to see whether the concept, together with its appropriate expression, is already to be found there. Even if the old use has become somewhat uncertain through the carelessness of its originators, it is still better to fix the meaning that was especially proper to it, even should it remain doubtful whether precisely the same meaning was intended at the time, than to spoil one's undertaking merely by making oneself unintelligible.

Thus if only a single word should be found for a certain concept, fitting it exactly in an already established meaning, and if distinguishing this concept from related concepts is of great importance, it is advisable not to use that word extravagantly or merely for variety as a synonym in place of others. Rather, one should carefully preserve its distinctive meaning. Otherwise it easily happens that, once the expression no longer particularly engages attention but is lost among a mass of others of very different significance, the thought it alone could have preserved is also lost.

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Plato used the expression "idea" in a way that makes it clear he understood by it something not only never borrowed from the senses, but even far surpassing the concepts of the understanding with which Aristotle concerned himself, since nothing congruent with it is ever found in experience. For him ideas are archetypes of things themselves, not merely keys to possible experiences, like the categories. In his opinion they flowed from supreme reason and were thence imparted to human reason. The latter, however, is no longer in its origi-

nal state, but must laboriously recall the old, now much obscured ideas through recollection, which is called philosophy. I will not enter here into a literary investigation to establish the meaning this sublime philosopher attached to his expression. I note only that it is not at all unusual, in ordinary conversation as well as in writings, to understand an author even better than he understood himself by comparing the thoughts he expresses about his subject. For he did not determine his concept sufficiently, and thereby sometimes spoke, or even thought, contrary to his own intention.

Plato very clearly observed that our cognitive power feels a far higher need than merely spelling out appearances according to synthetic unity in order to read them as experience.

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He observed too that our reason naturally soars to cognitions that go far beyond anything with which any object experience can give could ever be congruent, yet which nevertheless have their reality and are by no means mere fantasies.

Plato found his ideas especially in everything practical*, that is, everything resting on freedom, which in turn stands under cognitions that are a distinctive product of reason. Anyone who wished to draw the concepts of virtue from experience, who wished to make what can at most serve as an example for imperfect elucidation into a model and source of cognition, as many have actually done, would turn virtue into an ambiguous nonentity, changing with time and circumstances and useless for any rule.

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By contrast, everyone becomes aware that, when someone is presented to him as a model of virtue, he still has the true original only in his own mind, with which he compares this supposed model and by which alone he estimates it. This is the idea of virtue. In relation to it all possible objects of experience serve indeed as examples, proofs of the practicability to a certain degree of what the concept of reason demands, but not as archetypes. That no human being will ever act adequately to what the pure idea of virtue contains proves nothing chimerical in this thought. For every judgment of moral worth or unworthiness

is nevertheless possible only through this idea. Hence it necessarily underlies every approach to moral perfection, however far the obstacles in human nature, indeterminable in degree, may keep us from it.

* He admittedly extended his concept also to speculative cognitions, provided only that they were pure and given entirely a priori, even to mathematics, although its object lies nowhere but in possible experience. Here I cannot follow him, any more than in the mystical deduction of these ideas or the exaggerations through which he, as it were, hypostatized them; although the lofty language he used in this field is quite capable of a milder interpretation appropriate to the nature of things.

Plato's Republic has become proverbial as a supposedly striking example of dreamed-up perfection that can have its seat only in an idle thinker's brain, and Brucker finds it ridiculous that the philosopher asserted that a prince would never govern well unless he participated in the ideas. Yet one would do better to pursue this thought further and illuminate it through fresh effort where that excellent man leaves us unaided, rather than set it aside as useless under the very wretched and harmful pretext of impracticability.

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A constitution providing the greatest human freedom according to laws that allow each person's freedom to coexist with everyone else's—not the greatest happiness, for this will follow of itself—is at least a necessary idea. It must underlie not merely the first design of a political constitution but all laws as well. At the outset one must abstract from present obstacles, which may arise not so much inevitably from human nature as from neglect of genuine ideas in legislation. For nothing can be more harmful or more unworthy of a philosopher than the vulgar appeal to experience contradicting in vain, which would not exist at all if those institutions had been established at the proper time according to ideas, instead of crude concepts, precisely because they were drawn from experience, frustrating every good intention. The more legislation and government were arranged in agreement with this idea, the rarer punishments would certainly become; and it is then quite reasonable, as Plato asserts,

that with a perfect arrangement of them none would be needed at all. Although this last state may never come about, the idea is nevertheless entirely correct.

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It sets up this maximum as an archetype, in order to bring the legal constitution of human beings ever closer to the greatest possible perfection. For what the highest degree may be at which humanity must stop, and hence how great the gulf necessarily remaining between the idea and its execution may be, no one can or should determine, precisely because freedom can overstep every specified boundary.

But not only in what displays the true causality of human reason, where ideas become efficient causes of actions and their objects, namely in morality, but also with respect to nature itself, Plato rightly sees clear proofs of its origin in ideas. A plant, an animal, the orderly arrangement of the universe, and presumably therefore the whole order of nature, clearly show that they are possible only according to ideas. No individual creature under the individual conditions of its existence is congruent with the idea of what is most perfect of its kind, any more than a human being is with the idea of humanity that he even carries in his own soul as the archetype of his actions. Yet those ideas in the highest understanding are individual, unalterable, thoroughly determined, and the original causes of things; only the whole of their combination in the universe is fully adequate to that idea.

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If we set aside the exaggeration of expression, the philosopher's soaring from a consideration of the physical world order as a copy to its architectonic connection according to ends, that is, ideas, is an endeavor deserving respect and emulation. With regard to the principles of morality, legislation, and religion, however, where ideas first make experience itself (of the good) possible, though they can never be fully expressed in it, it is a quite distinctive merit. This merit goes unrecognized only because it is judged by those very empirical rules whose validity as principles was precisely what the ideas were intended to abolish. For with respect to nature experience supplies the rule and is the source of truth;

with respect to moral laws, however, experience is (sadly!) the mother of illusion. It is utterly reprehensible to derive the laws of what I ought to do from what is done, or to wish to restrict them by it.

Instead of all these considerations, whose proper elaboration in fact constitutes the distinctive dignity of philosophy, we are now engaged in a less brilliant but not unmeritorious task: making the ground level and firm for those majestic moral edifices.

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In that ground lie all kinds of mole tunnels dug by a reason searching for treasure in vain but with great confidence, which make the building insecure. Thus it is the transcendental use of pure reason, its principles and ideas, that we must now know precisely, in order properly to determine and estimate the influence and worth of pure reason. Yet before laying aside this preliminary introduction, I ask those to whom philosophy matters—which is saying more than one commonly finds—if they should find themselves convinced by this and what follows, to protect the expression "idea" in its original meaning. It should no longer fall among the other expressions commonly used to designate all kinds of representation in careless disorder, to the detriment of science. We do not lack designations properly suited to every kind of representation, without needing to encroach on the property of another. Here is their ascending scale. The genus is representation in general (repraesentatio). Beneath it stands representation with consciousness (perceptio). A perception relating solely to the subject as the modification of its state is sensation (sensatio); an objective perception is cognition (cognitio). Cognition is either intuition or concept (intuitus vel conceptus).

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The former relates immediately to the object and is singular; the latter mediately, through a mark that can be common to several things. A concept is either empirical or pure; and a pure concept, insofar as it originates solely in understanding, not in the pure image of sensibility, is called notio. A concept made up of notions that surpasses the possibility of experience is an idea, or concept

of reason. Anyone once accustomed to this distinction must find it intolerable to hear the representation of the color red called an idea. It cannot even be called a notion, a concept of the understanding.

First Book of Transcendental Dialectic Second Section On Transcendental Ideas

The transcendental analytic gave us an example of how the mere logical form of our cognition can contain the origin of pure a priori concepts that represent objects before all experience, or rather indicate the synthetic unity that alone makes empirical cognition of objects possible.

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The form of judgments, transformed into a concept of the synthesis of intuitions, produced categories guiding every use of understanding in experience. Likewise we may expect the form of syllogisms, when applied to the synthetic unity of intuitions according to the categories, to contain the origin of special a priori concepts. These we can call pure concepts of reason, or transcendental ideas, and they will determine the use of understanding in the whole of all experience according to principles.

The function of reason in its inferences consisted in the universality of cognition according to concepts; a syllogism itself is a judgment determined a priori in the entire extent of its condition. I could also draw the proposition "Caius is mortal" from experience merely through understanding. But I seek a concept containing the condition under which the predicate, the assertion in general, of this judgment is given, here the concept of a human being. After subsuming under this condition taken in its entire extent, "All human beings are mortal," I determine accordingly the cognition of my object: "Caius is mortal."

Thus in the conclusion of a syllogism we restrict a predicate to a certain object.

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We have previously thought it in the major premise in its entire extent under a certain condition. This completed magnitude of extent in relation to such a condition is called universality (Universalitas). Corresponding to it in the synthesis of intuitions is allness (Universitas), or the totality of conditions. Thus the transcendental concept of reason is none other than the concept of the

totality of conditions for a given conditioned. Since the unconditioned alone makes the totality of conditions possible, and conversely the totality of conditions is always itself unconditioned, a pure concept of reason in general can be explained through the concept of the unconditioned insofar as it contains a ground of the synthesis of the conditioned.

There will be as many kinds of pure concepts of reason as there are kinds of relation that understanding represents through the categories. Thus we must seek, first, an unconditioned of categorical synthesis in a subject; second, of hypothetical synthesis of the members of a series; and third, of disjunctive synthesis of the parts in a system.

There are, namely, just as many kinds of syllogism, each advancing through prosyllogisms to the unconditioned: one to the subject that is no longer itself a predicate, another to the presupposition that presupposes nothing further.

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The third advances to an aggregate of the members of a division, to which nothing further is required in order to complete the division of a concept. Thus pure concepts of reason concerning totality in the synthesis of conditions are necessary, at least as tasks for extending the unity of understanding, if possible, to the unconditioned, and are grounded in the nature of human reason. These transcendental concepts may otherwise lack a suitable use in concreto and consequently have no utility other than to guide understanding in a direction in which its use, while extended to the utmost, is at the same time brought into thoroughgoing agreement with itself.

But in speaking here of the totality of conditions and the unconditioned as the common heading of all concepts of reason, we again encounter an expression we cannot dispense with, yet cannot safely use owing to an ambiguity attached to it through long misuse. The word "absolute" is one of the few words originally fitted to a concept for which afterward no other word in the same language fits exactly. Its loss, or what amounts to the same thing, its uncertain use, must therefore entail the loss of the concept itself.

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It is a concept that, because it greatly occupies reason, cannot be dispensed with without great harm to all transcendental judging. The word "absolute" is now often used merely to indicate that something holds of a thing considered in itself, and thus internally. In this sense "absolutely possible" would mean what is possible in itself (interne), which is in fact the least one can say of an object. By contrast, it is also sometimes used to indicate that something holds in every relation (unrestrictedly), as with absolute dominion. "Absolutely possible" in this sense would mean what is possible in every respect and every relation, which is in turn the most I can say about the possibility of a thing. Now these meanings sometimes coincide. For example, what is internally impossible is also impossible in every relation, and hence absolutely impossible. But in most cases they are infinitely far apart, and I can in no way infer that, because something is possible in itself, it is therefore possible in every relation and hence absolutely possible. Indeed, I will show later of absolute necessity that it by no means depends in every case on inner necessity, and therefore must not be regarded as synonymous with it.

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If a thing's opposite is internally impossible, its opposite is certainly also impossible in every respect, and hence the thing itself is absolutely necessary. But I cannot infer conversely that the opposite of what is absolutely necessary is internally impossible, that the absolute necessity of things is an inner necessity. For this inner necessity is in certain cases an entirely empty expression with which we can associate not the least concept, whereas the concept of the necessity of a thing in every relation, to everything possible, carries quite special determinations with it. Since the loss of a concept widely used in speculative philosophy can never be indifferent to a philosopher, I hope that determining and carefully preserving the expression on which the concept depends will not be indifferent to him either.

I will therefore use the word "absolute" in this extended meaning and oppose it to what holds merely comparatively or in a particular respect. For the latter is restricted to conditions, while the former holds without restriction.

Now the transcendental concept of reason always concerns only absolute totality in the synthesis of conditions, and ends only with what is unconditioned absolutely, in every relation.

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For pure reason leaves everything to understanding that relates immediately to objects of intuition, or rather to their synthesis in imagination. Reason reserves for itself only absolute totality in the use of concepts of the understanding, and seeks to carry the synthetic unity thought in the category as far as the absolutely unconditioned. We can therefore call this the unity of reason in appearances, just as the unity expressed by the category is called unity of understanding. Thus reason relates only to the use of understanding, not insofar as this contains the ground of possible experience—for absolute totality of conditions is no concept usable in an experience, since no experience is unconditioned—but to prescribe its direction toward a certain unity of which understanding has no concept. This unity aims to gather all actions of understanding with respect to each object into an absolute whole. Hence the objective use of pure concepts of reason is always transcendent, whereas that of pure concepts of the understanding must by its nature always be immanent, since it is restricted solely to possible experience.

By an idea I understand a necessary concept of reason to which no congruent object can be given in the senses. Thus the pure concepts of reason we are now considering are transcendental ideas.

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They are concepts of pure reason, for they regard all experiential cognition as determined through an absolute totality of conditions. They are not arbitrarily invented, but set as tasks by the nature of reason itself, and therefore necessarily relate to the entire use of understanding. Finally, they are transcendent and overstep the boundary of all experience, in which no object adequate to the transcendental idea can therefore ever occur. In naming an idea, one says a great deal with respect to the object, as an object of pure understanding, but for that very reason very little with respect to the subject, that is, its actuality under empirical conditions, because as the concept of a maximum it can never be

given congruently in concreto. Since in the merely speculative use of reason this latter is properly the entire aim, and approaching a concept never attained in practice amounts to missing the concept altogether, we say of such a concept that it is only an idea. Thus one could say that the absolute whole of all appearances is only an idea, for since we can never portray such a whole in an image, it remains a problem without any solution. By contrast, in the practical use of understanding everything is concerned solely with carrying out rules.

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Hence the idea of practical reason can always actually be given in concreto, though only in part; indeed, it is the indispensable condition of every practical use of reason. Its execution is always bounded and deficient, but under indeterminable boundaries, and thus always under the influence of the concept of absolute completeness. Accordingly the practical idea is always supremely fruitful and indispensable with respect to actual actions. In it pure reason even has causality for actually producing what its concept contains. Hence one cannot say of wisdom with a sort of contempt that it is only an idea. Rather, precisely because it is the idea of the necessary unity of all possible ends, it must serve as a rule for everything practical, as an original and at least limiting condition.

Although we must therefore say of transcendental concepts of reason that they are only ideas, we must by no means regard them as superfluous and null. For although no object can be determined through them, they can nevertheless, fundamentally and unnoticed, serve understanding as a canon of its extended and harmonious use. Through this it indeed cognizes no more objects than it would cognize according to its concepts, but is guided better and further in that cognition.

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Not to mention that they may perhaps make possible a transition from concepts of nature to practical concepts, and in this way give the moral ideas themselves support and connection with the speculative cognitions of reason. We must await clarification of all this in what follows.

In keeping with our purpose, however, we set practical ideas aside here and therefore consider reason only in its speculative use, and within this more narrowly still, only in its transcendental use. Here we must follow the same path we took above in the deduction of the categories: consider the logical form of cognition through reason, and see whether reason thereby also becomes a source of concepts for regarding objects in themselves as synthetically determined a priori with respect to one or another function of reason.

Reason, considered as the faculty of a certain logical form of cognition, is the faculty of inference, of judging mediately by subsuming the condition of a possible judgment under the condition of a given judgment. The given judgment is the universal rule, the major premise (Major). Subsuming the condition of another possible judgment under the condition of the rule is the minor premise (Minor). The actual judgment asserting the rule's assertion in the subsumed case is the conclusion (Conclusio).

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The rule, namely, asserts something universally under a certain condition. Now in a case at hand the condition of the rule obtains. Thus what held universally under that condition is also regarded as valid in the case at hand, which carries that condition with it. It is easy to see that reason arrives at a cognition through actions of understanding that constitute a series of conditions. Suppose I arrive at the proposition "All bodies are alterable" only by beginning with the more remote cognition, which does not yet contain the concept of body but nevertheless contains its condition, "Everything composite is alterable"; proceeding from this to a nearer cognition standing under the condition of the former, "Bodies are composite"; and only from this to a third, which now connects the remote cognition, alterable, with the present one: "Therefore bodies are alterable." I have then arrived at a cognition, a conclusion, through a series of conditions, premises. Now every series whose exponent, of the categorical or hypothetical judgment, is given can be continued. Hence this same action of reason leads to the ratiocinatio polysyllogistica: a series of inferences that can be continued to indefinite lengths on the side of conditions (per prosyllogismos).

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Or it can be continued on the side of the conditioned (per episyllogismos).
But we soon become aware that the chain or series of prosyllogisms, inferred cognitions on the side of grounds or conditions for a given cognition—in other words, the ascending series of syllogisms—must stand in a different relation to the faculty of reason from the descending series, reason's advance on the side of the conditioned through episyllogisms. For in the first case the cognition, the conclusion (conclusio), is given only as conditioned. We can therefore arrive at it through reason only under at least the presupposition that all members of the series on the side of conditions are given, totality in the series of premises, because only under that presupposition is the judgment before us possible a priori. On the side of the conditioned or the consequences, by contrast, we think only a developing series, not one already entirely presupposed or given, and hence only a potential advance. Thus when a cognition is regarded as conditioned, reason is compelled to regard the ascending series of conditions as completed and given in its totality.
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But when the very same cognition is regarded at the same time as the condition of other cognitions that together constitute a descending series of consequences, reason can be entirely indifferent to how far this advance extends a parte posteriori and whether totality of this series is even possible anywhere. For it does not need such a series for the conclusion before it, since that conclusion is already sufficiently determined and secured by its grounds a parte priori. Now whether the series of premises on the side of conditions has a first member as supreme condition or not, and thus is without bounds a parte priori, it must nevertheless contain totality of condition, even supposing we could never succeed in grasping it. The whole series must be unconditionally true if the conditioned, regarded as a consequence arising from it, is to count as true. This is a demand of reason, which declares its cognition determined a priori and necessary: either in itself, in which case it needs no grounds, or, if derived, as a member of a series of grounds that is itself unconditionally true.
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First Book of Transcendental Dialectic Third Section System of Transcendental Ideas

We are concerned here not with a logical dialectic that abstracts from all content of cognition and merely exposes false illusion in the form of syllogisms, but with a transcendental dialectic. This is to contain, entirely a priori, the origin of certain cognitions from pure reason and of inferred concepts whose object cannot be given empirically at all, and which therefore lie wholly outside the power of pure understanding. From the natural relation that the transcendental use of our cognition, in inferences as well as judgments, must have to its logical use, we have gathered that there will be only three kinds of dialectical inference. These relate to the three kinds of inference through which reason can arrive at cognitions from principles, and in all of them its business is to ascend from the conditioned synthesis to which understanding always remains bound to the unconditioned synthesis that it can never attain.

Now the universal forms of all relation our representations can have are 1.
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relation to the subject, 2. relation to objects, either as appearances or as objects of thinking in general. Combining this subdivision with the division above, every relation of representations of which we can form either a concept or an idea is threefold: 1. the relation to the subject, 2. to the manifold of the object in appearance, 3. to all things in general.

Now all pure concepts in general concern the synthetic unity of representations, but concepts of pure reason, transcendental ideas, concern the unconditioned synthetic unity of all conditions in general. Consequently all transcendental ideas can be brought under three classes: the first containing the absolute, unconditioned unity of the thinking subject; the second the absolute unity of the series of conditions of appearance; the third the absolute unity of the condition of all objects of thinking in general.

The thinking subject is the object of psychology; the sum total of all appearances (the world) is the object of cosmology; and the thing containing the supreme condition of the possibility of everything that can be thought, the being of all beings, is the object of theology.

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Thus pure reason supplies the idea for a transcendental doctrine of the soul (psychologia rationalis), a transcendental science of the world (cosmologia rationalis), and finally a transcendental cognition of God (Theologia transzendentalis). Even the mere design of any one of these sciences does not derive from understanding, even if understanding were combined with the highest logical use of reason, all conceivable inferences, in order to advance from one of its objects, an appearance, to all others as far as the most remote members of empirical synthesis. It is solely a pure and genuine product, or problem, of pure reason.

What modi of pure concepts of reason stand under these three headings of all transcendental ideas will be fully set out in the following chapter. They proceed along the thread of the categories. For pure reason never relates directly to objects, but to the concepts of the understanding concerning them. Likewise only in the full development will it become clear how reason, solely through the synthetic use of the very same function it employs in categorical syllogism, must necessarily arrive at the concept of the absolute unity of the thinking subject; how the logical procedure in hypothetical ideas must necessarily entail the idea of the absolutely unconditioned in a series of given conditions.

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Finally, it will become clear how the mere form of disjunctive syllogism must necessarily entail the highest concept of reason, that of a being of all beings. At first sight this thought seems exceedingly paradoxical.

No objective deduction of these transcendental ideas is properly possible, as we were able to provide for the categories. For in fact they have no relation to any object that could be given congruently with them, precisely because they are only ideas. But we could undertake a subjective introduction to them from the nature of our reason, and this has also been accomplished in the present chapter.

It is easy to see that pure reason aims at nothing but absolute totality of synthesis on the side of conditions, whether of inherence, dependence, or concurrence, and has nothing to do with absolute completeness on the side of the con-

ditioned. For only the former is needed to presuppose the entire series of conditions and thereby give it to understanding a priori. Once a completely and unconditionally given condition is present, no further concept of reason is needed for continuing the series, since understanding takes every downward step from condition to conditioned by itself.

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Thus transcendental ideas serve only for ascending in the series of conditions to the unconditioned, to principles. With respect to descending to the conditioned, however, there is indeed a far-reaching logical use that our reason makes of the laws of understanding, but no transcendental use at all. If we form an idea of the absolute totality of such a synthesis (progressus), for example of the entire series of all future alterations of the world, this is a thought-entity (ens rationis), thought merely arbitrarily and not necessarily presupposed by reason. For the possibility of the conditioned presupposes the totality of its conditions, but not of its consequences. Consequently such a concept is no transcendental idea, with which alone we are concerned here.

Finally, we also become aware that a certain connection and unity shines forth among transcendental ideas themselves, and that through them pure reason brings all its cognitions into a system. To proceed from cognition of oneself (the soul) to cognition of the world, and through this to the original being, is so natural an advance. It seems similar to reason's logical progress from the premises to the conclusion*.

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Whether a kinship of the kind found between logical and transcendental procedure really underlies this in secret is also one of the questions whose answer must await the continuation of these investigations. Provisionally we have already achieved our purpose.

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We have been able to extract the transcendental concepts of reason from the ambiguous position in which they are ordinarily mingled with others in philosophers' theories, without those philosophers even properly distinguishing them from concepts of the understanding. We have been able to indicate

their origin and thereby their determinate number, beyond which there can be no more, and present them in a systematic connection through which a special field is marked out and restricted for pure reason.

* Metaphysics has only three ideas as the proper aim of its inquiry: God, freedom, and immortality. The second concept, combined with the first, is to lead to the third as a necessary conclusion. Everything else this science concerns itself with serves merely as a means of arriving at these ideas and their reality. It needs them not for natural science, but to go beyond nature. Insight into them would make theology, morality, and through their combination religion, and hence the highest ends of our existence, depend solely on the speculative faculty of reason and on nothing else. In a systematic presentation of these ideas, the order given above, as the synthetic order, would be the most suitable. But in the treatment that must necessarily precede it, the analytic order, reversing this order, will be more appropriate to our purpose: to carry out our grand design by proceeding from what experience immediately supplies, the doctrine of the soul, to the doctrine of the world, and from there to cognition of God.

Transcendental Dialectic Second Book On the Dialectical Inferences of Pure Reason

One can say that the object of a mere transcendental idea is something of which we have no concept, although this idea has been generated quite necessarily in reason according to its original laws. For in fact no concept of the understanding is possible of an object that is to be adequate to reason's demand: no concept that can be exhibited and made intuitive in a possible experience.

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Yet one would express oneself better, and with less danger of misunderstanding, by saying that we can have no acquaintance with the object corresponding to an idea, though we can have a problematic concept of it.

Now at least the transcendental, subjective reality of pure concepts of reason rests on our being led to such ideas through a necessary syllogism. Thus there will be syllogisms containing no empirical premises, through which we infer from something we know to something else of which we nevertheless have no concept, yet to which we give objective reality through an unavoidable illusion.

With respect to their result such inferences should therefore be called specious rather than rational inferences. With respect to their occasion, however, they may well bear the latter name, since they are neither invented nor accidentally arisen, but have sprung from the nature of reason. They are sophistries not of human beings but of pure reason itself. Even the wisest of all human beings cannot free himself from them, and although after much effort he may perhaps prevent the error, he can never entirely rid himself of the illusion that incessantly torments and mocks him.

There are therefore only three kinds of these dialectical syllogisms, as many as the ideas in which their conclusions terminate.

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In the syllogism of the first class I infer from the transcendental concept of the subject, which contains no manifold, to the absolute unity of this subject itself, of which in this way I have no concept whatever. I will call this dialectical inference the transcendental paralogism. The second class of specious inferences is directed toward the transcendental concept of the absolute totality of the series of conditions for a given appearance in general. From always having a self-contradictory concept of the unconditioned synthetic unity of the series on one side, I infer the correctness of the opposite unity, of which I nevertheless also have no concept. I will call the state of reason in these dialectical inferences the antinomy of pure reason. Finally, according to the third kind of specious inference, I infer from the totality of conditions for thinking objects in general insofar as they can be given to me, to the absolute synthetic unity of all conditions of the possibility of things in general. That is, from things I do not know according to their mere transcendental concept, I infer a being of all beings that I know still less through a transcendent concept, and of whose unconditioned necessity I can form no concept. I will call this dialectical syllogism the ideal of pure reason.

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Second Book of Transcendental Dialectic First Chapter On the Paralogisms of Pure Reason

A logical paralogism consists in the falsity of a syllogism as to its form, whatever its content may otherwise be. A transcendental paralogism, however, has a transcendental ground for inferring falsely as to form. In this way such a false inference will have its ground in the nature of human reason and carry with it an unavoidable, though not insoluble, illusion.

We now come to a concept not recorded above in the general list of transcendental concepts, yet which must be counted among them without thereby altering that table in the least or declaring it deficient. This is the concept, or, if one prefers, the judgment "I think." But it is easy to see that it is the vehicle of all concepts in general, and hence also of transcendental concepts; it is therefore always included among them and is accordingly just as transcendental. Yet it can have no special heading, because it serves only to introduce all thinking as belonging to consciousness.

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Meanwhile, however pure it is of the empirical, the impression of the senses, it nevertheless serves to distinguish two kinds of object from the nature of our power of representation. I, as thinking, am an object of inner sense and am called soul. What is an object of outer senses is called body. Thus the expression "I, as a thinking being" already signifies the object of psychology, which can be called the rational doctrine of the soul if I wish to know nothing further about the soul than what can be inferred, independently of all experience that determines me more closely and in concreto, from this concept "I" insofar as it occurs in all thinking.

The rational doctrine of the soul is indeed an undertaking of this kind. For if the slightest empirical element of my thinking, any particular perception of my inner state, were mixed among the grounds of cognition of this science, it would no longer be a rational but an empirical doctrine of the soul. We therefore already have before us a supposed science built on the single proposition "I think," whose soundness or unsoundness we can very appropriately investigate here in accordance with the nature of a transcendental philosophy. One must not take offense that in this proposition, which expresses the perception of oneself, I nevertheless have an inner experience.

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Nor must one take offense that rational psychology built on it is therefore never pure, but partly grounded on an empirical principle. For this inner perception is nothing further than mere apperception, "I think," which even makes possible all transcendental concepts, in which we say "I think substance, cause," and so on. For inner experience in general and its possibility, or perception in general and its relation to another perception, without any particular difference or determination being empirically given, cannot be regarded as empirical cognition. It must be regarded as cognition of the empirical in general, and belongs to the investigation of the possibility of every experience, which is certainly transcendental. The least object of perception, for example mere pleasure or displeasure, added to the universal representation of self-consciousness would immediately transform rational psychology into empirical psychology.

"I think" is therefore the sole text of rational psychology, from which it is to unfold all its wisdom. It is easy to see that this thought, if it is to be related to an object, myself, can contain nothing but transcendental predicates of it, because the slightest empirical predicate would spoil the science's rational purity and independence from all experience.

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Here, however, we need only follow the guiding thread of the categories. Since a thing, I as a thinking being, has first been given here, we will not alter the order of the categories among themselves as presented in their table, but will nevertheless begin here with the category of substance, through which a thing in itself is represented, and thus follow their series backward. The topics of the rational doctrine of the soul, from which everything else it may contain must be derived, are accordingly as follows:

1 The soul is substance.

2 In its quality, simple.

3 In the different times in which it exists, numerically identical, that is, unity, not plurality.

4 In relation to possible objects in space*.

* Readers who cannot readily discern from these expressions, in their transcendental abstraction, their psychological sense, or why the soul's last attribute belongs to the category of existence, will find them sufficiently explained and justified in what follows. As for the Latin expressions that have slipped in instead of their German equivalents, contrary to good literary taste, both in this section and throughout the work, I offer this excuse: I preferred to sacrifice something of elegance in language rather than make academic use more difficult through the slightest unintelligibility.

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From these elements all concepts of the pure doctrine of the soul arise merely through composition, without recognizing any other principle whatever. This substance, merely as an object of inner sense, gives the concept of immateriality; as simple substance, that of incorruptibility; its identity as an intellectual substance gives personality; all three together give spirituality. Relation to objects in space gives commerce with bodies; hence it represents thinking substance as the principle of life in matter, that is, as soul (anima) and as the ground of animality; this, restricted by spirituality, gives immortality.

To these there now relate four paralogisms of a transcendental doctrine of the soul, falsely regarded as a science of pure reason concerning the nature of our thinking being.

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But we can ground it on nothing other than the simple representation, entirely empty of content in itself, "I." Of this we cannot even say that it is a concept, but only a mere consciousness accompanying all concepts. Through this I, or he, or it, the thing that thinks, nothing further is represented than a transcendental subject of thoughts = x. This is cognized only through the thoughts that are its predicates, and apart from these we can never have the slightest concept of it. We therefore turn in a perpetual circle around it, since we must always

already employ its representation to judge anything about it. This inconvenience is inseparable from it, because consciousness in itself is not so much a representation distinguishing a particular object as a form of representation in general insofar as it is to be called cognition. For of this alone can I say that through it I think something.

Yet at the very outset it must seem strange that the condition under which I think in general, which is therefore merely a constitution of my subject, should also hold for everything that thinks; and that we can presume to ground on a seemingly empirical proposition an apodictic and universal judgment, namely that everything thinking is constituted as the pronouncement of self-consciousness declares me to be.

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The cause of this lies in our having necessarily to ascribe to things a priori all the properties constituting the conditions under which alone we think them. Now I can have the slightest representation of a thinking being through no outer experience, but solely through self-consciousness. Thus such objects are nothing further than the transfer of this consciousness of mine to other things, which are represented as thinking beings only in this way. But the proposition "I think" is here taken only problematically, not insofar as it may contain a perception of an existence (the Cartesian cogito, ergo sum), but according to its mere possibility, to see what properties may flow from this so simple proposition to its subject, whether such a subject exists or not.

If our pure rational cognition of thinking beings in general were grounded on more than the cogito, if we also enlisted observations of the play of our thoughts and the natural laws of the thinking self to be drawn from them, an empirical psychology would arise. This would be a kind of physiology of inner sense and might serve to explain its appearances, but could never disclose properties that do not belong to possible experience at all, such as that of the simple.

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Nor could it teach apodictically anything concerning the nature of thinking beings in general. It would therefore be no rational psychology.

Now since the proposition "I think," taken problematically, contains the form of every judgment of understanding in general and accompanies all categories as their vehicle, it is clear that inferences from it can contain a merely transcendental use of understanding, rejecting every admixture of experience. After what we have shown above, we can form no favorable expectation in advance of its progress. We will therefore follow it with a critical eye through all the predicaments of the pure doctrine of the soul, but, for brevity's sake, we will let their examination proceed in an uninterrupted connection.

First, the following general remark may sharpen our attention to this kind of inference. I do not cognize any object merely by thinking. I can cognize an object only by determining a given intuition with regard to the unity of consciousness in which all thinking consists. Thus I do not cognize myself by being conscious of myself as thinking, but by being conscious of the intuition of myself as determined with respect to the function of thinking.

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All modi of self-consciousness in thinking as such are therefore not yet concepts of the understanding concerning objects, categories, but mere functions that give thinking no object to cognize, and hence do not give myself as an object either. The object is not consciousness of the determining self, but only that of the determinable self, my inner intuition, insofar as its manifold can be combined in accordance with the universal condition of the unity of apperception in thinking.

1) In all judgments I am always the determining subject of the relation constituting the judgment. But that I, who think, must always count in thinking as subject, and as something that cannot be regarded as merely attaching to thought as a predicate, is an apodictic and indeed identical proposition. It does not, however, mean that I as object am for myself a self-subsistent being, or substance. The latter goes very far, and therefore requires data not found in thinking at all, perhaps, insofar as I consider merely the thinking being as such, more than I will ever find in it anywhere.

2) That the I of apperception, and consequently in every act of thinking, is a singular that cannot be resolved into a plurality of subjects, and thus designates a logically simple subject, already lies in the concept of thinking and is therefore an analytic proposition.

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But this does not mean that the thinking I is a simple substance, which would be a synthetic proposition. The concept of substance always relates to intuitions that in my case can only be sensible, and thus lie entirely outside the field of understanding and its thinking, which is properly all that is being discussed here when we say that the I in thinking is simple. It would indeed be astonishing if what elsewhere requires so much preparation—to distinguish in what intuition presents what in it is substance, and still more whether this can also be simple, as with the parts of matter—were here given so directly in the poorest of all representations, as though through a revelation.

3) The proposition of my own identity through all the manifold of which I am conscious likewise lies in the concepts themselves and is therefore analytic. But this identity of the subject, of which I can become conscious in all its representations, does not concern the intuition of the subject through which it is given as an object. Hence it cannot signify personal identity, by which is understood consciousness of the identity of one's own substance as a thinking being throughout all change of states.

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To prove this, mere analysis of the proposition "I think" would not suffice; various synthetic judgments grounded on the given intuition would be required.

4) "I distinguish my own existence as a thinking being from other things outside me, including my body" is likewise an analytic proposition, for other things are those I think as distinct from myself. But whether this consciousness of myself is even possible without things outside me through which representations are given to me, and whether I can therefore exist merely as a thinking being without being human, I do not thereby know at all.

Thus through analysis of the consciousness of myself in thinking in general, not the slightest gain is made toward cognition of myself as an object. The logical exposition of thinking in general is falsely taken for a metaphysical determination of the object.

It would be a great, indeed the only, stumbling block against our entire critique if there were a possibility of proving a priori that all thinking beings are in themselves simple substances, and as such therefore, as a consequence of the same ground of proof, inseparably possess personality and are conscious of their existence apart from all matter. For in this way we would after all have taken a step beyond the world of sense and entered the field of noumena.

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No one could then deny us the right to spread further within it, settle it, and take possession there as each person's lucky star favored him. For the proposition "Every thinking being as such is a simple substance" is a synthetic a priori proposition, because, first, it goes beyond the concept laid at its foundation and adds a way of existing to thinking in general; and second, it adds to that concept a predicate, simplicity, that can be given in no experience whatever. Thus synthetic a priori propositions would be feasible and admissible not merely, as we have maintained, in relation to objects of possible experience, as principles of the possibility of this experience itself, but could also relate to things in general and in themselves. This conclusion would put an end to this entire critique and command us to leave matters as they were. But on closer examination the danger is not so great here.

In the procedure of rational psychology there prevails a paralogism represented by the following syllogism:

What cannot be thought otherwise than as subject also cannot exist otherwise than as subject, and is therefore substance.

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Now a thinking being, considered merely as such, cannot be thought otherwise than as subject.

Therefore it also exists only as such, that is, as substance.

The major premise speaks of a being that can be thought in general in every respect, consequently also as it may be given in intuition. But the minor premise speaks of it only insofar as it considers itself as subject solely in relation to thinking and the unity of consciousness, not at the same time in relation to the intuition through which it is given to thinking as an object. Thus the conclusion is inferred per Sophisma figurae dictionis, and hence through a fallacy*.

* Thinking is taken in entirely different senses in the two premises: in the major premise as relating to an object in general, and hence as that object may be given in intuition; in the minor premise only as it consists in relation to self-consciousness. Here no object at all is therefore thought, but only the relation to oneself as subject, as the form of thinking, is represented. The first speaks of things that cannot be thought otherwise than as subjects; the second speaks not of things but of thinking, abstracting from every object, in which the I always serves as the subject of consciousness. Hence the conclusion cannot be "I cannot exist otherwise than as subject," but only "In thinking my existence I can employ myself only as the subject of judgment." This is an identical proposition disclosing absolutely nothing about the manner of my existence.

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That this resolution of the celebrated argument into a paralogism is entirely correct becomes clear if one consults the general remark on the systematic presentation of principles and the section on noumena. There it was proved that the concept of a thing that can exist by itself as subject, but not as mere predicate, carries no objective reality at all: we cannot know whether any object whatever could correspond to it, since we do not understand the possibility of such a way of existing. Consequently it supplies absolutely no cognition. If, therefore, under the name of substance it is to indicate an object that can be given, if it is to become a cognition, a persistent intuition must be laid at its foundation as the indispensable condition of the objective reality of a concept, that through which alone the object is given.

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But in inner intuition we have nothing persistent at all, for the I is only the consciousness of my thinking. Thus if we remain with thinking alone, we also lack the necessary condition for applying the concept of substance, of a self-subsistent subject, to ourselves as thinking beings. The simplicity of substance bound up with it entirely falls away together with the objective reality of this concept, and is transformed into a merely logical qualitative unity of self-consciousness in thinking in general, whether the subject is composite or not.

Refutation of Mendelssohn's Proof of the Persistence of the Soul

This acute philosopher soon noticed an insufficiency in the ordinary argument intended to prove that the soul, if conceded to be a simple being, cannot cease to be through division. The argument was inadequate to secure its necessary continued existence, since one could still assume that its existence ceases through disappearance. In his Phaedo he now sought to ward off this perishability, which would be a genuine annihilation, by venturing to prove that a simple being cannot cease to be at all. For it cannot be diminished, and so cannot gradually lose something of its existence.

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Nor can it be transformed gradually into nothing, since it has no parts and hence no plurality within itself. Thus no time would be found between an instant in which it is and another in which it no longer is, which is impossible. —But he did not consider that even if we concede this simple nature to the soul, its containing no manifold of parts outside one another and hence no extensive magnitude, we can no more deny it intensive magnitude than we can deny this to anything existing. That is, it has a degree of reality with respect to all its faculties, indeed everything constituting its existence. This degree can decrease through all the infinitely many smaller degrees, and thus the supposed substance, the thing whose persistence is not already otherwise established, can be transformed into nothing, though not through division, yet through the gradual relaxation (remissio) of its forces, and hence through elanguescence, if I may use this expression. For even consciousness always has a degree that can still be further diminished*, and consequently so does the faculty of being conscious of oneself.

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The same holds of all the other faculties.—Thus the persistence of the soul, as a mere object of inner sense, remains unproved and even unprovable. Its persistence in life, when the thinking being as a human being is at the same time an object of outer senses to itself, is indeed clear in itself. But this by no means satisfies the rational psychologist, who undertakes to prove from mere concepts the soul's absolute persistence even beyond life**.

* Clarity is not, as logicians say, consciousness of a representation. For a certain degree of consciousness, insufficient for recollection, must be found even in many obscure representations, since without any consciousness at all we would make no distinction in combining obscure representations. Yet we can do this with the marks of many concepts, such as those of right and equity, and as a musician does when striking many notes together in improvisation. Rather, a representation is clear when consciousness in it is sufficient for consciousness of its difference from others. If consciousness is sufficient for distinction but not for consciousness of the difference, the representation would still have to be called obscure. Thus there are infinitely many degrees of consciousness down to its disappearance.

** Those who believe they have done enough to introduce a new possibility by defiantly claiming that no one can show a contradiction in their presuppositions can be greatly embarrassed by other possibilities no bolder in the least. This includes all those who believe they understand the possibility of thinking even after human life ceases, although they have an example of it only in empirical intuitions during human life. One such possibility is the division of a simple substance into several substances, and conversely the flowing together, coalition, of several into one simple substance. For although divisibility presupposes something composite, it does not necessarily require a composite of substances, but merely of degrees of the various faculties of one and the same substance. Just as we can think all the soul's forces and faculties, even consciousness itself, diminished by half, yet so that substance still remains, we can also without contradiction represent this extinguished half as preserved, but not in the soul: outside it. Since everything in the soul that is real, and hence has a degree, and

thus its entire existence without anything omitted, has here been halved, a separate substance would then arise outside it. For the plurality that was divided was already present, not as a plurality of substances, but of every reality as a quantum of existence in the soul. The unity of substance was only a way of existing that through this division alone could be transformed into a plurality of subsistence. But several simple substances could likewise flow together again into one, with nothing lost except the plurality of subsistence, since the one would contain the combined degree of reality of all the previous ones. Perhaps the simple substances that give us the appearance of matter might, through such dynamical division of the parents' souls as intensive magnitudes, produce children's souls—not, admittedly, through a mechanical or chemical influence on one another, but through an influence unknown to us, of which the former would be only the appearance—while the parents in turn replenished their loss through coalition with new material of the same kind. I am far from granting such fantasies the slightest worth or validity; moreover, the principles of the analytic above have sufficiently insisted that no use of the categories, such as that of substance, be made except in experience. But if the rationalist is bold enough to make a self-subsistent being out of the mere faculty of thinking, without any persistent intuition through which an object would be given, merely because the unity of apperception in thinking allows him no explanation from the composite—when he would do better to confess that he does not know how to explain the possibility of a thinking nature—why should the materialist not be entitled to equal boldness in using his principle for the opposite purpose while retaining the formal unity of the former, although he can no more cite experience in support of his possibilities?

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Let us now take our propositions above in synthetic connection, as they must also be taken in rational psychology as a system valid for all thinking beings, and proceed from the category of relation.

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We begin with the proposition that all thinking beings, as such, are substances. Going backward through their series until the circle closes, we finally encounter their existence. In this system they are not only conscious of their existence independently of outer things.

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They can also determine it from themselves, with respect to the persistence that necessarily belongs to the character of substance. It follows, however, that idealism is unavoidable in that same rationalistic system, at least problematic idealism. If the existence of outer things is not at all required to determine one's own existence in time, the former is also assumed quite gratuitously, without any proof of it ever being possible.

If, by contrast, we follow the analytic procedure, where "I think," as a proposition already including an existence, is laid down as given, and hence modality is the foundation, and analyze it to cognize its content—whether and how this I determines its existence in space or time merely through that proposition—the propositions of rational psychology would begin not with the concept of a thinking being in general but with an actuality.

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From the way this actuality is thought, after everything empirical in it has been separated off, what belongs to a thinking being in general would be inferred, as the following table shows.

1 I think,

2 as subject,

3 as simple subject,

4 as identical subject, in every state of my thinking.

Since the second proposition here does not determine whether I can exist and be thought only as subject and not also as predicate of another, the concept of a subject is taken merely logically, and it remains undetermined whether substance is to be understood by it or not. But in the third proposition the absolute unity of apperception, the simple I in the representation to which all com-

bination or separation constituting thinking relates, becomes important in itself, even though I have not yet established anything about the subject's constitution or subsistence. Apperception is something real, and its simplicity already lies in its possibility. Now in space there is nothing real that is simple, for points, which constitute the only simple things in space, are mere boundaries, not themselves anything serving to constitute space as a part.

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Thus it follows that explaining my constitution as a merely thinking subject on materialist grounds is impossible. But since my existence is regarded in the first proposition as given—it does not say "Every thinking being exists," which would assert absolute necessity of them and hence too much, but only "I exist thinking"—the proposition is empirical and contains the determinability of my existence solely with respect to my representations in time. But for this I again first need something persistent, of a kind not given to me at all in inner intuition insofar as I think myself. Hence the way I exist, whether as substance or accident, cannot be determined through this simple self-consciousness at all. Thus if materialism is unfit as a way of explaining my existence, spiritualism is equally insufficient for it. The conclusion is that in no way whatever can we cognize anything about the constitution of our soul concerning the possibility of its separate existence in general.

And how could it be possible to go beyond experience, our existence in life, through the unity of consciousness, which we ourselves know only because we indispensably need it for the possibility of experience?

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How could it even be possible to extend our cognition to the nature of all thinking beings in general through the empirical proposition "I think," which is undetermined with respect to every kind of intuition?

Thus there is no rational psychology as a doctrine supplying an addition to our self-cognition, but only as a discipline setting impassable boundaries to speculative reason in this field. On the one hand, it keeps us from throwing ourselves into the arms of soulless materialism; on the other, from losing ourselves in fanciful wanderings through a spiritualism groundless for us in life. Rather, it

reminds us to regard reason's refusal to give satisfying answers to inquisitive questions reaching beyond this life as its indication that we should turn our self-cognition from fruitless, extravagant speculation to fruitful practical use. Though this use too is always directed only toward objects of experience, it draws its principles from higher sources and determines conduct as though our vocation reached infinitely far beyond experience, and hence beyond this life.

From all this we see that a mere misunderstanding gives rise to rational psychology. The unity of consciousness underlying the categories is here taken for an intuition of the subject as object, and the category of substance is applied to it. [B 422]

But it is only unity in thinking, through which alone no object is given. The category of substance, which always presupposes a given intuition, therefore cannot be applied to it, and this subject cannot be cognized at all. Thus the subject of the categories cannot, by thinking them, obtain a concept of itself as an object of the categories. For in order to think them it must lay at their foundation its pure self-consciousness, which was precisely what was to be explained. Likewise the subject in which the representation of time originally has its ground cannot thereby determine its own existence in time; and if the latter cannot occur, neither can the former occur through categories as a determination of itself as a thinking being in general*.

* As already stated, "I think" is an empirical proposition and contains within itself the proposition "I exist." But I cannot say "Everything that thinks exists," for then the property of thinking would make all beings possessing it necessary beings. Hence my existence also cannot be regarded as inferred from the proposition "I think," as Descartes held, since otherwise the major premise "Everything that thinks exists" would have to precede it; rather, my existence is identical with it. The proposition expresses an indeterminate empirical intuition, perception, and thus does prove that sensation, which consequently belongs to sensibility, already underlies this existential proposition. But it precedes experience, which is to determine the object of perception through the category with respect to time. Existence here is not yet a category, since a category relates not to an indeterminately given object but only to one of which we have a concept

and wish to know whether it is also posited outside this concept or not. An indeterminate perception here signifies only something real that has been given, and indeed only for thinking in general, thus neither as appearance nor as a thing in itself (noumenon), but as something that in fact exists and is designated as such in the proposition "I think." For it should be noted that, when I called "I think" an empirical proposition, I did not mean that the I in this proposition is an empirical representation. Rather, it is purely intellectual because it belongs to thinking in general. Yet without some empirical representation supplying the material for thinking, the act "I think" would not take place; and the empirical is only the condition of the application or use of the pure intellectual faculty.

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Thus a cognition attempted beyond the boundaries of possible experience, yet belonging to humanity's highest interest, dissolves into disappointed expectation insofar as it is to be owed to speculative philosophy.

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Nevertheless, the rigor of critique, by proving at the same time the impossibility of dogmatically establishing anything about an object of experience beyond the boundary of experience, renders reason a service of no small importance in this interest: it also secures reason against every possible assertion of the contrary. This can be accomplished only by either proving one's proposition apodictically or, if that fails, seeking the sources of this inability. If these lie in the necessary limits of our reason, they must then subject every opponent to precisely the same law of renouncing all claims to dogmatic assertion.

Nevertheless, not the slightest thing is thereby lost for the right, indeed the necessity, of assuming a future life according to principles of the practical use of reason combined with its speculative use. For the merely speculative proof could never in any case have had any influence on common human reason. It is so poised on a hair's breadth that even the schools can keep it there only as long as they make it spin incessantly around itself like a top; thus even in their own eyes it supplies no persistent foundation on which anything could be built.

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All proofs usable for the world retain their undiminished worth and indeed gain clarity and unaffected conviction through the removal of those dogmatic pretensions. They place reason in its proper domain, the order of ends, which is nevertheless also an order of nature. But reason at the same time, as a practical faculty in itself, without being restricted to the conditions of nature's order, is entitled to extend the order of ends, and with it our own existence, beyond the boundaries of experience and life. Judging by analogy with the nature of living beings in this world—where reason must necessarily adopt as a principle that no organ, no faculty, no impulse, hence nothing dispensable or disproportionate to its use, and thus purposeless, is to be found, but everything is precisely suited to its vocation in life—the human being, who alone can contain within himself the ultimate final end of all this, would have to be the only creature exempted from it. For his natural predispositions, not merely his talents and impulses to use them, but above all the moral law within him, go so far beyond every use and advantage he could draw from them in this life that the latter even teaches him to value above everything the mere consciousness of integrity of disposition, in the absence of all advantages and even of the mere shadow of posthumous fame.
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He feels inwardly called to make himself fit, through his conduct in this world and the renunciation of many advantages, to be a citizen of a better world that he has in idea. This powerful ground of proof, never to be refuted, remains, accompanied by an incessantly increasing cognition of purposiveness in everything we see before us and a prospect into the immensity of creation, hence also by consciousness of a certain boundlessness in the possible extension of our cognitions together with a corresponding impulse, even though we must abandon the attempt to understand the necessary continuance of our existence from merely theoretical cognition of ourselves.
Conclusion of the Resolution of the Psychological Paralogism

The dialectical illusion in rational psychology rests on confusing an idea of reason (a pure intelligence) with the concept, indeterminate in every respect, of a thinking being in general. I think myself for the purpose of a possible experience while still abstracting from all actual experience, and infer from this that I can become conscious of my existence even outside experience and its empirical conditions.

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Thus I confuse the possible abstraction from my empirically determined existence with the supposed consciousness of a separately possible existence of my thinking self, and believe I cognize what is substantial in me as the transcendental subject, when what I have in mind is merely the unity of consciousness that underlies all determination as the mere form of cognition.

The task of explaining the communion of the soul with the body does not properly belong to the psychology under discussion here, because its intention is to prove the personality of the soul even outside this communion (after death), and it is therefore transcendent in the strict sense, although it concerns an object of experience—but only insofar as that object ceases to be an object of experience. Yet our doctrine can also provide an adequate answer to this question. As is well known, the difficulty that prompted the task lies in the presumed heterogeneity of the object of inner sense (the soul) and the objects of the outer senses: time alone attaches to the former as the formal condition of its intuition, while space attaches to the latter as well. But consider that these two kinds of objects differ in this respect not intrinsically, but only insofar as one appears externally to the other.

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Then what underlies the appearance of matter, as a thing in itself, may perhaps not be so heterogeneous, and this difficulty disappears. No other remains than the question of how a communion of substances is possible at all. Its solution lies entirely outside the field of psychology and, as the reader will readily judge from what the Analytic said about fundamental powers and faculties, undoubtedly outside the field of all human cognition as well.

General Remark Concerning the Transition from Rational Psychology to Cosmology

The proposition "I think," or "I exist thinking," is an empirical proposition. But such a proposition rests on empirical intuition, and consequently on the object thought as appearance. It therefore seems that, according to our theory, the soul would be transformed entirely into appearance, even in thinking, and that in this way our consciousness itself, as mere illusion, would in fact refer to nothing.

Thinking, taken by itself, is merely the logical function, and thus sheer spontaneity of the combination of the manifold of a merely possible intuition, and by no means presents the subject of consciousness as appearance.

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This is simply because it takes no account at all of the kind of intuition, whether sensible or intellectual. Through it I represent myself neither as I am nor as I appear to myself; I merely think myself as any object in general, abstracting from its manner of intuition. If I represent myself here as the subject of thoughts, or as the ground of thinking, these modes of representation do not signify the categories of substance or cause, for these are those functions of thinking (judging) already applied to our sensible intuition, which would certainly be required if I wished to cognize myself. But now I wish only to become conscious of myself as thinking; I set aside how my own self is given in intuition. In that intuition it might be mere appearance to me, who think, though not insofar as I think. In consciousness of myself in mere thinking, I am the being itself, though admittedly nothing about it is thereby yet given to me for thought.

But the proposition "I think," insofar as it means "I exist thinking," is not a mere logical function. It determines the subject (which is then also an object) with respect to existence, and cannot occur without inner sense, whose intuition always provides the object not as a thing in itself, but merely as appearance.

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Thus it no longer contains mere spontaneity of thinking, but also receptivity of intuition: that is, the thinking of myself applied to the empirical intuition of that same subject. In this latter intuition the thinking self would now have to seek the conditions for using its logical functions as categories of substance, cause, and so on, in order not merely to designate itself as an object in itself through the "I," but also to determine the manner of its existence—that is, to cognize itself as a noumenon. This, however, is impossible, since inner empirical intuition is sensible and provides nothing but data of appearance. These furnish the object of pure consciousness with nothing toward knowledge of its separate existence, but can serve only the purposes of experience.

Suppose, however, that in what follows we found occasion—not in experience, but in certain (not merely logical rules, but) laws of the pure use of reason, established a priori and concerning our existence—to presuppose ourselves as legislating wholly a priori with regard to our own existence, and as ourselves determining that existence. This would reveal a spontaneity through which our actuality could be determined without requiring the conditions of empirical intuition. Here we would become aware that consciousness of our existence contains something a priori.

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This can serve to determine our existence, which is thoroughly determinable only sensibly, nevertheless in respect of a certain inner faculty, in relation to an intelligible world (admittedly one that is only thought).

Nonetheless, this would not advance any of the attempts of rational psychology in the least. For through that admirable faculty, first disclosed to me by consciousness of the moral law, I would indeed have a purely intellectual principle for determining my existence—but through what predicates? Through none other than those that must be given to me in sensible intuition. Thus I would again arrive where I was in rational psychology: needing sensible intuitions to give meaning to my concepts of the understanding—substance, cause, and so on—through which alone I can have cognition of myself. But those intuitions can never carry me beyond the field of experience. Yet with regard to practical use, which is always directed toward objects of experience, I would be entitled

to apply these concepts to freedom and its subject in a meaning analogous to their theoretical use. By them I understand merely the logical functions of subject and predicate, ground and consequence.

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In accordance with these, actions or effects are determined under those laws so that, together with the laws of nature, they can always be explained in conformity with the categories of substance and cause, although they arise from an entirely different principle. This has been said only to prevent the misunderstanding to which the doctrine of our self-intuition as appearance is easily exposed. We will have occasion to make use of it in what follows.

Transcendental Dialectic Book Two

Chapter Two The Antinomy of Pure Reason

In the introduction to this part of our work, we showed that all transcendental illusion of pure reason rests on dialectical inferences, whose schema logic supplies in the three formal kinds of syllogism in general, just as the categories find their logical schema in the four functions of all judgments. The first kind of these sophistical inferences concerned the unconditioned unity of the subjective conditions of all representations in general (the subject or the soul), corresponding to categorical syllogisms, whose major premise, as principle, asserts the relation of a predicate to a subject.

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The second kind of dialectical argument will therefore, by analogy with hypothetical syllogisms, take as its content the unconditioned unity of objective conditions in appearance, just as the third kind, which will occur in the following chapter, has as its theme the unconditioned unity of the objective conditions of the possibility of objects in general.

It is noteworthy, however, that the transcendental paralogism produced a merely one-sided illusion with regard to the idea of the subject of our thinking, and that not the slightest illusion arising from concepts of reason can be found in support of the contrary assertion. The advantage lies entirely on the side of pneumatism, although it cannot disown its inherited defect: despite all the illusion in its favor, it dissolves into mere vapor in the trial by fire of critique.

The outcome is entirely different when we apply reason to the objective synthesis of appearances. Here reason thinks it can establish its principle of unconditioned unity with much illusion, but soon becomes entangled in contradictions that force it, so far as its cosmological aim is concerned, to abandon its demand. Here a new phenomenon of human reason appears: an entirely natural antithetic, which no one needs to contrive through subtle speculation or by artfully laying snares.

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Reason falls into it of itself, and indeed unavoidably. It is thereby protected from the slumber of an imagined conviction produced by a merely one-sided illusion, but at the same time tempted either to surrender to skeptical hopelessness or to assume a dogmatic defiance, obstinately insisting on certain assertions without giving the grounds for the contrary a fair hearing. Either is the death of sound philosophy, although the former might, if necessary, still be called the euthanasia of pure reason.

Before presenting the scenes of division and disruption brought about by this conflict of laws (antinomy) of pure reason, we will offer certain discussions that may explain and justify the method we employ in treating our subject. I call all transcendental ideas, insofar as they concern absolute totality in the synthesis of appearances, world-concepts. This is partly because of that very unconditioned totality, on which the concept of the world-whole also rests—a concept that is itself only an idea—and partly because they concern solely the synthesis of appearances, hence empirical synthesis. By contrast, there is the absolute totality in the synthesis of the conditions of all possible things in general.

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This will give rise to an ideal of pure reason, entirely distinct from the world-concept, though related to it. Accordingly, just as the paralogisms of pure reason laid the foundation for a dialectical psychology, the antinomy of pure reason will display the transcendental principles of a supposed pure (rational) cosmology. It does so not to establish their validity and adopt them, but, as the very name of a conflict of reason already indicates, to present them in their dazzling but false illusion as an idea that cannot be reconciled with appearances.

The Antinomy of Pure Reason Section One System of Cosmological Ideas

To enumerate these ideas according to a principle with systematic precision, we must first note that pure and transcendental concepts can arise only from the understanding. Reason does not, strictly speaking, generate any concept at all; at most it frees the concept of the understanding from the unavoidable limitations of a possible experience, and thus seeks to extend it beyond the boundaries of the empirical, yet in connection with it.

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It does so by demanding absolute totality on the side of the conditions for a given conditioned (under which the understanding subjects all appearances to synthetic unity), thereby making the category into a transcendental idea, in order to give empirical synthesis absolute completeness by continuing it to the unconditioned (which is never found in experience, but only in the idea). Reason demands this according to the principle: if the conditioned is given, then the whole sum of conditions, and thus the absolutely unconditioned through which alone the conditioned was possible, is also given. First, then, transcendental ideas will properly be nothing but categories extended to the unconditioned, and can be arranged in a table ordered under the headings of those categories. Second, however, not all categories will be suited to this, but only those in which the synthesis constitutes a series, specifically of conditions subordinated to one another (not coordinated) for a conditioned. Reason demands absolute totality only insofar as it concerns the ascending series of conditions for a given conditioned, not when the question concerns the descending line of consequences, or the aggregate of coordinated conditions for those consequences.

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For conditions are already presupposed in relation to the given conditioned and must be regarded as given along with it, whereas consequences do not make their conditions possible but rather presuppose them. Hence in proceeding to the consequences (or descending from the given condition to the conditioned), we need not concern ourselves with whether the series comes to an end or not, and the question of its totality is in general no presupposition of reason at all.

Thus we necessarily think a time that has wholly elapsed up to the given moment as also given (although not determinable by us). But as for future time, since it is not a condition of arriving at the present, it is entirely immaterial to our comprehension of the present how we choose to regard the future: whether we let it end somewhere or run on to infinity. Let there be a series m, n, o, in which n is given as conditioned in relation to m, but also as the condition of o. Let the series ascend from the conditioned n to m (l, k, i, etc.), and likewise descend from the condition n to the conditioned o (p, q, r, etc.). Then I must presuppose the former series in order to regard n as given, and according to reason (the totality of conditions), n is possible only through that series. Its possibility does not, however, rest on the following series o, p, q, r.

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This series can therefore be regarded not as given, but only as dabilis.

I will call the synthesis of a series on the side of the conditions, beginning with the one nearest the given appearance and proceeding to more remote conditions, regressive synthesis; the synthesis that proceeds on the side of the conditioned, from the nearest consequence to more remote ones, I will call progressive synthesis. The former proceeds to antecedentia, the latter to consequentia. Cosmological ideas therefore concern the totality of regressive synthesis and proceed to antecedentia, not to consequentia. When the latter occurs, it is an arbitrary and not a necessary problem of pure reason, because to make what is given in appearance completely comprehensible we need its grounds, but not its consequences.

To arrange the table of ideas according to the table of categories, we first take the two original quanta of all our intuition, time and space. Time is in itself a series (and the formal condition of all series), and therefore, in relation to a given present, the antecedentia as conditions (the past) can be distinguished a priori from the consequentibus (the future). Consequently, the transcendental idea of the absolute totality of the series of conditions for a given conditioned concerns only all past time.

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According to the idea of reason, the whole elapsed time, as the condition of the given moment, is necessarily thought as given. As for space, however, in itself it contains no distinction between progression and regression, because it constitutes an aggregate, not a series, since its parts are all simultaneous. I could regard the present moment, in relation to past time, only as conditioned, never as its condition, because this moment arises only through elapsed time (or rather through the elapsing of the preceding time). But since the parts of space are not subordinated to one another but coordinated, one part is not the condition of the possibility of another, and space does not in itself constitute a series as time does. Yet the synthesis of the manifold parts of space, through which we apprehend it, is successive, and thus occurs in time and contains a series. And since, in this series of aggregated spaces (for example, the feet in a rod), the spaces thought as added beyond a given one are always the condition of the boundary of the preceding ones, measuring a space must also be regarded as a synthesis of a series of conditions for a given conditioned. The side of the conditions, however, is not in itself distinguished from the side toward which the conditioned lies.

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Consequently regression and progression in space seem to be one and the same. Yet because one part of space is not given through another, but only bounded by it, we must also regard every bounded space as conditioned insofar as it presupposes another space as the condition of its boundary, and so onward. With regard to bounding, then, proceeding in space is also a regression, and the transcendental idea of the absolute totality of synthesis in the series of conditions applies to space as well. I can ask about the absolute totality of appearance in space just as well as about its totality in elapsed time. Whether an answer to either question is possible at all will be determined later.

Second, reality in space—that is, matter—is a conditioned whose inner conditions are its parts, while the parts of those parts are its more remote conditions. Here, therefore, a regressive synthesis takes place whose absolute totality reason demands. This can occur only through a completed division in which the real-

ity of matter vanishes either into nothing or into what is no longer matter, namely the simple. Here, too, then, there is a series of conditions and an advance toward the unconditioned.

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Third, as regards the categories of real relation among appearances, the category of substance with its accidents is unsuited to a transcendental idea; that is, reason has no ground for proceeding regressively to conditions in its case. For accidents, insofar as they inhere in a single substance, are coordinated with one another and do not constitute a series. In relation to substance, however, they are not properly subordinated to it, but are the way the substance itself exists. What might still seem to be an idea of transcendental reason here would be the concept of the substantial. But this means nothing other than the concept of an object in general that subsists, insofar as we think in it merely the transcendental subject without any predicates. Since we are concerned here only with the unconditioned in the series of appearances, it is clear that the substantial cannot constitute a member of that series. The same holds for substances in communion: they are mere aggregates and have no exponent of a series, since they are not subordinated to one another as conditions of their possibility—which one could indeed say of spaces, whose boundary was never determined in itself, but always through another space. Thus only the category of causality remains. It presents a series of causes for a given effect.

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In this series we can ascend from the latter, as the conditioned, to the former, as conditions, and answer reason's question.

Fourth, the concepts of the possible, the actual, and the necessary lead to no series except insofar as what is contingent in existence must always be regarded as conditioned and, according to the rule of the understanding, points to a condition under which it is necessary; this condition points to a higher one, until reason finds unconditioned necessity only in the totality of this series.

Accordingly, there are only four cosmological ideas, corresponding to the four headings of the categories, if we select those that necessarily involve a series in the synthesis of the manifold.

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1 Absolute completeness of the composition of the given whole of all appearances

2 Absolute completeness of the division of a given whole in appearance

3 Absolute completeness of the origination of an appearance

4 Absolute completeness of the dependence of the existence of what is alterable in appearance

First, we must note here that the idea of absolute totality concerns nothing but the exposition of appearances, not the pure concept of the understanding of a whole of things in general. Here, then, appearances are regarded as given, and reason demands the absolute completeness of the conditions of their possibility insofar as these constitute a series: hence an absolutely (that is, in every respect) complete synthesis through which the appearance can be expounded according to laws of the understanding.

Second, it is properly only the unconditioned that reason seeks.

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It seeks it in this synthesis of conditions, continued serially and indeed regressively: completeness, as it were, in the series of premises that together presuppose no others. Now this unconditioned is always contained in the absolute totality of the series when we represent it in imagination. But this absolutely completed synthesis is itself only an idea; for we cannot know, at least in advance, whether such a synthesis is possible in the case of appearances. If we represent everything through mere pure concepts of the understanding, without conditions of sensible intuition, we can say outright that with a given conditioned the whole series of conditions subordinated to one another is also given, for the former is given only through the latter. But with appearances there is a special restriction on the manner in which conditions are given: namely, through the successive synthesis of the manifold of intuition, which is supposed to be complete in the regression. Whether this completeness is sensibly

possible remains a problem. Yet the idea of this completeness lies in reason, regardless of the possibility or impossibility of connecting empirical concepts in a way adequate to it.

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Thus, since the unconditioned is necessarily contained in the absolute totality of the regressive synthesis of the manifold in appearance (under the guidance of the categories, which represent it as a series of conditions for a given conditioned)—even if one leaves unsettled whether and how this totality can be brought about—reason here takes the path of beginning with the idea of totality, although its ultimate aim is properly the unconditioned, whether of the entire series or of a part of it.

We can now think this unconditioned either as consisting solely in the whole series, in which all members without exception would be conditioned and only their whole would be absolutely unconditioned—in which case the regression is called infinite—or as the absolutely unconditioned being only a part of the series, to which its remaining members are subordinated but which itself stands under no other condition.* In the first case, the series a parte priori is without boundaries (without a beginning), that is, infinite, and yet given in its entirety; regression within it, however, is never completed and can be called infinite only potentialiter.

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In the second case, there is a first member of the series, called, with respect to elapsed time, the beginning of the world; with respect to space, the boundary of the world; with respect to the parts of a whole given within its boundaries, the simple; with respect to causes, absolute self-activity (freedom); and with respect to the existence of alterable things, absolute natural necessity.

* The absolute whole of the series of conditions for a given conditioned is always unconditioned, because outside it there are no further conditions in relation to which it could be conditioned. But this absolute whole of such a series is only an idea, or rather a problematic concept whose possibility must be investigated, specifically in relation to the way the unconditioned, as the transcendental idea properly at issue, may be contained in it.

We have two expressions, "world" and "nature," which sometimes overlap. The first signifies the mathematical whole of all appearances and the totality of their synthesis, both in the large and in the small—that is, both in the advance of this synthesis through composition and through division. But this same world is called nature* insofar as it is considered as a dynamical whole, and attention is directed not to aggregation in space or time.

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Aggregation serves to produce it as a magnitude; attention goes instead to unity in the existence of appearances. Here the condition of what happens is called the cause; the unconditioned causality of the cause in appearance is called freedom, while conditioned causality is called a natural cause in the narrower sense. What is conditioned in existence generally is called contingent, and what is unconditioned, necessary. The unconditioned necessity of appearances can be called natural necessity.

* Nature, taken adjectivally (formaliter), signifies the connection of the determinations of a thing according to an inner principle of causality. By nature taken substantivally (materialiter), by contrast, we mean the sum total of appearances insofar as they are thoroughly connected through an inner principle of causality. In the first sense we speak of the nature of fluid matter, of fire, etc., and use this word adjectivally; by contrast, when we speak of the things of nature, we have an existing whole in mind.

I called the ideas with which we are now concerned cosmological ideas above, partly because "world" means the sum total of all appearances, and our ideas, too, are directed only toward the unconditioned among appearances; partly also because the word "world," in the transcendental sense, signifies the absolute totality of the sum of existing things, and we direct our attention solely to completeness of synthesis (though properly only in the regression to the conditions). Moreover, all these ideas are transcendent. Although they do not go beyond their object—appearances—in kind, and concern only the sensible world, not noumena, they nevertheless carry synthesis to a degree that exceeds all possible experience. In view of this, I think they can all quite appropriately be called world-concepts.

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With regard to the distinction between the mathematically and the dynamically unconditioned, at which the regression aims, I would nevertheless call the first two world-concepts in a narrower sense (of the world in the large and in the small), and the other two transcendent concepts of nature. This distinction is not yet particularly significant, but may become more important as we proceed.

The Antinomy of Pure Reason Section Two The Antithetic of Pure Reason

If a thetic is any body of dogmatic doctrines, then by an antithetic I mean not dogmatic assertions of the opposite, but the conflict of seemingly dogmatic cognitions (thesin cum antithesi), without attributing to either a superior claim to acceptance. An antithetic, then, is not concerned at all with one-sided assertions, but considers universal cognitions of reason solely in terms of their conflict with one another and its causes. The transcendental antithetic is an investigation of the antinomy of pure reason, its causes, and its result.

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If we employ our reason not merely on objects of experience, for the use of principles of the understanding, but venture to extend those principles beyond the boundary of experience, sophistical propositions arise that may neither hope for confirmation in experience nor fear refutation by it. Each is not only free of contradiction in itself but even finds conditions of its necessity in the nature of reason. Unfortunately, however, its opposite has equally valid and necessary grounds for assertion on its side.

The questions that naturally arise in such a dialectic of pure reason are therefore: 1. In which propositions, then, pure reason is in fact inevitably subject to an antinomy. 2. On what causes this antinomy rests. 3. Whether, and in what way, a path to certainty nevertheless remains open to reason under this contradiction.

A dialectical proposition of pure reason must therefore have this characteristic, distinguishing it from all sophistical propositions: it concerns not an arbitrary question raised merely for some chosen purpose, but one that every human rea-

son must necessarily encounter in its advance. Second, together with its opposite, it must carry not merely an artificial illusion that disappears as soon as it is understood, but a natural and unavoidable illusion.

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Even when one is no longer taken in by it, this illusion still deludes, though it does not deceive, and thus can be rendered harmless but never eradicated.

Such a dialectical doctrine will refer not to the unity of the understanding in concepts of experience, but to the unity of reason in mere ideas. Since the conditions of these ideas are to agree, first, as a synthesis according to rules, with the understanding, and yet at the same time, as the absolute unity of that synthesis, with reason, they will be too great for the understanding if they are adequate to the unity of reason, and too small for reason if they are suited to the understanding. From this a conflict must arise that cannot be avoided, whatever approach we take.

These sophistical assertions thus open a dialectical arena where whichever side is permitted to attack gains the upper hand, while the side forced to remain on the defensive is certain to succumb. Hence even valiant knights, whether championing a good or a bad cause, are sure of carrying off the victor's wreath if they only secure the privilege of making the last attack and are not obliged to withstand a renewed assault from their opponent. We can readily imagine that this arena has been entered often enough from time immemorial, and that many victories have been won on both sides.

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We can imagine, too, that for the final victory, which decided the matter, care was always taken that the champion of the good cause alone held the field, by forbidding his opponent to take up arms again. As impartial judges, we must set entirely aside whether the cause for which the contestants fight is good or bad, and first let them settle their dispute between themselves. Perhaps, after exhausting rather than injuring one another, they will recognize the futility of their quarrel for themselves and part as good friends.

This method of watching a conflict of assertions—or rather of provoking it ourselves—not to decide finally in favor of one side or the other, but to investigate whether its object may not be a mere mirage, which each pursues in vain and from which neither could gain anything even if no resistance were offered: this procedure, I say, may be called the skeptical method. It is entirely distinct from skepticism, a principle of artful and scientific ignorance that undermines the foundations of all cognition in order, if possible, to leave it nowhere reliable or secure. For the skeptical method aims at certainty.

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It does so, in a dispute honestly intended on both sides and intelligently conducted, by seeking to discover the point of misunderstanding, in order, as wise legislators do, to draw instruction for itself from the perplexity of judges in lawsuits, concerning what is defective and insufficiently determined in their laws. Given our limited wisdom, the antinomy disclosed in applying laws is the best test of legislation, making reason, which does not easily notice its missteps in abstract speculation, attentive to the factors involved in determining its principles.

But this skeptical method is essentially peculiar to transcendental philosophy alone; it may be dispensed with in every other field of investigation, but not in this one. Its use in mathematics would be absurd, since false assertions cannot hide there and become invisible: proofs must always proceed along the thread of pure intuition, through a synthesis that is evident at every step. In experimental philosophy a doubt that postpones judgment may indeed be useful; at least, however, no misunderstanding is possible that could not readily be removed, and experience must ultimately contain the final means of deciding the dispute, whether these are discovered sooner or later.

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Morality, too, can present all its principles in concreto, together with their practical consequences, at least in possible experiences, and thereby avoid the misunderstanding of abstraction. Transcendental assertions, by contrast, presume insights extending even beyond the field of all possible experiences. Their abstract synthesis can neither be given in any intuition a priori, nor can misun-

derstanding be discovered through any experience. Transcendental reason therefore admits no other touchstone than the attempt to reconcile its assertions with one another, and consequently, beforehand, their free and unhindered contest with one another. This is what we will now undertake.*

* The antinomies follow one another in the order of the transcendental ideas listed above.

The Antinomy of Pure Reason

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First Conflict of the Transcendental Ideas

Thesis

The world has a beginning in time and is also enclosed within boundaries in space.

Proof

For suppose the world has no beginning in time. Then an eternity has elapsed up to every given point in time, and consequently an infinite series of successive states of things in the world has passed. But the infinity of a series consists precisely in its never being capable of completion through successive synthesis. An infinite elapsed world-series is therefore impossible; hence a beginning of the world is a necessary condition of its existence. This was the first point to be proved.

As for the second point, again assume the opposite. Then the world will be an infinite given whole of simultaneously existing things. Now consider the magnitude of a quantum that is not given to any intuition within certain boundaries*.

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We can think it in no other way than through the synthesis of its parts, and the totality of such a quantum only through completed synthesis, or through the repeated addition of the unit to itself.** Accordingly, to think the world that fills all spaces as a whole, the successive synthesis of the parts of an infinite world would have to be regarded as completed; that is, an infinite time would have to be regarded as having elapsed in enumerating all coexisting things. This is impossible. Consequently, an infinite aggregate of actual things cannot be

regarded as a given whole, and thus not as given simultaneously. A world is therefore not infinite in spatial extension, but enclosed within its boundaries. This was the second point.

* We can intuit an indeterminate quantum as a whole if it is enclosed within boundaries, without having to construct its totality through measurement, that is, the successive synthesis of its parts. For the boundaries already determine completeness by cutting off everything more.

** The concept of totality in this case is nothing other than the representation of the completed synthesis of its parts, because, since we cannot derive the concept from intuition of the whole (which in this case is impossible), we can grasp it only through the synthesis of the parts up to completion of the infinite, at least in the idea.

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Antithesis

The world has no beginning and no boundaries in space, but is infinite with regard to both time and space.

Proof

For suppose it has a beginning. Since a beginning is an existence preceded by a time in which the thing does not exist, there must have preceded a time in which the world did not exist, that is, an empty time. But in an empty time no thing can arise, because no part of such a time, compared with another, contains any distinguishing condition of existence rather than nonexistence (whether we assume that the thing arises of itself or through another cause). Thus although many a series of things can begin in the world, the world itself can have no beginning, and is therefore infinite with regard to past time.

As for the second point, first assume the opposite: that the world is spatially finite and bounded. It then exists in an empty space that is not bounded. There would therefore be not only a relation of things in space, but also of things to space. Now the world is an absolute whole.

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Outside it no object of intuition, and thus no correlate of the world to which it could stand in relation, is found, so the relation of the world to empty space would be its relation to no object. But such a relation, and therefore the bounding of the world by empty space, is nothing. Thus the world is not spatially bounded at all; that is, it is infinite in extension.*

* Space is merely the form of outer intuition (formal intuition), not an actual object that can be intuited externally. Space prior to all things that determine it (fill or bound it), or rather that give an empirical intuition conforming to its form, is, under the name of absolute space, nothing other than the mere possibility of outer appearances insofar as they either exist in themselves or can be added to given appearances. Empirical intuition is therefore not composed of appearances and space (perception and empty intuition). One is not the other's correlate in synthesis; rather, they are combined only in one and the same empirical intuition as its matter and form. If we try to place one of these two components outside the other (space outside all appearances), all sorts of empty determinations of outer intuition result, which are nevertheless not possible perceptions: for example, the motion or rest of the world in infinite empty space, a determination of their mutual relation that can never be perceived and is therefore also the predicate of a mere thought-entity.

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Remark on the First Antinomy I. On the Thesis

In these conflicting arguments I have not sought deceptive tricks in order perhaps (as one says) to offer an advocate's proof, exploiting an opponent's carelessness and willingly allowing his appeal to a misunderstood law so as to build one's own unlawful claims on its refutation. Each of these proofs has been drawn from the nature of the matter, setting aside the advantage that the fallacies of dogmatists on either side might afford us.

I could also have seemingly proved the thesis by first introducing a faulty concept of the infinity of a given magnitude, as dogmatists habitually do. An infinite magnitude would be one than which no greater is possible (that is, no greater than the multitude of a given unit contained in it). Now no multitude is the greatest, because one or more units can always be added. Therefore an

infinite given magnitude, and consequently a world infinite either in its elapsed series or in its extension, is impossible: it is therefore bounded in both respects. I could have conducted my proof in this way. But this concept does not agree with what is understood by an infinite whole. It does not represent how great that whole is, so its concept is not the concept of a maximum.

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It thinks only the whole's relation to a unit that may be assumed at will, in respect of which the whole is greater than any number. Depending on whether the unit is assumed greater or smaller, the infinite would be greater or smaller; but its infinity, consisting merely in its relation to this given unit, would always remain the same. Admittedly, the absolute magnitude of the whole would not thereby be cognized at all, but that is not at issue here.

The true (transcendental) concept of infinity is this: the successive synthesis of the unit in measuring a quantum can never be completed.* From this it follows with certainty that an eternity of actual successive states cannot have elapsed up to a given (the present) point in time, and therefore that the world must have a beginning.

* It thereby contains a multitude (of the given unit) greater than any number, which is the mathematical concept of the infinite.

With regard to the second part of the thesis, the difficulty of an infinite yet elapsed series does indeed disappear, for the manifold of a world infinite in extension is given simultaneously. But to think the totality of such a multitude, since we cannot appeal to boundaries that themselves constitute this totality in intuition, we must account for our concept. In such a case it cannot proceed from the whole to the determinate multitude of parts, but must demonstrate the possibility of a whole through the successive synthesis of the parts. Since this synthesis would have to constitute a series that could never be completed, we cannot think a totality prior to it, and thus not through it either. For in this case the concept of totality itself is the representation of a completed synthesis of the parts, and this completion, hence also its concept, is impossible.

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II. Remark on the Antithesis

The proof of the infinity of the given world-series and of the sum total of the world rests on this: in the opposite case an empty time, and likewise an empty space, would have to constitute the boundary of the world. I am well aware that attempts are made to evade this consequence by claiming that a boundary of the world in time and space is quite possible without having to assume an absolute time before the world's beginning, or an absolute space extending outside the actual world—which is impossible. I am quite content with the latter part of this opinion of the philosophers of the Leibnizian school. Space is merely the form of outer intuition, not an actual object that can be intuited externally, and not a correlate of appearances but the form of appearances themselves. Space, therefore, cannot occur absolutely (on its own) as something determining the existence of things, because it is no object at all, but only the form of possible objects. Things as appearances do indeed determine space: that is, among all its possible predicates (magnitude and relation), they bring it about that these or those belong to actuality. But conversely, space, as something existing on its own, cannot determine the actuality of things with regard to magnitude or shape, because it is nothing actual in itself. A space (whether full or empty)* can therefore indeed be bounded by appearances.

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Appearances, however, cannot be bounded by an empty space outside them. The same holds for time. Granting all this, it nevertheless remains indisputable that we must absolutely assume these two nonentities—empty space outside the world and empty time before it—if we assume a boundary of the world, whether in space or in time.

* It is readily apparent that this means: empty space insofar as it is bounded by appearances, and thus empty space within the world, at least does not contradict transcendental principles and can therefore be admitted with respect to them (although its possibility is not thereby immediately asserted).

For the escape by which people seek to evade the consequence we state—that if the world has boundaries in time and space, the infinite void must determine the existence of actual things with regard to their magnitude—secretly consists only in this: instead of a sensible world, they think some intelligible world, who

knows what; instead of a first beginning (an existence preceded by a time of nonexistence), they think an existence in general that presupposes no other condition in the world; instead of a boundary of extension, they think limits of the world-whole, and thereby evade time and space. But here we are concerned only with the mundus phaenomenon and its magnitude. We can by no means abstract from the stated conditions of sensibility without abolishing its essence. If the sensible world is bounded, it necessarily lies in the infinite void. If we wish to leave this out, and hence space in general as an a priori condition of the possibility of appearances, the entire sensible world disappears. In our problem this world alone is given to us. The mundus intelligibilis is nothing but the general concept of a world in general, in which we abstract from all conditions of its intuition, and with respect to which, consequently, no synthetic proposition, affirmative or negative, is possible at all.

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The Antinomy of Pure Reason Second Conflict of the Transcendental Ideas

Thesis

Every composite substance in the world consists of simple parts, and nothing exists anywhere but the simple or what is composed of it.

Proof

For suppose composite substances did not consist of simple parts. Then, if all composition were abolished in thought, no composite part would remain, and (since there are no simple parts) no simple part either; thus nothing at all would remain, and consequently no substance would have been given. Either, then, it is impossible to abolish all composition in thought, or after its abolition something existing without any composition—that is, the simple—must remain. In the first case, however, the composite would in turn not consist of substances (because in these, composition is only a contingent relation of substances, without which they must exist as beings enduring on their own).

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Since this case contradicts the supposition, only the second remains: namely, that the substantial composite in the world consists of simple parts.

From this it follows immediately that all things in the world are simple beings, that composition is only their external state, and that although we can never entirely remove the elementary substances from this state of combination and isolate them, reason must nevertheless think them as the first subjects of all composition, and thus as simple beings prior to it.

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Antithesis

No composite thing in the world consists of simple parts, and nothing simple exists anywhere in it.

Proof

Suppose a composite thing (as substance) consists of simple parts. Since all external relation, and therefore all composition of substances, is possible only in space, the space occupied by the composite must consist of as many parts as the composite itself. Now space does not consist of simple parts, but of spaces. Thus every part of the composite must occupy a space. But the absolutely first parts of every composite are simple. Therefore the simple occupies a space. Now everything real that occupies a space contains a manifold whose elements are external to one another, and is thus composite. As a real composite, it consists not of accidents (for these cannot be external to one another without substance), but of substances. Thus the simple would be a substantial composite, which contradicts itself.

The second proposition of the antithesis is that nothing simple exists in the world at all.

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Here it is meant to say only this: the existence of the absolutely simple cannot be demonstrated from any experience or perception, either outer or inner. The absolutely simple is therefore a mere idea whose objective reality can never be demonstrated in any possible experience, and hence is without any application or object in the exposition of appearances. For suppose an object of experience could be found for this transcendental idea. Then the empirical intuition of some object would have to be cognized as containing absolutely no manifold whose elements are external to one another and combined into unity. But from

our lack of consciousness of such a manifold no inference is valid to its complete impossibility in any intuition of an object; yet this latter is absolutely required for absolute simplicity. It follows that simplicity cannot be inferred from any perception whatever. Thus, since something can never be given as an absolutely simple object in any possible experience, while the sensible world must be regarded as the sum total of all possible experiences, nothing simple is given anywhere in it.

This second proposition of the antithesis goes much further than the first, which excludes the simple only from the intuition of the composite; this one, by contrast, removes it from the whole of nature. Hence it could be proved not from the concept of a given object of outer intuition (the composite), but from its relation to a possible experience in general.

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Remark on the Second Antinomy I. On the Thesis

When I speak of a whole that necessarily consists of simple parts, I mean only a substantial whole as the proper compositum: that is, the contingent unity of a manifold that is given separately (at least in thought), placed in reciprocal combination, and thereby constitutes one thing. Space should properly be called not compositum but totum, because its parts are possible only in the whole, not the whole through its parts. At most it could be called a compositum ideale, but not reale. Yet this is only a subtlety. Since space is not a composite of substances (not even of real accidents), if I abolish all composition in it, nothing must remain, not even a point; for a point is possible only as the boundary of a space (and thus of a composite).

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Space and time therefore do not consist of simple parts, and neither does what belongs only to the state of a substance, even if it has a magnitude (for example, alteration); that is, a certain degree of alteration does not arise through an accumulation of many simple alterations. Our inference from the composite to the simple holds only for things existing on their own. Accidents of a state, however, do not exist on their own. Thus we can easily ruin the proof of the necessity

of the simple as the constituent parts of every substantial composite, and thereby our case in general, if we extend it too far and try to make it hold for everything composite without distinction, as has in fact often happened.

Moreover, I speak here only of the simple insofar as it is necessarily given in the composite, since the latter can be resolved into it as into its constituent parts.

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The proper meaning of the word "Monas" (according to Leibniz's usage) should probably concern only the simple given immediately as simple substance (for example, in self-consciousness), not as an element of the composite, which might better be called the Atomus. And since I wish to prove simple substances only with regard to the composite, as its elements, I could call the antithesis of the second antinomy transcendental atomism. But since this word has long been used to designate a particular way of explaining corporeal appearances (molecularum), and thus presupposes empirical concepts, let it be called the dialectical principle of monadology.

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II. Remark on the Antithesis

Against this proposition of an infinite division of matter, whose ground of proof is merely mathematical, the monadists raise objections that already arouse suspicion by refusing to accept the clearest mathematical proofs as insights into the constitution of space, insofar as it is in fact the formal condition of the possibility of all matter. Instead, they regard them only as inferences from abstract but arbitrary concepts that could not be related to actual things. As if it were even possible to invent a kind of intuition other than the one given in the original intuition of space, and as if its a priori determinations did not also concern everything possible only by filling that space. If we listen to them, we would have to think, besides the mathematical point, which is simple but not a part, merely the boundary of a space, physical points as well. These, too, would be simple, but would have the advantage of filling space as its parts through their mere aggregation. Without repeating here the many common

and clear refutations of this absurdity—it is wholly futile to try to reason away mathematical evidence through merely discursive concepts—I note only the following.

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When philosophy quibbles with mathematics here, it does so because it forgets that this question concerns only appearances and their condition. Here it is not enough to find the concept of the simple for the pure concept of the understanding of the composite; we must find the intuition of the simple for the intuition of the composite (matter). This is wholly impossible according to the laws of sensibility, and thus also in objects of the senses. It may therefore always hold of a whole made of substances, thought merely through the pure understanding, that we must have the simple prior to all its composition. Yet this does not hold of the totum substantiale phaenomenon, which, as empirical intuition in space, necessarily has the property that no part of it is simple, because no part of space is simple. The monadists, however, have been subtle enough to try to evade this difficulty by presupposing not space as a condition of the possibility of objects of outer intuition (bodies), but these objects and the dynamical relation of substances in general as the condition of the possibility of space. Now we have a concept of bodies only as appearances; as such, however, they necessarily presuppose space as the condition of the possibility of all outer appearance. The evasion is therefore futile, as it was also sufficiently blocked above in the Transcendental Aesthetic. Were they things in themselves, the monadists' proof would certainly hold.

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The second dialectical assertion has this peculiarity: opposed to it is a dogmatic assertion that, alone among all sophistical assertions, undertakes to prove visibly in an object of experience the actuality of what we counted above merely among transcendental ideas, namely the absolute simplicity of substance. It asserts that the object of inner sense, the "I" that thinks, is an absolutely simple substance. Without entering into this now (since it was considered more fully above), I note only that when something is thought merely as an object, without adding any synthetic determination of its intuition (as occurs through the

entirely bare representation "I"), then certainly no manifold and no composition can be perceived in such a representation. Moreover, since the predicates through which I think this object are merely intuitions of inner sense, nothing can occur in them that would prove a manifold whose elements are external to one another, and hence real composition. Self-consciousness therefore entails only that, because the subject that thinks is also its own object, it cannot divide itself (although it can divide the determinations inhering in it); for in relation to itself every object is absolute unity. Nevertheless, if this subject is considered externally, as an object of intuition, it would indeed display composition in appearance. But it must always be considered in this way if we wish to know whether or not it contains a manifold whose elements are external to one another.

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The Antinomy of Pure Reason Third Conflict of the Transcendental Ideas

Thesis

Causality according to laws of nature is not the only causality from which all the appearances of the world can be derived. To explain them, it is necessary to assume a causality through freedom as well.

Proof

Suppose there is no causality other than that according to laws of nature. Then everything that happens presupposes a previous state, on which it inevitably follows according to a rule. But the previous state must itself be something that happened (came to be in time, since it did not previously exist), because if it had always existed, its consequence, too, would not first have arisen, but would always have existed. Thus the causality of the cause through which something happens is itself something that has happened, which according to the law of nature again presupposes a previous state and its causality, and this in turn a still earlier one, and so on. If, therefore, everything happens according to mere laws of nature, there is always only a subordinate beginning.

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There is never, however, a first beginning, and thus no completeness at all of the series on the side of causes deriving from one another. But the law of nature consists precisely in this: nothing happens without a cause sufficiently determined a priori. Thus the proposition that all causality is possible only according to laws of nature contradicts itself in its unrestricted universality, and this causality cannot therefore be assumed to be the only kind.

Accordingly, we must assume a causality through which something happens without its cause being further determined according to necessary laws by another preceding cause: that is, an absolute spontaneity of causes to begin of themselves a series of appearances that proceeds according to laws of nature, and hence transcendental freedom, without which even in the course of nature the succession of appearances is never complete on the side of causes.

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Antithesis

There is no freedom; everything in the world happens solely according to laws of nature.

Proof

Suppose there is freedom in the transcendental sense, as a special kind of causality according to which events in the world could occur: namely, a power to begin a state, and thus a series of its consequences, absolutely. Then not only will a series begin absolutely through this spontaneity, but the determination of this spontaneity itself to produce the series—that is, its causality—will also begin absolutely, so that nothing precedes by which this occurring action is determined according to constant laws. But every beginning of action presupposes a state of the cause in which it is not yet acting, and a dynamically first beginning of action presupposes a state having no causal connection at all with the preceding state of that same cause: that is, it in no way follows from it. Transcendental freedom is therefore contrary to the causal law.

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It is a combination of the successive states of efficient causes of a kind according to which no unity of experience is possible; it is thus also found in no experience, and is consequently an empty thought-entity.

We therefore have nothing but nature in which to seek the connection and order of events in the world. Freedom (independence) from laws of nature is indeed a liberation from constraint, but also from the guiding thread of all rules. For we cannot say that laws of freedom enter into the causality of the world's course in place of laws of nature, because if this causality were determined according to laws, it would not be freedom but itself nothing other than nature. Nature and transcendental freedom therefore differ as lawfulness and lawlessness. The former admittedly burdens the understanding with the difficulty of seeking the derivation of events ever higher in the series of causes, because their causality is always conditioned; but in compensation it promises thoroughgoing and lawful unity of experience. The mirage of freedom, by contrast, promises the inquiring understanding rest in the chain of causes by leading it to an unconditioned causality that begins to act of itself. But since it is itself blind, it breaks the guiding thread of rules through which alone a thoroughly connected experience is possible.

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Remark on the Third Antinomy I. On the Thesis

The transcendental idea of freedom is far from constituting the entire content of the psychological concept bearing this name, which is largely empirical. It constitutes only the absolute spontaneity of action, as the proper ground of its imputability. Yet it is the real stumbling block for philosophy, which finds insuperable difficulties in admitting such a kind of unconditioned causality. Thus what has always placed speculative reason in such great perplexity in the question of freedom of the will is properly only transcendental. It concerns solely whether we must assume a power to begin a series of successive things or states of itself. It is not equally necessary to be able to answer how such a power is possible, since even with causality according to laws of nature we must be content to cognize a priori that such causality must be presupposed, although we cannot in any way comprehend the possibility of one existence positing the existence of another, and in this respect must hold solely to experience. Now we have properly demonstrated this necessity of a first beginning of a series of

appearances through freedom only insofar as it is required to make an origin of the world comprehensible, while all subsequent states can be taken as a succession according to mere laws of nature.

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But since the power to begin a series in time entirely of itself has thereby once been proved (though not understood), we are now also permitted to let various series begin of themselves, as regards causality, in the midst of the world's course, and to attribute to its substances a power to act from freedom. We must not, however, let a misunderstanding obstruct us here: namely, that because a successive series in the world can have only a comparatively first beginning, since a state of things in the world always precedes it, perhaps no absolutely first beginning of series is possible during the world's course. For here we are speaking not of an absolutely first beginning in time, but in causality. If I now (for example) rise from my chair entirely freely, without the necessarily determining influence of natural causes, then in this event, together with its natural consequences to infinity, a new series begins absolutely, although in time this event is only the continuation of a preceding series. For this decision and deed do not lie in the succession of mere natural effects and are not their mere continuation. Rather, the determining natural causes cease entirely above it with regard to this event, which follows them but does not follow from them, and must therefore be called an absolutely first beginning of a series of appearances, not in time, but with respect to causality.

The confirmation of reason's need to appeal to a first beginning through freedom in the series of natural causes is especially clear in this: all ancient philosophers (except the Epicurean school) felt compelled to assume a first mover to explain the motions of the world—that is, a freely acting cause that first began this series of states of itself. For they did not venture to make a first beginning comprehensible from mere nature.

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II. Remark on the Antithesis

The defender of nature's omnipotence (transcendental physiocracy), opposed to the doctrine of freedom, would maintain his proposition against the sophistical inferences of the latter as follows. If you assume no mathematically first term in time in the world, you also have no need to seek a dynamically first term in causality. Who told you to invent an absolutely first state of the world, and thus an absolute beginning of the series of appearances that unfolds successively, and to set boundaries to unrestricted nature in order to provide your imagination a resting place? Since substances in the world have always existed—at least the unity of experience makes such a presupposition necessary—there is no difficulty in also assuming that the succession of their states, that is, a series of their alterations, has always existed, and consequently that no first beginning, either mathematical or dynamical, need be sought. The possibility of such an infinite derivation, without a first member in relation to which everything else is merely subsequent, cannot be made comprehensible. But if you wish to discard these riddles of nature on that account, you will find yourselves compelled to reject many synthetic fundamental properties (fundamental powers) that you can comprehend just as little.

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Even the possibility of alteration in general must offend you. For if you did not find through experience that it is actual, you could never devise a priori how such an unceasing succession of being and nonbeing is possible.

Even if a transcendental power of freedom were conceded, if necessary, to begin the alterations of the world, this power would at least have to be only outside the world (although it always remains a bold presumption to assume, outside the sum total of all possible intuitions, an object that can be given in no possible perception). But attributing such a power to substances within the world itself can never be permitted, because then the connection according to universal laws of appearances necessarily determining one another, which we call nature, would largely disappear, and with it the criterion of empirical truth that distinguishes experience from dreams. For alongside such a lawless power of freedom, nature can scarcely be thought any longer: its laws would be inces-

santly altered by the influences of freedom, and the play of appearances, which according to mere nature would be regular and uniform, would thereby be made confused and disconnected.

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The Antinomy of Pure Reason Fourth Conflict of the Transcendental Ideas

Thesis

There belongs to the world something that, either as its part or as its cause, is an absolutely necessary being.

Proof

The sensible world, as the whole of all appearances, also contains a series of alterations. For without these, even the representation of the temporal series, as a condition of the possibility of the sensible world, would not be given to us.* But every alteration stands under its condition, which precedes it in time and under which it is necessary. Now every conditioned that is given presupposes, with respect to its existence, a complete series of conditions up to the absolutely unconditioned, which alone is absolutely necessary. Therefore something absolutely necessary must exist if an alteration exists as its consequence. But this necessary being itself belongs to the sensible world. For suppose it were outside that world: then the series of alterations in the world would derive its beginning from it.

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Yet this necessary cause itself would not belong to the sensible world. Now this is impossible. For since the beginning of a temporal series can be determined only by what precedes in time, the highest condition of the beginning of a series of alterations must exist in the time when that series did not yet exist (for a beginning is an existence preceded by a time in which the thing that begins did not yet exist). Thus the causality of the necessary cause of alterations, and hence the cause itself, belongs to time, and consequently to appearance (in which alone time is possible as its form). It therefore cannot be thought as separate from the sensible world as the sum total of all appearances. Thus something absolutely necessary is contained in the world itself (whether this is the entire world-series itself or a part of it).

* Time, as the formal condition of the possibility of alterations, does indeed objectively precede them. Subjectively, however, and in the actuality of consciousness, this representation, like every other, is given only on the occasion of perceptions.

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Antithesis

No absolutely necessary being exists anywhere, either in the world or outside the world as its cause.

Proof

Suppose the world itself is a necessary being, or a necessary being exists within it. Then in the series of its alterations there would either be a beginning that was unconditionally necessary, and thus without a cause, which conflicts with the dynamical law determining all appearances in time; or the series itself would be without any beginning and, although contingent and conditioned in all its parts, nevertheless absolutely necessary and unconditioned as a whole. This contradicts itself, because the existence of a multitude cannot be necessary if not a single part of it possesses an existence necessary in itself.

Suppose, on the other hand, there is an absolutely necessary cause of the world outside the world.

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Then, as the highest member in the series of causes of alterations in the world, it would first begin their existence and their series.* But it would then also have to begin to act, and its causality would belong to time, and for that very reason to the sum total of appearances, that is, to the world. Consequently the cause itself would not be outside the world, contrary to the supposition. Thus neither in the world nor outside it (but in causal combination with it) is there any absolutely necessary being.

* The word "begin" is taken in two senses. The first is active, when the cause begins a series of states as its effect (infit.). The second is passive, when causality arises in the cause itself (fit.). Here I infer from the former to the latter.

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Remark on the Fourth Antinomy I. On the Thesis

To prove the existence of a necessary being, I am obliged here to use no argument other than a cosmological one: one that ascends from the conditioned in appearance to the unconditioned in the concept, regarding this as the necessary condition of the absolute totality of the series. Attempting a proof from the mere idea of a highest being of all beings in general belongs to another principle of reason, and such a proof will therefore have to occur separately.

Now the pure cosmological proof can demonstrate the existence of a necessary being only by leaving unsettled whether that being is the world itself or a thing distinct from it. For to establish the latter requires principles that are no longer cosmological and do not proceed in the series of appearances, but rather concepts of contingent beings in general (insofar as they are considered merely as objects of the understanding), and a principle for connecting these with a necessary being through mere concepts. All this belongs to a transcendent philosophy for which this is not yet the place.

But once we begin the proof cosmologically, taking as our basis the series of appearances and the regression within it according to empirical laws of causality, we cannot afterward leap away from it and pass to something that does not belong to the series as a member at all.

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For something must be regarded as a condition in the very same sense in which the relation of the conditioned to its condition was taken within the series that was to lead to this highest condition through continuous advance. Now if this relation is sensible and belongs to the possible empirical use of the understanding, the highest condition or cause can conclude the regression only according to laws of sensibility, and thus only as belonging to the temporal series; the necessary being must be regarded as the highest member of the world-series.

Nevertheless, people have taken the liberty of making such a leap (metabasis eis allo genos). From alterations in the world they inferred empirical contingency —that is, their dependence on empirically determining causes—and obtained an ascending series of empirical conditions, which was entirely correct. But since they could find no first beginning and no highest member in this series, they suddenly abandoned the empirical concept of contingency and took up

the pure category. This then occasioned a merely intelligible series whose completeness rested on the existence of an absolutely necessary cause. Since this cause was now bound to no sensible conditions, it was also freed from the temporal condition of itself beginning its causality. But this procedure is wholly illegitimate, as we can conclude from the following.

Contingent, in the pure sense of the category, is that whose contradictory opposite is possible. Now we cannot infer that intelligible contingency from empirical contingency at all.

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The opposite of what is altered (of its state) is actual at another time, and thus also possible. But this is not the contradictory opposite of the previous state; that would require that at the same time when the previous state existed, its opposite could have existed in its place, which cannot be inferred from alteration at all. A body that was in motion = A comes to rest = non A. From the fact that a state opposed to A follows it, we cannot infer that the contradictory opposite of A is possible, and hence that A is contingent; for that would require that at the same time when the motion existed, rest could have existed instead. Now all we know is that rest was actual, and thus possible, at the subsequent time. But motion at one time and rest at another are not contradictorily opposed to one another. Thus the succession of opposed determinations, that is, alteration, by no means proves contingency according to concepts of the pure understanding, and therefore cannot lead to the existence of a necessary being according to pure concepts of the understanding. Alteration proves only empirical contingency: that is, according to the law of causality, the new state could not have occurred on its own without a cause belonging to the preceding time. Even if this cause is assumed to be absolutely necessary, it must in this way still be found in time and belong to the series of appearances.

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II. Remark on the Antithesis

If, in ascending the series of appearances, we think we encounter difficulties against the existence of an absolutely necessary highest cause, these must not rest on mere concepts of the necessary existence of a thing in general, and thus

must not be ontological. They must emerge instead from the causal combination with a series of appearances when we assume for that series a condition that is itself unconditioned; consequently, they must be cosmological and inferred according to empirical laws. Specifically, we must show that ascent in the series of causes (in the sensible world) can never end at an empirically unconditioned condition, and that the cosmological argument from the contingency of states of the world, as evidenced by their alterations, goes against the assumption of a first cause that begins the series absolutely.

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But a strange contrast appears in this antinomy: from the very same ground of proof from which the thesis inferred the existence of an original being, the antithesis infers its nonexistence, and with equal rigor. First it was said: there is a necessary being because the whole past time contains the series of all conditions, and thus also the unconditioned (necessary). Now it is said: there is no necessary being precisely because the whole elapsed time contains the series of all conditions (which are consequently all in turn conditioned). The cause is this. The first argument considers only the absolute totality of the series of conditions, one of which determines another in time, and thereby obtains something unconditioned and necessary. The second, by contrast, considers the contingency of everything determined in the temporal series (because each is preceded by a time in which the condition itself must in turn be determined as conditioned), whereby everything unconditioned and all absolute necessity fall away entirely.

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Yet the mode of inference in both is quite in keeping even with ordinary human reason, which often comes to be divided against itself when considering its object from two different standpoints. Mr. von Mairan considered the dispute between two famous astronomers, arising from a similar difficulty about the choice of standpoint, a phenomenon sufficiently remarkable to warrant a separate treatise. One reasoned as follows: the moon rotates on its axis because it constantly turns the same side toward the earth. The other: the moon does

not rotate on its axis, precisely because it constantly turns the same side toward the earth. Both inferences were correct, depending on the standpoint from which one chose to observe the moon's motion.

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The Antinomy of Pure Reason Section Three The Interest of Reason in This Conflict of Its Own

We now have the entire dialectical play of cosmological ideas. These permit neither an object congruent with them to be given in any possible experience, nor even reason to think them in harmony with universal laws of experience. Yet they are not arbitrarily invented: reason is necessarily led to them in the continuous advance of empirical synthesis when it wishes to free from every condition what can always be determined only conditionally according to rules of experience, and to grasp it in its unconditioned totality. These sophistical assertions are so many attempts to solve four natural and unavoidable problems of reason. There can therefore be precisely this many, neither more nor fewer, because there are no more series of synthetic presuppositions that bound empirical synthesis a priori.

We have presented the brilliant pretensions of reason, which extends its domain beyond all boundaries of experience, only in dry formulas containing merely the ground of its legal claims.

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As befits a transcendental philosophy, we have stripped these of everything empirical, although the full splendor of reason's assertions can shine forth only in combination with it. But in this application, and in the progressive extension of the use of reason, beginning in the field of experiences and gradually soaring to these sublime ideas, philosophy displays a dignity that, if it could only vindicate its pretensions, would leave the value of all other human science far beneath it. For it promises the foundation for our greatest expectations and prospects concerning the ultimate ends in which all endeavors of reason must finally unite. Whether the world has a beginning and any boundary to its extension in space; whether anywhere, and perhaps in my thinking self, there is an indivisible and indestructible unity, or nothing but the divisible and perishable;

whether in my actions I am free or, like other beings, led along the thread of nature and fate; whether, finally, there is a highest cause of the world, or whether natural things and their order constitute the final object at which we must stop in all our reflections: these are questions for whose solution the mathematician would gladly surrender his entire science; for that science can give him no satisfaction with regard to humanity's highest and most urgent ends.

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Even the proper dignity of mathematics (this pride of human reason) rests on its guiding reason to insight into nature, both in the large and in the small, in its order and regularity and in the admirable unity of the forces that move it, far beyond every expectation of philosophy founded on ordinary experience. It thereby itself provides occasion and encouragement for the use of reason extended beyond all experience, and supplies the philosophy concerned with that use with the finest materials for supporting its investigation, as far as its character permits, through appropriate intuitions.

Unfortunately for speculation (though perhaps fortunately for the practical vocation of the human being), reason finds itself, amid its greatest expectations, so entangled in a press of grounds and countergrounds that—since neither its honor nor even its security permits it to withdraw and watch this dispute indifferently as a mere mock battle, still less to command peace outright, because the object of the dispute is of great interest—nothing remains for it but to reflect on the origin of this disagreement of reason with itself, and to ask whether a mere misunderstanding may not be to blame.

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Once that is clarified, the proud claims on both sides might indeed fall away, but in their place a permanently peaceful rule of reason over understanding and senses would begin.

For now we will postpone this thorough clarification a little longer and first consider which side we would most readily join if compelled to take a party. Since in this case we consult not the logical touchstone of truth but merely our interest, such an investigation, though it decides nothing about the disputed

rights of either side, will nevertheless help us understand why participants in this dispute have joined one side rather than the other without any superior insight into the object being the cause. It will likewise explain other incidental matters: for example, the zealous heat of one side and the cold assertions of the other, why people gladly acclaim one party with joyful applause and are irreconcilably prejudiced against the other in advance.

There is, however, something that determines the standpoint from which alone this preliminary assessment can be undertaken with due thoroughness: comparison of the principles from which the two sides proceed. Among the assertions of the antithesis we notice a complete uniformity of thought and an entire unity of maxim.

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The maxim is, namely, a principle of pure empiricism, not only in explaining appearances in the world but also in resolving the transcendental ideas of the universe itself. The assertions of the thesis, by contrast, take intellectual beginnings as their basis in addition to the empirical mode of explanation within the series of appearances, and to that extent their maxim is not simple. But from its essential distinguishing characteristic I will call it the dogmatism of pure reason.

On the side of dogmatism, then, in determining the cosmological ideas of reason, or on the side of the thesis, there appears:

First, a certain practical interest in which every well-disposed person, if he understands his true advantage, takes a heartfelt part. That the world has a beginning; that my thinking self is simple and therefore imperishable in nature; that it is also free in its voluntary actions and raised above natural compulsion; and that, finally, the entire order of things constituting the world derives from an original being from which everything borrows its unity and purposive connection—these are so many foundation stones of morality and religion. The antithesis robs us of all these supports, or at least seems to do so.

Second, a speculative interest of reason also manifests itself on this side.

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For if we accept and employ transcendental ideas in this way, we can grasp the whole chain of conditions entirely a priori and comprehend the derivation of the conditioned by beginning with the unconditioned. The antithesis cannot achieve this, and recommends itself very poorly by being unable to answer the question about the conditions of its synthesis without leaving us to ask further questions endlessly. According to it, we must ascend from a given beginning to a still higher one; every part leads to a still smaller part; every event always has another event above it as cause; and the conditions of existence in general always rest in turn on others, without ever obtaining unconditioned footing and support in a self-subsisting thing as original being.

Third, this side also has the advantage of popularity, which certainly contributes no small part to its appeal. Ordinary understanding finds not the slightest difficulty in the ideas of the unconditioned beginning of all synthesis, since it is in any case more accustomed to descend to consequences than to ascend to grounds. In the concepts of the absolutely first (whose possibility it does not ponder), it finds ease and also a firm point to which it can attach the guiding cord of its steps. By contrast, it can find no satisfaction in the restless ascent from the conditioned to its condition, always with one foot in the air.

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On the side of empiricism in determining cosmological ideas, or of the antithesis, there is, first, no such practical interest arising from pure principles of reason as morality and religion carry with them. Rather, mere empiricism seems to deprive both of all force and influence. If there is no original being distinct from the world; if the world is without a beginning and thus also without an author; if our will is not free and the soul is as divisible and perishable as matter, then moral ideas and principles also lose all validity and fall together with the transcendental ideas that constituted their theoretical support.

In compensation, however, empiricism offers reason's speculative interest advantages that are very enticing and far surpass those the dogmatic teacher of ideas of reason can promise. According to empiricism, the understanding is always on its own proper ground, namely the field of nothing but possible experiences, whose laws it can trace and through which it can extend its secure

and comprehensible cognition without end. Here it can and should present the object to intuition, both in itself and in its relations, or at least in concepts whose image can be exhibited clearly and distinctly in given similar intuitions. Not only does it have no need to leave this chain of the natural order.
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It need not do so in order to cling to ideas whose objects it does not know, because as thought-entities they can never be given. It is not even permitted to abandon its work and, on the pretext that it is now complete, pass into the domain of idealizing reason and to transcendent concepts. There it would no longer need to observe and investigate according to laws of nature, but only to think and invent, certain that it could not be refuted by facts of nature, since it is not bound to their testimony but may pass them by, or even subordinate them to a higher authority, that of pure reason.
The empiricist will therefore never permit any epoch of nature to be assumed as absolutely the first, or any boundary to his view of its extent to be regarded as the outermost; nor will he permit a transition from objects of nature that he can analyze through observation and mathematics and determine synthetically in intuition (the extended) to those that neither sense nor imagination can ever present in concreto (the simple). Nor will he concede that a power to act independently of laws of nature (freedom) should be taken as a basis within nature itself, thereby curtailing the understanding's work of tracing the origin of appearances along the guiding thread of necessary rules.
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Nor, finally, will he admit that we should seek a cause for anything outside nature (an original being), because we know nothing beyond nature, since it alone offers us objects and can instruct us in its laws.
To be sure, if the empirical philosopher intends his antithesis only to suppress the prying curiosity and presumption of reason that mistakes its true vocation, boasting of insight and knowledge precisely where insight and knowledge cease, and trying to pass off what is accepted with regard to the practical interest as advancing the speculative interest, so as, whenever convenience dictates, to break the thread of physical investigations and, under the pretense of extending

cognition, attach it to transcendental ideas through which we properly cognize only that we know nothing—if, I say, the empiricist were content with this, his principle would be a maxim of moderation in claims, modesty in assertions, and at the same time the greatest possible extension of our understanding through the teacher properly appointed for us, namely experience. For in such a case intellectual presuppositions and faith would not be taken from us for the purposes of our practical affairs. Only, they could not be allowed to appear under the title and pomp of science and rational insight.

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For properly speculative knowledge can concern no object other than that of experience; and when we cross its boundary, the synthesis that attempts new cognitions independent of experience has no substratum of intuition on which it could be exercised.

But when empiricism itself becomes dogmatic concerning ideas (as usually happens) and boldly denies what lies beyond the sphere of its intuitive cognitions, it itself falls into the fault of immodesty, which is all the more blameworthy here because it causes irreparable harm to reason's practical interest.

This is the opposition of Epicureanism* to Platonism.

* It remains a question, however, whether Epicurus ever presented these principles as objective assertions. If they were perhaps nothing more than maxims of the speculative use of reason, he showed in them a more genuine philosophical spirit than any of the ancient philosophers. That in explaining appearances we must proceed as if the field of investigation were cut off by no boundary or beginning of the world; that we must assume the material of the world as it must be if we are to learn about it through experience; that we must employ no production of events other than as they are determined through unalterable laws of nature, and finally no cause distinct from the world—these are still very correct, though little observed, principles for extending speculative philosophy and likewise for discovering the principles of morality independently of outside resources. Someone who demands that we ignore those dogmatic propositions as long as we are occupied with mere speculation must not on that account be accused of wishing to deny them.

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Each says more than he knows, though in such a way that the former encourages and advances knowledge, albeit to the detriment of the practical, while the latter indeed supplies excellent principles for the practical, but thereby allows reason, in everything in which speculative knowledge alone is granted us, to pursue ideal explanations of natural appearances and neglect physical investigation for their sake.

As for the third consideration relevant to a preliminary choice between the two contending parties, it is exceedingly strange that empiricism is entirely contrary to all popularity. One might have thought ordinary understanding would eagerly embrace a plan promising to satisfy it through nothing but experiential cognitions and their rational connection, whereas transcendental dogmatics forces it to ascend to concepts far exceeding the insight and rational powers of even minds most practiced in thinking. But this is precisely its motive.

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For it then finds itself in a condition in which even the most learned can claim no superiority over it. If it understands little or nothing of the matter, no one else can boast of understanding much more. And although it cannot speak about it as scholastically as others, it can nevertheless reason sophistically about it infinitely more, because it wanders among mere ideas about which we are most eloquent precisely because we know nothing of them. In the investigation of nature, by contrast, it would have to fall completely silent and confess its ignorance. Convenience and vanity thus already strongly recommend these principles. Moreover, although a philosopher finds it very difficult to accept something as a principle without being able to account for it to himself, or even to introduce concepts whose objective reality cannot be understood, nothing is more usual for ordinary understanding. It wants something with which it can confidently begin. The difficulty of comprehending such a presupposition itself does not trouble it, because this never occurs to it (since it does not know what comprehension means), and it takes as known what frequent use has

made familiar. Finally, all speculative interest vanishes for it before the practical, and it imagines that it understands and knows what its fears or hopes drive it to assume or believe.

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Thus the empiricism of transcendentally idealizing reason is wholly deprived of popularity. However much it may contain that is detrimental to the highest practical principles, there is no danger that it will ever cross the boundaries of the school and acquire any considerable standing in the community or any favor among the multitude.

Human reason is architectonic by nature: that is, it regards all cognitions as belonging to a possible system, and therefore admits only principles that at least do not make an intended cognition incapable of standing together with others in some system. But the propositions of the antithesis are such as to make the completion of an edifice of cognitions wholly impossible. According to them, beyond a state of the world there is always a still earlier one; in every part there are always further parts that are themselves divisible; before every event there is another that was itself likewise produced by something else; and in existence generally everything is always only conditioned, without acknowledging any unconditioned and first existence. Since the antithesis therefore admits no first term anywhere, and no beginning that could serve absolutely as the foundation of the structure, a complete edifice of cognition is wholly impossible under such presuppositions.

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Hence reason's architectonic interest (which demands not empirical unity, but pure rational unity a priori) carries with it a natural recommendation for the assertions of the thesis.

But if a person could renounce every interest and consider the assertions of reason, indifferent to all consequences, solely according to the content of their grounds, then, supposing he knew no way out of the predicament except to profess one or the other of the contending doctrines, he would be in a state of ceaseless vacillation. Today it would seem convincing to him that the human will is free; tomorrow, considering the indissoluble chain of nature, he would

hold freedom to be nothing but self-deception and everything to be mere nature. But when it came to doing and acting, this play of merely speculative reason would vanish like the shadowy images of a dream, and he would choose his principles solely according to practical interest. Yet it befits a reflective and inquiring being to devote certain periods solely to examining his own reason, laying aside all partiality completely and publicly communicating his observations for others to judge.

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No one can therefore be blamed, much less forbidden, for letting theses and antitheses appear as they can defend themselves, undeterred by any threat, before jurors of his own estate (namely, that of weak human beings).

The Antinomy of Pure Reason Section Four The Transcendental Problems of Pure Reason Insofar as They Must Absolutely Be Capable of Solution

To want to solve all problems and answer all questions would be shameless boasting and such extravagant conceit that one would thereby immediately have to forfeit all trust. Yet there are sciences whose nature requires that every question arising within them must be absolutely answerable from what is known, because the answer must arise from the very sources from which the question arises. Here it is by no means permissible to plead unavoidable ignorance; a solution can be demanded. What is right or wrong in all possible cases must be knowable according to the rule, because it concerns our obligation, and we have no obligation to what we cannot know.

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In explaining appearances of nature, however, much must remain uncertain and many a question insoluble, because what we know of nature is far from sufficient in every case for what we are supposed to explain. The question now is whether, in transcendental philosophy, any question concerning an object presented to reason is unanswerable by this same pure reason, and whether we may rightly evade a decisive answer by counting it as absolutely uncertain (from everything we can cognize), among matters of which we have enough of a concept to raise a question, but entirely lack the means or power ever to answer it.

I now maintain that transcendental philosophy has this peculiarity among all speculative cognition: no question concerning an object given to pure reason is insoluble for this same human reason, and no plea of unavoidable ignorance and unfathomable depth of the problem can absolve us from the obligation to answer it thoroughly and completely. For the very concept that enables us to ask must also make us fully capable of answering this question, since the object is not found at all outside the concept.

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(As in the case of right and wrong.)

But in transcendental philosophy it is only cosmological questions for which we can rightly demand a satisfactory answer concerning the constitution of the object, without allowing the philosopher to evade it by pleading impenetrable obscurity; and these questions can concern only cosmological ideas. For the object must be given empirically, and the question concerns only its adequacy to an idea. If the object is transcendental and thus itself unknown—for example, whether the something whose appearance (in ourselves) is thinking (the soul) is a being simple in itself, whether there is an absolutely necessary cause of all things together, and so on—then we are to seek an object for our idea of which we can confess that it is unknown to us, but not therefore impossible*.

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Cosmological ideas alone have the peculiarity that they can presuppose their object and the empirical synthesis required for its concept as given, and the question arising from them concerns only the advance of this synthesis insofar as it is supposed to contain absolute totality, which is no longer anything empirical, since it cannot be given in any experience. Since here we are speaking solely of a thing as an object of possible experience, not as a thing in itself, the answer to the transcendent cosmological question can lie nowhere outside the idea, for it concerns no object in itself. And with regard to possible experience, the question is not about what can be given in concreto in any experience, but about what lies in the idea, which the empirical synthesis is merely supposed to

approach. Thus it must be capable of solution from the idea alone; for the idea is a mere creature of reason, which therefore cannot cast off its responsibility and shift it onto the unknown object.

* We can give no answer to the question of the constitution of a transcendental object, namely what it is, but we can indeed answer that the question itself is nothing, because no object for it has been given. Hence all questions of the transcendental doctrine of the soul are also answerable, and have actually been answered; for they concern the transcendental subject of all inner appearances, which is not itself appearance and thus is not given as an object, and in which none of the categories (to which the question is properly directed) finds conditions of its application. Here, then, the common expression applies that no answer is also an answer: namely, that a question about the constitution of that something which cannot be thought through any determinate predicate, because it is placed entirely outside the sphere of objects that can be given to us, is wholly null and empty.

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It is not as extraordinary as it first seems that a science can demand and expect certain solutions to all questions belonging within its domain (quaestiones domesticae), even if these solutions have perhaps not yet been found. Besides transcendental philosophy, there are two other sciences of pure reason, one of merely speculative, the other of practical content: pure mathematics and pure morality. Has anyone ever heard it declared uncertain, as though because of a necessary ignorance of the conditions, exactly what ratio the diameter bears to the circle in rational or irrational numbers? Since it cannot be given congruently through the former, but has not yet been found through the latter, it was judged that at least the impossibility of such a solution could be cognized with certainty, and Lambert gave a proof of it. In the universal principles of morals nothing can be uncertain, because the propositions are either entirely null and meaningless or must flow solely from our concepts of reason. In natural science, by contrast, there is an infinity of conjectures about which certainty can never be expected, because natural appearances are objects given to us indepen-

dently of our concepts. Their key thus lies not in us and our pure thinking, but outside us, and for that very reason cannot be found in many cases; hence no certain explanation can be expected.

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I do not include here the questions of the Transcendental Analytic concerning the deduction of our pure cognition, because we are now treating only the certainty of judgments regarding objects, not regarding the origin of our concepts themselves.

We therefore cannot evade the obligation to give at least a critical solution to the questions of reason before us by lamenting the narrow limits of our reason and confessing, with the illusion of humble self-cognition, that it is beyond our reason to determine whether the world has existed from eternity or has a beginning; whether the space of the world is filled with beings to infinity or enclosed within certain boundaries; whether anything in the world is simple or everything must be divided to infinity; whether there is generation and production from freedom or everything hangs on the chain of the natural order; finally, whether there is any entirely unconditioned and intrinsically necessary being, or everything is conditioned in its existence, and thus externally dependent and intrinsically contingent. For all these questions concern an object that can be given nowhere but in our thoughts: the absolutely unconditioned totality of the synthesis of appearances.

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If we can say and establish nothing certain about it from our own concepts, we must not lay the blame on the thing that conceals itself from us. For such a thing cannot be given to us at all (since it is found nowhere outside our idea). Instead, we must seek the cause in our idea itself, which is a problem admitting no solution, yet which we stubbornly assume has an actual object corresponding to it. A clear exposition of the dialectic lying in our concept itself would soon bring us to complete certainty about what we must judge concerning such a question.

Against your pretext of uncertainty about these problems, we can first pose this question, which at least you must answer clearly: where do you get the ideas whose solution entangles you in such difficulty here? Are they perhaps appearances that you need to explain, for which, according to these ideas, you have only to seek the principles or the rule of their exposition? Assume that nature is wholly revealed before you, that nothing is hidden from your senses and your consciousness of everything presented to your intuition. Even then, through no single experience will you be able to cognize the object of your ideas in concreto.

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(For besides this complete intuition, a completed synthesis and consciousness of its absolute totality are also required, which no empirical cognition can provide.) Consequently, your question can by no means be necessary for explaining any appearance that occurs, and thus be assigned, as it were, by the object itself. For the object can never occur to you, since it cannot be given through any possible experience. With all possible perceptions you always remain caught within conditions, whether in space or time, and reach nothing unconditioned from which to determine whether this unconditioned is to be placed in an absolute beginning of synthesis or in an absolute totality of the series without any beginning. The "all" in the empirical sense, however, is always only comparative. The absolute all of magnitude (the universe), of division, of derivation, of the condition of existence in general, together with all questions whether it can be achieved through a finite synthesis or one continued to infinity, has nothing to do with any possible experience. You could not, for example, explain the appearances of a body in the least better, or even differently, whether you assumed that it consisted of simple parts or always and throughout of composite ones; for neither a simple appearance nor an infinite composition can ever occur to you. Appearances require explanation only as far as the conditions of their explanation are given in perception.

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But everything that may ever be given in them, taken together in an absolute whole, is itself a perception. Yet it is precisely this all whose explanation is demanded in the transcendental problems of reason.

Since even the solution of these problems can never occur in experience, you cannot say it is uncertain what should be attributed to the object in this regard. For your object is merely in your brain and cannot be given outside it at all. You therefore have only to ensure agreement with yourself and prevent the amphiboly that turns your idea into a supposed representation of an empirically given object, thus one also cognizable according to laws of experience. The dogmatic solution is therefore not uncertain, but impossible. The critical solution, however, which can be wholly certain, considers the question not objectively at all, but according to the foundation of cognition on which it rests.

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The Antinomy of Pure Reason Section Five Skeptical Representation of the Cosmological Questions through All Four Transcendental Ideas

We would gladly relinquish the demand to have our questions answered dogmatically if we already understood in advance that, whatever the answer, it would only increase our ignorance, plunging us from one incomprehensibility into another, from one obscurity into a still greater one, and perhaps even into contradictions. If our question calls merely for affirmation or denial, it is wise to leave the presumable grounds of the answer aside for the moment and first consider what we would gain if the answer fell on one side, and what if it fell on the opposite side. If it turns out that in both cases the result is sheer meaninglessness (nonsense), we have good grounds for critically examining our question itself and seeing whether it rests on an unfounded presupposition and plays with an idea that reveals its falsity better in application and through its consequences than in its isolated representation.

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This is the great benefit of the skeptical way of treating the questions pure reason addresses to pure reason: with little effort we can rid ourselves of a great mass of dogmatic clutter and put in its place a sober critique that, as a true

Katarktikon, will successfully expel delusion together with its retinue, polymathy.

If, accordingly, I could see in advance of a cosmological idea that, whichever side of the unconditioned in the regressive synthesis of appearances it took, it would be either too great or too small for every concept of the understanding, then I would comprehend that, since this idea concerns only an object of experience that ought to be commensurate with a possible concept of the understanding, it must be entirely empty and meaningless, because the object does not fit it however I try to accommodate it to the idea. This is indeed the case with all world-concepts, which for that very reason entangle reason in an unavoidable antinomy as long as it clings to them. For suppose:

First, that the world has no beginning. Then it is too great for your concept, since this concept, consisting in a successive regression, can never reach the whole elapsed eternity. Suppose it has a beginning: then, in the necessary empirical regression, it is again too small for your concept of the understanding.

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For since the beginning still presupposes a preceding time, it is not yet unconditioned, and the law of the empirical use of the understanding requires you to ask for a still higher temporal condition. The world is thus plainly too small for this law.

The same holds for the two answers to the question of the world's spatial magnitude. For if it is infinite and unbounded, it is too great for every possible empirical concept. If it is finite and bounded, you rightly ask further: what determines this boundary? Empty space is no self-subsisting correlate of things and can be no condition at which you can stop, still less an empirical condition constituting part of a possible experience. (For who can have an experience of the absolutely empty?) But the absolute totality of empirical synthesis always requires the unconditioned to be a concept of experience. Thus a bounded world is too small for your concept.

Second, if every appearance in space (matter) consists of infinitely many parts, the regression of division is always too great for your concept; and if the division of space is to stop anywhere at some member (the simple), then it is too small for the idea of the unconditioned.

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For this member still leaves a regression to further parts contained in it.

Third, suppose you assume that in everything that happens in the world there is nothing but consequence according to laws of nature. Then the causality of the cause is always in turn something that happens, making your regression to a still higher cause, and hence the extension of the series of conditions a parte priori, necessary without end. Mere efficient nature is therefore too great for any of your concepts in the synthesis of events in the world.

If you choose, here and there, events brought about of themselves, hence production from freedom, then the "why" pursues you according to an unavoidable law of nature and forces you to go beyond this point according to the causal law of experience. You find that such a totality of connection is too small for your necessary empirical concept.

Fourth, if you assume an absolutely necessary being (whether the world itself, something in the world, or the cause of the world), you place it in a time infinitely distant from the given point in time, because otherwise it would depend on another and earlier existence. But then this existence is inaccessible to your empirical concept and too great for you ever to reach it through any continued regression.

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But if, in your view, everything belonging to the world (whether as conditioned or as condition) is contingent, then every existence given to you is too small for your concept. For it forces you to keep looking for another existence on which it depends.

In all these cases we have said that the world-idea is either too great or too small for empirical regression, and hence for every possible concept of the understanding. Why did we not express ourselves conversely and say that in the first case the empirical concept is always too small for the idea, and in the second too

great, so that the fault would attach, as it were, to empirical regression, instead of accusing the cosmological idea of departing by excess or deficiency from its aim, namely possible experience? The reason was this. Possible experience alone can give reality to our concepts; without it every concept is only an idea, without truth or relation to an object. Hence the possible empirical concept was the standard by which the idea had to be judged as to whether it was a mere idea and thought-entity, or found its object in the world. For we say something is too great or too small in relation to something else only of what is assumed solely for the sake of that other thing and must be adapted to it.

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Among the playthings of the ancient dialectical schools was this question: if a ball does not pass through a hole, what should we say—is the ball too large or the hole too small? In this case it is immaterial how you choose to express yourself, for you do not know which exists for the sake of the other. By contrast, you will not say that a man is too tall for his coat, but that the coat is too short for the man.

We have therefore at least been led to a well-founded suspicion that cosmological ideas, and with them all the mutually conflicting sophistical assertions, may be based on an empty and merely imagined concept of the way the object of these ideas is given to us. This suspicion can already put us on the right track toward discovering the mirage that has so long led us astray.

The Antinomy of Pure Reason Section Six Transcendental Idealism as the Key to Resolving the Cosmological Dialectic

In the Transcendental Aesthetic we have sufficiently proved that everything intuited in space or time, and thus all objects of an experience possible for us, are nothing but appearances, that is, mere representations.

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As they are represented—as extended beings or series of alterations—they have no existence grounded in themselves outside our thoughts. I call this doctrine transcendental idealism.* The realist in the transcendental sense turns these modifications of our sensibility into things subsisting in themselves, and hence mere representations into things in themselves.

* I have also sometimes called it formal idealism, to distinguish it from material idealism, that is, the ordinary kind, which doubts or denies the existence of external things themselves. In some cases it seems advisable to use this expression rather than the one above, to prevent all misinterpretation.

It would be unjust to attribute to us the long-discredited empirical idealism that assumes space has a reality of its own while denying, or at least doubting, the existence of extended beings in it, and admits no sufficiently demonstrable distinction between dream and truth in this respect. As for the appearances of inner sense in time, it finds no difficulty in accepting them as actual things; indeed, it even maintains that this inner experience alone sufficiently proves the actual existence of its object (in itself), (with all this temporal determination).

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Our transcendental idealism, by contrast, allows that objects of outer intuition are actual just as they are intuited in space, and all alterations in time just as inner sense represents them. For since space is already a form of the intuition we call outer, and without objects in it there would be no empirical representation at all, we can and must assume extended beings in it as actual; the same holds for time. But space itself, together with this time and, along with both, all appearances, are nevertheless not things in themselves, but nothing but representations, and cannot exist outside our mind at all. Even the inner sensible intuition of our mind (as an object of consciousness), whose determination is represented through the succession of different states in time, is not the proper self as it exists in itself, or the transcendental subject, but only an appearance given to the sensibility of this being unknown to us. The existence of this inner appearance as a thing existing in itself in this way cannot be admitted, because its condition is time, which cannot be a determination of any thing in itself. In space and time, however, the empirical truth of appearances is sufficiently secured.

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It is adequately distinguished from affinity with dreams if both are correctly and thoroughly connected in one experience according to empirical laws.

Accordingly, objects of experience are never given in themselves, but only in experience, and do not exist outside it at all. That there could be inhabitants on the moon, although no human being has ever perceived them, must certainly be admitted; but this means only that we could encounter them in the possible advance of experience. For everything is actual that stands in a context with a perception according to laws of empirical progression. Thus they are actual if they stand in an empirical connection with my actual consciousness, although they are not therefore actual in themselves, that is, outside this advance of experience.

Nothing is actually given to us but perception and the empirical advance from it to other possible perceptions. For appearances in themselves, as mere representations, are actual only in perception, which is in fact nothing other than the actuality of an empirical representation, that is, appearance. To call an appearance an actual thing prior to perception means either that in the advance of experience we must encounter such a perception, or it has no meaning at all. For we could certainly say that it exists in itself, without relation to our senses and possible experience, if we were speaking of a thing in itself.

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But we are speaking only of an appearance in space and time, neither of which is a determination of things in themselves, but only of our sensibility. Hence what is in them (appearances) is not something in itself, but mere representations, which, unless given in us (in perception), are found nowhere at all.

The faculty of sensible intuition is properly only a receptivity for being affected in a certain way by representations. Their relation to one another is a pure intuition of space and time (mere forms of our sensibility), and insofar as they are connected and determinable in this relation (space and time) according to laws of the unity of experience, they are called objects. The nonsensible cause of these representations is entirely unknown to us, and we therefore cannot intuit it as an object; for such an object would have to be represented neither in space nor in time (as mere conditions of sensible representation), without which conditions we cannot think any intuition at all. Yet we can call the merely intelligible cause of appearances in general the transcendental object, simply so that we

have something corresponding to sensibility as a receptivity. To this transcendental object we can ascribe the whole extent and connection of our possible perceptions.

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We can say that it is given in itself prior to all experience. But in conformity with it, appearances are given not in themselves but only in this experience, because they are mere representations that signify an actual object only as perceptions, namely when this perception is connected with all others according to the rules of the unity of experience. Thus we can say that actual things of past time are given in the transcendental object of experience; but for me they are objects and actual in past time only insofar as I represent that a regressive series of possible perceptions (whether along the guiding thread of history or in the traces of causes and effects), according to empirical laws—in a word, the course of the world—leads to an elapsed temporal series as the condition of the present time. That series is then represented as actual only in the connection of a possible experience, not in itself. Thus all events that have elapsed from time immemorial before my existence signify nothing but the possibility of extending the chain of experience upward from present perception to the conditions determining it in time.

If, accordingly, I represent to myself all existing objects of the senses collectively in all time and all spaces, I do not place them in these prior to experience.

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Rather, this representation is nothing other than the thought of a possible experience in its absolute completeness. In it alone are those objects (which are nothing but mere representations) given. To say that they exist prior to all my experience means only that they are to be found in the part of experience to which I must first advance, beginning from perception. The cause of the empirical conditions of this advance, and hence which members, or how far, I can encounter in such a regression, is transcendental and therefore necessarily unknown to me. But this is not at issue; only the rule of the advance of experience is, in which objects, namely appearances, are given to me. The outcome is exactly the same whether I say that in an empirical advance through space I

could encounter stars a hundred times farther away than the most distant ones I see, or say that perhaps such stars are to be found in cosmic space, although no human being has ever perceived or ever will perceive them. For even if they were given as things in themselves, without relation to possible experience generally, they are nothing for me, and hence no objects, except insofar as they are contained in the series of empirical regression. Only in another relation is the distinction significant.

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When these very appearances are to be used for the cosmological idea of an absolute whole, and thus when the question goes beyond the boundaries of possible experience, it matters how we take the actuality of the objects of the senses in question; the distinction then prevents a deceptive delusion that must inevitably arise from misinterpreting our own concepts of experience.

The Antinomy of Pure Reason Section Seven Critical Decision of Reason's Cosmological Dispute with Itself

The entire antinomy of pure reason rests on the dialectical argument: if the conditioned is given, then the whole series of all its conditions is also given; now objects of the senses are given to us as conditioned; consequently, etc. Through this syllogism, whose major premise seems so natural and evident, as many cosmological ideas are introduced as there are different conditions in the synthesis of appearances insofar as these constitute a series. These ideas postulate the absolute totality of those series and thereby inevitably place reason in conflict with itself. But before exposing the deception in this sophistical argument, we must prepare ourselves.

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We must do so by correcting and determining certain concepts occurring in it.

First, the following proposition is clear and indubitably certain: if the conditioned is given, then by that very fact a regression in the series of all its conditions is set as a task for us. For the concept of the conditioned already entails that something is thereby referred to a condition and, if this is in turn conditioned, to a more remote condition, and so through all members of the series. This proposition is therefore analytic and beyond all fear of a transcendental

critique. It is a logical postulate of reason to pursue through the understanding, and continue as far as possible, the connection of a concept with its conditions that already attaches to the concept itself.

Further, if both the conditioned and its condition are things in themselves, then, when the former is given, not merely is regression to the latter assigned as a task; the latter is actually already given along with it. Since this holds for all members of the series, the complete series of conditions, and thus also the unconditioned, is thereby simultaneously given—or rather presupposed, since the conditioned, which was possible only through that series, is given. Here the synthesis of the conditioned with its condition is a synthesis of the mere understanding, which represents things as they are without considering whether and how we can come to know them.

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If, by contrast, I am dealing with appearances, which as mere representations are not given at all unless I come to know them (that is, come to them themselves, for they are nothing but empirical cognitions), then I cannot say in the same sense that if the conditioned is given, all its conditions (as appearances) are also given. Consequently, I can by no means infer the absolute totality of their series. For in apprehension appearances themselves are nothing other than an empirical synthesis (in space and time), and are therefore given only in that synthesis. Now it by no means follows that if the conditioned (in appearance) is given, the synthesis constituting its empirical condition is thereby also given and presupposed. Rather, this synthesis takes place only in the regression, and never without it. But in such a case we can indeed say that a regression to the conditions, that is, a continued empirical synthesis on this side, is commanded or assigned as a task, and that conditions to be given through this regression cannot be lacking.

This shows that the major premise of the cosmological syllogism takes the conditioned in the transcendental sense of a pure category, while the minor premise takes it in the empirical sense of a concept of the understanding applied to mere appearances.

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Consequently, it contains the dialectical deception called Sophisma figurae dictionis. But this deception is not contrived; it is an entirely natural delusion of ordinary reason. For through it we presuppose (in the major premise) the conditions and their series, as it were without looking, whenever something is given as conditioned, because this is nothing other than the logical requirement to assume complete premises for a given conclusion. Here no temporal order is found in the connection of the conditioned with its condition; they are presupposed as given simultaneously in themselves. Further, it is just as natural (in the minor premise) to regard appearances as things in themselves and as objects given to the mere understanding, just as occurred in the major premise, where I abstracted from all conditions of intuition under which alone objects can be given. But here we overlooked a remarkable difference between the concepts. The synthesis of the conditioned with its condition and the whole series of the latter (in the major premise) carried no limitation through time and no concept of succession. Empirical synthesis and the series of conditions in appearance (subsumed in the minor premise), by contrast, are necessarily successive and given only one after another in time. Consequently, I could not presuppose here, as I could there, the absolute totality of synthesis and of the series represented through it.

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For there all members of the series are given in themselves (without a temporal condition), whereas here they are possible only through successive regression, which is given only by actually carrying it out.

Once such a misstep has been demonstrated in the argument that serves as their common basis (for cosmological assertions), both contending parties can rightly be dismissed as grounding their demand on no sound title. But their dispute is not thereby ended in the sense that they, or one of them, have been proved wrong about the matter itself they assert (in the conclusion), even if they did not know how to build it on sound grounds of proof. Nothing seems clearer than that of two people, one asserting that the world has a beginning, the other that it has no beginning but has existed from eternity, one must be right. But if this is so, then, since the clarity is equal on both sides, it is impossi-

ble ever to determine which side is right, and the dispute continues as before, even though the parties have been ordered to keep the peace before the tribunal of reason. Thus no means remains of ending the dispute thoroughly and to the satisfaction of both sides except that, since they can refute one another so well, they should finally be convinced that they are disputing about nothing.

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They should be convinced, too, that a certain transcendental illusion has painted an actuality for them where none is to be found.

We will now take this path toward settling a dispute that cannot be adjudicated.

* * *

Zeno of Elea, a subtle dialectician, was already severely censured by Plato as a willful sophist for trying, to display his skill, to prove one and the same proposition through plausible arguments and soon afterward overturn it through others equally strong. He asserted that God (by which he presumably meant nothing but the world) is neither finite nor infinite, neither in motion nor at rest, neither similar nor dissimilar to any other thing. Those who judged him on this thought he meant to deny two mutually contradictory propositions entirely, which is absurd. But I do not find that this charge can rightly be brought against him. I will shortly examine the first of these propositions more closely. As for the others, if by "God" he understood the universe, then he certainly had to say that it neither remains persistently present in its place (at rest) nor changes its place (moves), because all places are only in the universe, which itself is therefore in no place. If the universe contains everything that exists, then in that respect it is also neither similar nor dissimilar to any other thing, because outside it there is no other thing with which it could be compared.

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If two opposed judgments presuppose an inadmissible condition, then despite their conflict (which is nevertheless no genuine contradiction), both fall away, because the condition under which alone either proposition was supposed to hold falls away.

If someone said that every body either smells good or smells not good, a third case is possible: that it has no smell at all (gives off no scent), and thus both conflicting propositions can be false. If I say that it is either fragrant or not fragrant (vel suaveolens vel non suaveolens), the two judgments are contradictorily opposed, and only the first is false; its contradictory opposite, namely that some bodies are not fragrant, also includes bodies that have no smell at all. In the former opposition (per disparata), the contingent condition of the concept of bodies (smell) remained in the conflicting judgment and was not abolished along with it; hence the latter was not the contradictory opposite of the former. Accordingly, if I say that the world is either infinite in space or is not infinite (non est infinitus), then if the former proposition is false, its contradictory opposite, that the world is not infinite, must be true. I would thereby merely abolish an infinite world without positing another, namely a finite one.

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But if the statement were that the world is either infinite or finite (noninfinite), both could be false. For I then regard the world as determined in its magnitude in itself, since in the opposite I do not merely abolish infinity, and with it perhaps the world's entire separate existence, but add a determination to the world as a thing actual in itself. This may equally be false if the world should not be given as a thing in itself at all, and thus not in its magnitude either, whether as infinite or finite. Allow me to call such opposition dialectical, while calling the opposition of contradiction analytical. Thus two dialectically opposed judgments can both be false, because one not only contradicts the other but says more than contradiction requires.

If we regard the two propositions "The world is infinite in magnitude" and "The world is finite in magnitude" as contradictorily opposed, we assume that the world (the entire series of appearances) is a thing in itself. For it remains whether I abolish the infinite or the finite regression in the series of its appearances. But if I remove this presupposition, or this transcendental illusion, and deny that the world is a thing in itself.

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The contradictory conflict of the two assertions then becomes merely dialectical. Since the world does not exist in itself at all (independently of the regressive series of my representations), it exists neither as a whole infinite in itself nor as one finite in itself. It is found only in the empirical regression of the series of appearances, and not at all on its own. Hence, if that series is always conditioned, it is never given in its entirety, and the world is therefore no unconditioned whole, nor does it exist as such, whether with infinite or finite magnitude.

What has been said here of the first cosmological idea, namely the absolute totality of magnitude in appearance, holds also for all the others. The series of conditions is found only in the regressive synthesis itself, not in itself in appearance as an independent thing given prior to all regression. Hence I must also say that the multitude of parts in a given appearance is in itself neither finite nor infinite, because appearance is not something existing in itself, and the parts are given only through and within the regression of decomposing synthesis. This regression is never given absolutely in its entirety, either as finite or as infinite. The same holds for the series of causes ordered one above another, or of conditioned existence up to unconditionally necessary existence.

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This series can never be regarded in its totality as finite or infinite in itself, because as a series of subordinated representations it consists only in the dynamical regression; prior to this, and as a self-subsisting series of things, it cannot exist in itself at all.

Thus the antinomy of pure reason in its cosmological ideas is removed by showing that it is merely dialectical: a conflict of an illusion arising from applying the idea of absolute totality, which holds only as a condition of things in themselves, to appearances. These exist only in representation and, when they constitute a series, in successive regression; otherwise they do not exist at all. Conversely, however, we can also draw a genuine benefit from this antinomy, not dogmatic but nevertheless critical and doctrinal: indirectly proving the transcendental ideality of appearances, should anyone find the direct proof in the Transcendental Aesthetic insufficient. The proof would consist in this

dilemma. If the world is a whole existing in itself, it is either finite or infinite. Now both the former and the latter are false (according to the proofs of the antithesis on the one hand and the thesis on the other, given above).

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Thus it is also false that the world (the sum total of all appearances) is a whole existing in itself. From this it follows that appearances in general are nothing outside our representations, which is precisely what we meant by their transcendental ideality.

This remark is important. It shows that the above proofs of the fourfold antinomy were not deceptions but sound, under the presupposition that appearances, or a sensible world embracing them all, were things in themselves. But the conflict of the propositions inferred from this reveals a falsity in the presupposition, and thereby leads us to discover the true constitution of things as objects of the senses. Transcendental dialectic therefore gives no support whatever to skepticism, but does support the skeptical method, which can display in it an example of its great usefulness. For if we allow reason's arguments to confront one another with the greatest freedom, then although in the end they may not deliver what we sought, they will always deliver something useful and conducive to correcting our judgments.

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The Antinomy of Pure Reason Section Eight The Regulative Principle of Pure Reason with Regard to Cosmological Ideas

Since the cosmological principle of totality gives no maximum of the series of conditions in a sensible world as a thing in itself, but can only assign it as a task in the regression through that series, the stated principle of pure reason, in its meaning thus corrected, still retains its full validity. It does so not as an axiom for thinking totality as actual in the object, but as a problem for the understanding, hence for the subject, to undertake and continue the regression in the series of conditions for a given conditioned in conformity with completeness in the idea. For in sensibility, that is, in space and time, every condition we can reach in expounding given appearances is itself conditioned, because these are not objects in themselves, in which the absolutely unconditioned might per-

haps occur, but merely empirical representations that must always find their condition in intuition, determining them in space or time. The principle of reason is therefore properly only a rule that commands a regression in the series of conditions of given appearances.

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This regression is never permitted to stop at something absolutely unconditioned. Thus it is no principle of the possibility of experience and of empirical cognition of objects of the senses, and hence no principle of the understanding; for every experience is enclosed within its boundaries (according to the given intuition). Nor is it a constitutive principle of reason for extending the concept of the sensible world beyond all possible experience. Rather, it is a principle of the greatest possible continuation and extension of experience, according to which no empirical boundary must count as an absolute boundary. It is therefore a principle of reason that, as a rule, postulates what we are to do in the regression, and does not anticipate what is given in itself in the object prior to all regression. Hence I call it a regulative principle of reason. By contrast, the principle of the absolute totality of the series of conditions as given in itself in the object (appearances) would be a constitutive cosmological principle. Through this very distinction I have sought to indicate its nullity, and thereby to prevent what otherwise inevitably happens (through transcendental subreption): attributing objective reality to an idea that serves merely as a rule.

To determine the meaning of this rule of pure reason properly, we must first note the following.

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It cannot say what the object is, but how the empirical regression is to be undertaken in order to arrive at the complete concept of the object. For if the former occurred, it would be a constitutive principle, such as can never be possible from pure reason. Thus we can by no means intend to say through it that the series of conditions for a given conditioned is in itself finite or infinite. For then a mere idea of absolute totality, created solely within itself, would think an object that can be given in no experience, by conferring on a series of appearances an objective reality independent of empirical synthesis. The idea of rea-

son will therefore prescribe only a rule to regressive synthesis in the series of conditions, according to which it proceeds from the conditioned through all subordinated conditions to the unconditioned, although the latter is never reached. For the absolutely unconditioned is not found in experience at all.

For this purpose we must first determine precisely the synthesis of a series insofar as it is never complete. Two expressions are commonly used here, supposedly to distinguish something in it, though no one quite knows how to specify the ground of the distinction. Mathematicians speak solely of a progressus in infinitum.

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Those who investigate concepts (philosophers) would allow instead only the expression of a progressus in indefinitum. Without pausing to examine the scruple that recommended such a distinction to them, or its useful or fruitless employment, I will try to determine these concepts precisely in relation to my purpose.

We can rightly say of a straight line that it can be extended to infinity; here the distinction between infinite and indefinitely far progression (progressus in indefinitum) would be an empty subtlety. Admittedly, if the instruction is "Extend a line," it is more correct to add in indefinitum than to say in infinitum: the former means no more than "Extend it as far as you wish," the latter "You must never stop extending it" (which is not the intention here). But when the question concerns only what can be done, the former expression is entirely correct; for you can keep making it greater to infinity. The same holds in all cases where we speak only of progression, that is, of proceeding from the condition to the conditioned: this possible advance in the series of appearances goes to infinity. From a pair of parents you can proceed without end in the descending line of generation, and can quite well think that it actually proceeds in this way in the world.

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For here reason never needs absolute totality of the series, since it does not presuppose this as a condition and as given (datum), but only as something conditioned that can be given (dabile) and is added without end.

The matter is quite different with the problem of how far the regression ascending from the given conditioned to the conditions in a series extends: whether I can say it is a regression to infinity, or only one extending indefinitely far (in indefinitum); and thus whether I can ascend to infinity from the people now living in the series of their ancestors, or whether we can say only that, however far I have gone back, no empirical ground is ever found for regarding the series as bounded anywhere, so that I am entitled and at the same time obliged to seek a further forebear for each ancestor, although not actually to presuppose one.

Accordingly, I say: if the whole has been given in empirical intuition, regression in the series of its inner conditions proceeds to infinity. But if only one member of the series is given, from which regression is first to proceed toward absolute totality, then only a regression in an indeterminate manner (in indefinitum) takes place.

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Thus of the division of a matter (a body) given within its boundaries, we must say that it proceeds to infinity. For this matter is given as a whole, and consequently with all its possible parts, in empirical intuition. Now since the condition of this whole is its part, and the condition of this part the part of that part, and so on, and since in this regression of decomposition no unconditioned (indivisible) member of this series of conditions is ever encountered, not only is there nowhere any empirical ground for stopping the division, but the further members of the division to be continued are themselves empirically given even before that further division: that is, the division proceeds to infinity. By contrast, the series of ancestors of a given person is given in its absolute totality in no possible experience; yet regression proceeds from each member of this generation to a higher one, so that no empirical boundary is found presenting a member as absolutely unconditioned. But since the members that could supply the condition are not already present in the empirical intuition of the whole before the regression, this regression proceeds not to infinity (in dividing what is given), but indefinitely far in seeking further members for the given ones, which are themselves always given only as conditioned.

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In neither of the two cases, the regressus in infinitum as well as that in indefinitum, is the series of conditions regarded as given as infinite in the object. They are not things given in themselves, but only appearances given, as conditions of one another, solely in the regression itself. Thus the question is no longer how great this series of conditions is in itself, whether finite or infinite—for it is nothing in itself—but how we should undertake empirical regression and how far we should continue it. And here there is a significant difference in the rule for this advance. If the whole has been empirically given, it is possible to regress to infinity in the series of its inner conditions. But if the whole is not given and is first to be given through empirical regression, I can say only that it is infinitely possible to proceed to still higher conditions of the series. In the first case I could say that there are always more members present and empirically given than I reach through the regression (of decomposition); in the second, that I can always go further in regression, because no member is empirically given as absolutely unconditioned, and thus it always admits a still higher member as possible and hence the search for it as necessary. There it was necessary to encounter more members of the series; here it is always necessary to inquire after more, because no experience sets an absolute boundary.

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For either you have no perception that absolutely bounds your empirical regression, in which case you must not regard your regression as completed; or you have a perception bounding your series, in which case it cannot be part of the series you have traversed (because what bounds must be distinct from what it bounds), and you must therefore continue your regression to this condition as well, and so onward.

The following section will put these remarks in their proper light through their application.

The Antinomy of Pure Reason Section Nine The Empirical Use of the Regulative Principle of Reason with Regard to All Cosmological Ideas

As we have repeatedly shown, there is no transcendental use either of pure concepts of the understanding or of concepts of reason. The absolute totality of the series of conditions in the sensible world rests solely on a transcendental use of reason, which demands this unconditioned completeness of what it presupposes as a thing in itself; but the sensible world contains no such thing.

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Hence the issue can no longer be the absolute magnitude of the series in it, whether bounded or unbounded in themselves, but only how far we should go back in empirical regression, tracing experience to its conditions, so that, according to reason's rule, we stop only at an answer to its questions commensurate with the object.

Thus all that remains to us is the validity of reason's principle as a rule for the continuation and magnitude of a possible experience, after its invalidity as a constitutive principle of appearances in themselves has been sufficiently demonstrated. If we can exhibit that validity beyond doubt, reason's dispute with itself will also be wholly ended. For not only will critical resolution have removed the illusion that divided reason against itself; in its place, the meaning in which reason agrees with itself, whose misinterpretation alone occasioned the dispute, will be disclosed, and an otherwise dialectical principle transformed into a doctrinal one. Indeed, suppose this principle can be vindicated in its subjective meaning—determining the greatest possible use of the understanding in experience in conformity with its objects.

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Then it is precisely as much as if it determined objects in themselves a priori like an axiom (which is impossible from pure reason). For even this could have no greater influence on extending and correcting our cognition of objects of experience than proving itself active in the most extensive experiential use of our understanding.

I. Resolution of the Cosmological Idea of the Totality of the Composition of Appearances of a World-Whole

Here, as with the other cosmological questions, the ground of reason's regulative principle is the proposition that in empirical regression no experience of an absolute boundary can be found, and hence of no condition as empirically absolutely unconditioned. The reason is that such an experience would have to contain a bounding of appearances by nothing, or by the void, which continued regression could encounter through a perception. This is impossible.

Now this proposition amounts to saying that in empirical regression I always reach only a condition.

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That condition must itself in turn be regarded as empirically conditioned. The proposition thus contains the rule in terminis that, however far I may have come in the ascending series, I must always inquire after a higher member of the series, whether or not it becomes known to me through experience.

Nothing further is now needed to resolve the first cosmological problem except to determine whether, in regression toward the unconditioned magnitude of the world-whole (in time and space), this never-bounded ascent can be called a regression to infinity, or only an indefinitely continued regression (in indefinitum).

The mere general representation of the series of all past states of the world, and likewise of the things simultaneously present in cosmic space, is itself nothing other than a possible empirical regression that I think, though still indeterminately, and through which alone the concept of such a series of conditions for the given perception can arise*.

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Now I always have the world-whole only in a concept, never in intuition (as a whole). Thus I cannot infer from its magnitude the magnitude of the regression and determine the latter according to the former; rather, I must first form a concept of the world's magnitude through the magnitude of empirical regression. But of this regression I never know more than that from every given member of the series of conditions I must always proceed empirically to a higher (more remote) member. Thus the magnitude of the whole of appearances is not thereby determined absolutely at all. Consequently, we also cannot say that

this regression proceeds to infinity, because this would anticipate the members the regression has not yet reached and represent their multitude as so great that no empirical synthesis can reach it. It would therefore determine the world's magnitude before the regression (even if only negatively), which is impossible. For this is given to me through no intuition (in its totality), and hence its magnitude too is not given at all before the regression. Accordingly, we can say nothing whatever about the world's magnitude in itself, not even that a regressus in infinitum takes place within it; we must seek the concept of its magnitude only according to the rule determining empirical regression in it. But this rule says no more than that, however far we may have come in the series of empirical conditions, we should nowhere assume an absolute boundary.

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Rather, we must subordinate every appearance, as conditioned, to another as its condition, and thus proceed further to it. This is the regressus in indefinitum, which, because it determines no magnitude in the object, can be distinguished clearly enough from that in infinitum.

* This world-series can therefore be neither greater nor smaller than the possible empirical regression on which alone its concept rests. And since this can yield neither a determinate infinite nor a determinate finite (something absolutely bounded), it is clear that we can assume the world's magnitude neither as finite nor as infinite, because the regression (through which it is represented) admits neither.

Accordingly, I cannot say that the world is infinite in past time or in space. For such a concept of magnitude as a given infinity is absolutely impossible empirically, and hence also with regard to the world as an object of the senses. Nor will I say that regression from a given perception to everything that bounds it in a series, both in space and in past time, proceeds to infinity; for this presupposes the world's infinite magnitude. Nor will I say that it is finite, for an absolute boundary is likewise empirically impossible. Thus I will be able to say nothing about the entire object of experience (the sensible world), but only about the rule according to which experience should be undertaken and continued in conformity with its object.

To the cosmological question concerning the world's magnitude, then, the first and negative answer is: the world has no first beginning in time and no outermost boundary in space.

For in the opposite case it would be bounded by empty time on the one hand and empty space on the other.

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Since, as appearance, it can be neither of these in itself—for appearance is no thing in itself—a perception of its bounding by absolutely empty time or empty space would have to be possible, through which these ends of the world would be given in a possible experience. But such an experience, as wholly empty of content, is impossible. Thus an absolute boundary of the world is empirically, and hence absolutely, impossible*.

* It will be noticed that the proof here has been conducted in an entirely different way from the dogmatic proof above in the antithesis of the first antinomy. There we allowed the sensible world, according to the ordinary and dogmatic manner of representation, to count as a thing given in itself in its totality prior to all regression; and if it did not occupy all time and all spaces, we denied it any determinate position in either at all. Hence the inference was also different from the present one: we inferred its actual infinity.

From this follows at the same time the affirmative answer: regression in the series of appearances of the world, as a determination of the world's magnitude, proceeds in indefinitum. This amounts to saying that the sensible world has no absolute magnitude, but empirical regression (through which alone it can be given on the side of its conditions) has its rule. From every member of the series, as conditioned, it must always proceed to a still more remote one.

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It must do so whether through one's own experience, or the guiding thread of history, or the chain of effects and their causes, and must nowhere exempt itself from extending the possible empirical use of one's understanding. This is, indeed, reason's proper and sole business with its principles.

This prescribes no determinate empirical regression proceeding incessantly within a particular kind of appearances—for example, that from a living person we must always ascend in a series of ancestors without expecting a first pair, or in the series of celestial bodies without admitting an outermost sun. Rather, it commands only progression from appearances to appearances, even if these yield no actual perception (when they are too weak in degree for our consciousness to become experience), because they nevertheless belong to possible experience.

Every beginning is in time, and every boundary of the extended is in space. But space and time are only in the sensible world. Consequently, only appearances in the world are bounded conditionally; the world itself is bounded neither conditionally nor unconditionally.

For this very reason, and because the world can never be given in its entirety, nor even the series of conditions for a given conditioned as a world-series, the concept of the world's magnitude is given only through regression, not prior to it in a collective intuition.

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But regression always consists only in determining magnitude, and therefore yields no determinate concept, nor any concept of a magnitude infinite in relation to a certain measure. It thus proceeds not to infinity (as though already given), but indefinitely far, in order to yield a magnitude (of experience) that first becomes actual through this regression.

II. Resolution of the Cosmological Idea of the Totality of the Division of a Given Whole in Intuition

When I divide a whole given in intuition, I proceed from a conditioned to the conditions of its possibility. The division of the parts (subdivisio or decompositio) is a regression in the series of these conditions. The absolute totality of this series would be given only if the regression could reach simple parts. But if, in a continuously proceeding decomposition, all parts are always divisible in turn, then division—that is, regression from the conditioned to its conditions—pro-

ceeds in infinitum, because the conditions (the parts) are contained in the conditioned itself and, since the latter is given in its entirety in an intuition enclosed within its boundaries, are all given along with it.

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Regression must therefore not be called merely a regression in indefinitum, as the preceding cosmological idea alone allowed, where I was to proceed from the conditioned to its conditions outside it, which were consequently not thereby given along with it but were first added in empirical regression. Despite this, we are by no means permitted to say of such an infinitely divisible whole that it consists of infinitely many parts. For although all parts are contained in the intuition of the whole, the entire division is not contained in it: this consists only in the continuing decomposition, or regression itself, which first makes the series actual. Since this regression is infinite, all members (parts) it reaches are indeed contained in the given whole as aggregates, but not the entire series of division, which is successively infinite and never entire, and therefore can represent neither an infinite multitude nor its collection in a whole.

This general reminder is first very easily applied to space. Every space intuited within its boundaries is such a whole, whose parts, throughout all decomposition, are always spaces in turn, and it is therefore divisible to infinity.

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From this follows quite naturally the second application, to an outer appearance enclosed within its boundaries (a body). Its divisibility rests on the divisibility of space, which constitutes the possibility of the body as an extended whole. The body is therefore divisible to infinity, without thereby consisting of infinitely many parts.

It admittedly seems that, since a body must be represented as substance in space, it will differ from space with regard to the law of divisibility. For we can perhaps concede that decomposition in space can never remove all composition, since then even all space, which otherwise has nothing self-subsisting, would cease (which is impossible). But that, if all composition of matter were abolished in thought, nothing at all should remain seems irreconcilable with the concept of a substance, which should properly be the subject of all compo-

sition and would have to remain in its elements even if their connection in space, through which they constitute a body, were abolished. But what is called substance in appearance is not constituted as we might think a thing in itself through a pure concept of the understanding. It is not an absolute subject.

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It is an enduring image of sensibility and nothing but intuition, in which nothing unconditioned is found anywhere.

Although this rule of progression to infinity undoubtedly holds in subdividing an appearance as a mere filling of space, it cannot hold if we also wish to extend it to the multitude of parts already separated in a certain way within the given whole, thereby constituting a quantum discretum. We cannot think that in every articulated (organized) whole each part is itself articulated, and that in this way, in analyzing the parts to infinity, we always encounter new artfully formed parts—in a word, that the whole is articulated to infinity—although we can indeed think that the parts of matter could be articulated in its decomposition to infinity. For the infinity of the division of a given appearance in space rests solely on the fact that this appearance gives only divisibility, that is, a multitude of parts absolutely indeterminate in itself, while the parts themselves are given and determined only through subdivision: in short, the whole is not already divided in itself. Hence division can determine a multitude in it extending as far as we wish to proceed in the regression of division.

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By contrast, in an organic body articulated to infinity, the whole is represented through this very concept as already divided, and a multitude of parts determinate in itself but infinite is found in it prior to all regression of division, whereby one contradicts oneself, since this infinite unfolding is regarded as a series that can never be completed (infinite), yet also as completed in a collection. Infinite division designates only appearance as quantum continuum and is inseparable from the filling of space, because in that filling lies the ground of infinite divisibility. But as soon as something is assumed as quantum discretum, the multitude of units in it is determined, and hence always equal to a number. Thus how far organization may extend in an articulated body can be deter-

mined only by experience; and even if experience never reached an inorganic part with certainty, such parts must nevertheless lie at least in possible experience. But how far the transcendental division of an appearance in general extends is no matter of experience at all. It is a principle of reason never to regard empirical regression in decomposing the extended as absolutely completed, in conformity with the nature of this appearance.

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Concluding Remark on the Resolution of the Mathematical-Transcendental Ideas, and Preliminary Reminder Concerning the Resolution of the Dynamical-Transcendental Ideas

When we presented the antinomy of pure reason through all transcendental ideas in a table, indicating the ground of this conflict and the only means of removing it—declaring both opposed assertions false—we everywhere represented conditions as belonging to their conditioned according to relations of space and time. This is the usual presupposition of ordinary human understanding, on which that conflict entirely rested. In this respect, all dialectical representations of totality in the series of conditions for a given conditioned were also thoroughly of the same kind. There was always a series in which condition and conditioned were connected as its members and were thereby homogeneous; hence regression could never be thought as completed, or, if it were to be so thought, an intrinsically conditioned member would have to be falsely assumed as first, and thus as unconditioned. Thus, although not everywhere the object, that is, the conditioned, was considered merely in its magnitude, the series of its conditions was.

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The difficulty, which could be removed not by any compromise but only by cutting the knot entirely, was that reason made the series either too long or too short for the understanding, so that the latter could never match its idea.

But here we overlooked an essential distinction among the objects, that is, the concepts of the understanding, which reason seeks to elevate to ideas. According to our table of categories above, two of them signify a mathematical synthesis of appearances, while the other two signify a dynamical synthesis.

Until now this could quite well be done, since, just as in the general representation of all transcendental ideas we always remained only among conditions in appearance, so too in the two mathematical-transcendental ideas we had no object other than one in appearance. But now, as we proceed to dynamical concepts of the understanding insofar as they are to conform to the idea of reason, that distinction becomes important and opens an entirely new prospect concerning the dispute in which reason is entangled. Previously dismissed as built on false presuppositions on both sides, it may now admit settlement to the satisfaction of both parties from this standpoint.

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Perhaps in the dynamical antinomy such a presupposition occurs that can coexist with reason's claim, while the judge supplies the deficiency in legal grounds that both sides had misunderstood. This could not be done in the dispute of the mathematical antinomy.

The series of conditions are indeed all homogeneous insofar as we consider only their extent: whether they conform to the idea, or whether the idea is too great or too small for them. But the concept of the understanding underlying these ideas contains either solely a synthesis of the homogeneous (which is presupposed in every magnitude, both in its composition and in its division), or also a synthesis of the heterogeneous, which can at least be admitted in dynamical synthesis, both in causal combination and in the combination of the necessary with the contingent.

Thus, in the mathematical connection of series of appearances, no condition can enter except a sensible one, that is, one that is itself part of the series. The dynamical series of sensible conditions, by contrast, still admits a heterogeneous condition that is not part of the series but, as merely intelligible, lies outside it.

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This satisfies reason and places the unconditioned before appearances without thereby confusing their series, which is always conditioned, or breaking it off contrary to principles of the understanding.

Now because dynamical ideas admit a condition of appearances outside their series, that is, one that is not itself appearance, something occurs wholly different from the outcome of the antinomy. The antinomy required both dialectical counterassertions to be declared false. By contrast, the thoroughly conditioned character of dynamical series, inseparable from them as appearances, connected with a condition that is empirically unconditioned but also nonsensible, can satisfy the understanding on the one hand and reason on the other.* The dialectical arguments that sought unconditioned totality in mere appearances in one way or another fall away.

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The propositions of reason, by contrast, can both be true in their meaning corrected in this way. This can never occur with cosmological ideas concerning merely mathematically unconditioned unity, because in them no condition of the series of appearances is found except one that is itself appearance and, as such, also constitutes a member of the series.

* For the understanding allows no condition among appearances that would itself be empirically unconditioned. But if an intelligible condition, thus one not belonging to the series of appearances as a member, could be thought for a conditioned (in appearance) without in the least interrupting the series of empirical conditions, then such a condition could be admitted as empirically unconditioned, so that continuous empirical regression would nowhere be impaired.

III. Resolution of the Cosmological Ideas of the Totality of the Derivation of Events in the World from Their Causes

With regard to what happens, we can think only two kinds of causality: according to nature or from freedom. The first is the connection of a state with a preceding one in the sensible world, on which it follows according to a rule. Now since the causality of appearances rests on temporal conditions, and the preceding state, if it had always existed, would also have produced no effect first arising in time, the causality of the cause of what happens or arises has itself also arisen and, according to the principle of the understanding, itself requires a cause in turn.

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By freedom in the cosmological sense, by contrast, I understand the power to begin a state of itself, whose causality therefore does not in turn stand under another cause determining it in time according to the law of nature. Freedom in this sense is a pure transcendental idea, which, first, contains nothing borrowed from experience and, second, has an object that also cannot be given determinately in any experience. For it is a universal law, even of the possibility of all experience, that everything that happens must have a cause; hence the causality of the cause, which itself has happened or arisen, must in turn have a cause. Thereby the whole field of experience, however far it may extend, is transformed into a sum total of mere nature. But since in this way no absolute totality of conditions in the causal relation can be obtained, reason creates for itself the idea of a spontaneity that can begin to act of itself, without another cause being permitted to be placed before it to determine it in turn to action according to the law of causal connection.

It is exceedingly noteworthy that the practical concept of freedom is grounded on this transcendental idea, and that the latter constitutes in it the real source of the difficulties that have always surrounded the question of its possibility.

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Freedom in the practical sense is the independence of choice from compulsion by impulses of sensibility. For a power of choice is sensible insofar as it is pathologically affected (through motives of sensibility); it is called animal (arbitrium brutum) if it can be pathologically necessitated. Human choice is indeed an arbitrium sensitivum, but not brutum, rather liberum, because sensibility does not necessitate its action, and the human being possesses a power to determine himself of himself, independently of compulsion by sensible impulses.

It is easy to see that if all causality in the sensible world were mere nature, every event would be determined by another in time according to necessary laws. Consequently, since appearances, insofar as they determine choice, would have to necessitate every action as their natural consequence, abolishing transcendental freedom would also annihilate all practical freedom. For the latter presupposes that although something did not happen, it nevertheless ought to

have happened, and hence its cause in appearance was not so determining as to exclude a causality in our choice independent of those natural causes, capable even against their power and influence of producing something determined in the temporal order according to empirical laws, and thus of beginning a series of events entirely of itself.

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What occurs here, then, is what we find generally in the conflict of a reason venturing beyond the boundaries of possible experience: the problem is properly not physiological, but transcendental. Hence the question of the possibility of freedom does indeed trouble psychology, but because it rests on dialectical arguments of merely pure reason, it must, together with its solution, occupy transcendental philosophy alone. To enable that philosophy—which cannot decline to give a satisfactory answer—to address it, I must first try to determine its procedure in this problem more closely through a remark.

If appearances were things in themselves, and hence space and time forms of the existence of things in themselves, the conditions would always belong with the conditioned as members of one and the same series. From this there would arise in the present case, too, the antinomy common to all transcendental ideas: this series would inevitably turn out too great or too small for the understanding. But the dynamical concepts of reason with which we are concerned in this and the following subsection have this peculiarity: since they concern not an object considered as magnitude but only its existence, we can also abstract from the magnitude of the series of conditions.

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What matters in them is solely the dynamical relation of condition to conditioned. Thus in the question of nature and freedom we already encounter the difficulty whether freedom is possible at all and, if it is, whether it can coexist with the universality of the natural law of causality; hence whether it is a correctly disjunctive proposition that every effect in the world must arise either from nature or from freedom, or whether both might instead occur simultaneously in different relations in one and the same event. The correctness of the principle of the thoroughgoing connection of all events in the sensible world

according to immutable laws of nature is already established as a principle of the Transcendental Analytic and admits no impairment. The only question, then, is whether, despite this, freedom may also occur with regard to the very same effect determined according to nature, or whether that inviolable rule wholly excludes it. Here the common but deceptive presupposition of the absolute reality of appearances at once shows its harmful influence in confusing reason. For if appearances are things in themselves, freedom cannot be saved. Nature is then the complete and intrinsically sufficient determining cause of every event, and its condition is always contained only in the series of appearances, which, together with their effect, are necessary under every law of nature.
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If, by contrast, appearances count as no more than they actually are—not things in themselves, but mere representations connected according to empirical laws—then they must themselves still have grounds that are not appearances. But such an intelligible cause is not determined in its causality by appearances, although its effects appear and can thus be determined by other appearances. It therefore stands, together with its causality, outside the series, while its effects are found in the series of empirical conditions. The effect can thus be regarded as free in relation to its intelligible cause, and yet at the same time, in relation to appearances, as a consequence of them according to the necessity of nature. This distinction must seem extremely subtle and obscure when presented generally and quite abstractly, but it will become clear in application. Here I wished only to note that, since the thoroughgoing connection of all appearances in a context of nature is an indispensable law, it would necessarily overthrow all freedom if we stubbornly clung to the reality of appearances. Hence those who follow the common opinion here have never been able to reconcile nature and freedom.
[B 566]
The Possibility of Causality through Freedom in Union with the Universal Law of Natural Necessity

I call that in an object of the senses which is not itself appearance intelligible. Accordingly, if what must be regarded as appearance in the sensible world also has in itself a power that is no object of sensible intuition, but through which it can nevertheless be the cause of appearances, then the causality of this being can be considered from two sides: as intelligible in its action as a thing in itself, and as sensible in its effects as an appearance in the sensible world. We would accordingly form both an empirical and an intellectual concept of the causality of such a subject's power, both occurring together in one and the same effect. Thinking the power of an object of the senses from such a twofold aspect contradicts none of the concepts we must form of appearances and of a possible experience. For appearances, being no things in themselves, must have underlying them a transcendental object that determines them as mere representations.
[B 567]

Nothing therefore prevents us from attributing to this transcendental object, besides the property through which it appears, a causality that is not appearance, although its effect is nevertheless found in appearance. But every efficient cause must have a character, that is, a law of its causality, without which it would not be a cause at all. Thus in a subject of the sensible world we would have, first, an empirical character through which its actions, as appearances, would be thoroughly connected with other appearances according to constant laws of nature and could be derived from them as their conditions. Combined with these, they would therefore constitute members of a single series in the natural order. Second, we would also have to grant it an intelligible character, through which it is indeed the cause of those actions as appearances, but which itself stands under no conditions of sensibility and is not itself appearance. We could also call the former the character of such a thing in appearance, the latter the character of the thing in itself.

Now this acting subject, according to its intelligible character, would stand under no temporal conditions, for time is only the condition of appearances, not of things in themselves. In it no action would arise or pass away.
[B 568]

Hence it would also not be subject to the law of all temporal determination, of everything alterable: that everything that happens finds its cause in appearances (of the preceding state). In a word, its causality, insofar as it is intellectual, would not stand at all in the series of empirical conditions that necessitate the event in the sensible world. This intelligible character could indeed never be known immediately, because we can perceive nothing except insofar as it appears; but it would nevertheless have to be thought in conformity with the empirical character, just as we must generally think a transcendental object as underlying appearances, although we know nothing of what it is in itself.

According to its empirical character, then, this subject as appearance would be subject to all laws of determination through causal combination, and to that extent would be nothing but a part of the sensible world whose effects, like every other appearance, flowed inevitably from nature. Once we knew through experience how outer appearances influenced it and what its empirical character—that is, the law of its causality—was, all its actions would have to be explicable according to laws of nature, and all requirements for their complete and necessary determination would have to be found in a possible experience.

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But according to its intelligible character (of which we can have nothing but its general concept), that same subject would nevertheless have to be declared free from all influence of sensibility and determination through appearances. And since in it, insofar as it is a noumenon, nothing happens—no alteration requiring dynamical temporal determination, and hence no connection with appearances as causes is found—this active being would to that extent be independent and free in its actions from all natural necessity, which is found solely in the sensible world. We would say of it quite correctly that it begins its effects in the sensible world of itself, without the action beginning in itself. This would hold without the effects in the sensible world therefore being allowed to begin of themselves, because in that world they are always predetermined through empirical conditions in the preceding time, though only by means of the empirical character (which is merely the appearance of the intelligible character), and are possible only as a continuation of the series of natural causes. Thus

freedom and nature, each in its full meaning, would be found simultaneously and without any conflict in the very same actions, according as we compare them with their intelligible or sensible cause.

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Elucidation of the Cosmological Idea of Freedom in Combination with Universal Natural Necessity

I thought it advisable first to sketch the outline of the solution to our transcendental problem, so that the course of reason in solving it might be more easily surveyed. We will now set out the factors on which its decision properly depends and consider each separately.

The law of nature states that everything that happens has a cause; that the causality of this cause, that is, the action, since it precedes in time and, in view of an effect that has arisen, cannot itself always have existed but must have happened, also has its cause among appearances through which it is determined; and that consequently all events are empirically determined in a natural order. This law, through which alone appearances can constitute a nature and provide objects of an experience, is a law of the understanding that we are permitted under no pretext to depart from, or to exempt any appearance from. Otherwise we would place that appearance outside all possible experience, and would thereby distinguish it from all objects of possible experience.

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It would be made into a mere thought-entity and a fantasy.

Although this presents nothing but a chain of causes that admits no absolute totality in regression to its conditions, this difficulty does not detain us at all; for it has already been removed in the general assessment of reason's antinomy when it seeks the unconditioned in the series of appearances. If we choose to yield to the delusion of transcendental realism, neither nature nor freedom remains. Here the only question is whether, if we acknowledge sheer natural necessity throughout the entire series of all events, it is nevertheless possible to regard the very same event, which on one side is merely a natural effect, on the other as an effect from freedom, or whether there is a direct contradiction between these two kinds of causality.

Among causes in appearance there can certainly be nothing capable of beginning a series absolutely and of itself. Every action as appearance, insofar as it produces an event, is itself an event or occurrence that presupposes another state in which its cause is found. Thus everything that happens is only a continuation of the series, and no beginning occurring of itself is possible within it.
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All actions of natural causes in temporal succession are therefore themselves effects in turn, which likewise presuppose their causes in the temporal series. An original action through which something happens that did not exist before is not to be expected from the causal connection of appearances.
But is it also necessary that, if effects are appearances, the causality of their cause—which is itself also appearance—must be merely empirical? Is it not rather possible that, although every effect in appearance certainly requires a connection with its cause according to laws of empirical causality, this empirical causality itself could nevertheless, without in the least interrupting its connection with natural causes, be an effect of a causality that is not empirical but intelligible? That is, an action original with regard to appearances, of a cause that is therefore to that extent not appearance but intelligible in this power, although in other respects it must be counted wholly as a member of the chain of nature belonging to the sensible world.
We need the proposition of the causality of appearances among one another in order to seek and specify natural conditions—that is, causes in appearance—for natural events. If this is conceded and weakened by no exception, the understanding has everything it can demand.
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In its empirical use it sees nothing but nature in all occurrences, and is entitled to do so. Physical explanations continue their unhindered course. Now it does not impair the understanding in the least—even supposing the assumption were otherwise a mere invention—if we assume that among natural causes there are some possessing a power that is only intelligible, since its determination to action never rests on empirical conditions but on mere grounds of the understanding, provided that the action in appearance arising from this cause

conforms to all laws of empirical causality. For in this way the acting subject, as causa phaenomenon, would be linked with nature in the unbroken dependence of all its actions, and only the phaenomenon of this subject (with all its causality in appearance) would contain certain conditions that, if we wish to ascend from the empirical object to the transcendental one, would have to be regarded as merely intelligible. For if we only follow the rule of nature in whatever may be the cause among appearances, we can remain unconcerned about what ground of these appearances and their connection is thought in the transcendental subject, which is empirically unknown to us. This intelligible ground does not affect empirical questions at all, but perhaps concerns only thinking in the pure understanding.

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Although the effects of this thinking and acting of the pure understanding are found in appearances, they must nevertheless be capable of complete explanation from their cause in appearance according to laws of nature, by following the merely empirical character of that cause as the highest ground of explanation and passing over its intelligible character, the transcendental cause of the former, as entirely unknown, except insofar as it is indicated through the empirical character as its sensible sign. Let us apply this to experience. The human being is one of the appearances of the sensible world, and thus also one of the natural causes whose causality must stand under empirical laws. As such, he must therefore also have an empirical character, like all other natural things. We observe it through the forces and faculties it manifests in its effects. In inanimate nature, or nature animated only in an animal way, we find no ground for thinking any faculty otherwise than as merely sensibly conditioned. But the human being, who otherwise knows the whole of nature solely through the senses, also cognizes himself through mere apperception, and indeed in actions and inner determinations that he cannot count among impressions of the senses at all. He is to himself certainly in one respect a phenomenon, but in another, namely with regard to certain faculties, a merely intelligible object, because their action cannot be counted as belonging to the receptivity of sensibility at all.

[B 575]
We call these faculties understanding and reason; especially the latter is properly and preeminently distinguished from all empirically conditioned forces, since it considers its objects solely according to ideas and determines the understanding accordingly, which then makes an empirical use of its concepts (though these, too, are pure).
That this reason has causality, or at least that we represent such causality in it, is clear from the imperatives we prescribe as rules to the executive forces in all practical matters. The "ought" expresses a kind of necessity and connection with grounds that occurs nowhere else in the whole of nature. Of nature, the understanding can cognize only what is, has been, or will be. It is impossible that something in nature ought to be other than it actually is in all these temporal relations; indeed, if we have only the course of nature before us, the "ought" has no meaning at all. We cannot ask what ought to happen in nature, any more than what properties a circle ought to have, but only what happens in nature or what properties the circle has.
Now this "ought" expresses a possible action whose ground is nothing other than a mere concept; by contrast, the ground of a merely natural action must always be an appearance.
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The action must certainly be possible under natural conditions if the "ought" is directed toward it; but these natural conditions concern not the determination of choice itself, but only its effect and outcome in appearance. However many natural grounds may impel me to will, however many sensible incentives there may be, they cannot produce the "ought," but only a willing that is far from necessary and is always conditioned. Against this, the "ought" pronounced by reason sets measure and goal, indeed prohibition and authority. Whether the object is one of mere sensibility (the agreeable) or of pure reason (the good), reason does not yield to the ground empirically given and does not follow the order of things as they present themselves in appearance. Rather, with complete spontaneity it makes for itself an order of its own according to ideas, into which it fits empirical conditions, and according to which it even declares

actions necessary that have not occurred and perhaps will not occur. Yet of all these actions it presupposes that reason could have causality in relation to them; otherwise it would not expect effects in experience from its ideas.

Let us now stop here and assume as at least possible that reason actually has causality with regard to appearances.

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Then, however much it is reason, it must nevertheless exhibit an empirical character, because every cause presupposes a rule according to which certain appearances follow as effects, and every rule requires a uniformity of effects grounding the concept of the cause (as a power). Insofar as this must become evident from mere appearances, we can call it the cause's empirical character, which is constant while its effects appear in changing forms according to differences in accompanying and partly limiting conditions.

Thus every human being has an empirical character of choice, which is nothing other than a certain causality of his reason insofar as it exhibits in its effects in appearance a rule through which we can discern the grounds of reason and its actions in their kinds and degrees, and judge the subjective principles of his choice. Because this empirical character must itself be drawn from appearances as effect and from their rule supplied by experience, all human actions in appearance are determined according to the order of nature by his empirical character and the other cooperating causes.

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If we could investigate all appearances of his choice to their foundation, there would be no human action we could not predict with certainty and cognize as necessary from its preceding conditions. With regard to this empirical character, then, there is no freedom; and yet this is the only character according to which we can consider the human being when we merely observe and, as happens in anthropology, seek to investigate the moving causes of his actions physiologically.

But if we consider these same actions in relation to reason—not speculative reason, to explain them in their origin, but solely insofar as reason is the cause of producing them itself; in a word, if we compare them with reason for a practi-

cal purpose—we find an entirely different rule and order from that of nature. For perhaps everything that did happen according to nature's course, and inevitably had to happen according to its empirical grounds, ought not to have happened. Sometimes, however, we find, or at least believe we find, that the ideas of reason have actually demonstrated causality with regard to human actions as appearances, and that these occurred not because they were determined by empirical causes—no, but because they were determined by grounds of reason.

[B 579]

Suppose, then, that we could say reason has causality with regard to appearance. Could its action be called free when it is precisely determined and necessary in reason's empirical character (its sensible disposition)? This character is in turn determined in the intelligible character (the way of thinking). But we do not know the latter; we designate it through appearances, which properly make known immediately only the sensible disposition (empirical character).* Now the action, insofar as it is attributable to the way of thinking as its cause, nevertheless does not follow from it according to empirical laws: that is, not so that the conditions of pure reason precede, but only so that their effects precede in the appearance of inner sense. Pure reason, as a merely intelligible faculty, is not subject to the form of time, and hence not to the conditions of temporal succession either. The causality of reason in its intelligible character does not arise, or begin at some particular time, in order to produce an effect.

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Otherwise it would itself be subject to the natural law of appearances insofar as that law determines causal series in time, and its causality would then be nature, not freedom. Thus we will be able to say: if reason can have causality with regard to appearances, it is a faculty through which the sensible condition of an empirical series of effects first begins. For the condition lying in reason is not sensible and therefore does not itself begin. Accordingly, what we missed in all empirical series then occurs: the condition of a successive series of events could

itself be empirically unconditioned. For here the condition is outside the series of appearances (in the intelligible), and hence subject to no sensible condition and no temporal determination through a preceding cause.

* The proper morality of actions (merit and guilt), even that of our own conduct, therefore remains entirely hidden from us. Our imputations can refer only to the empirical character. But how much of this is to be ascribed to the pure effect of freedom, how much to mere nature and the blameless fault of temperament or its fortunate constitution (merito fortunae), no one can fathom, and hence no one can judge with complete justice.

Nevertheless, this same cause also belongs in another relation to the series of appearances. The human being is himself appearance. His choice has an empirical character that is the (empirical) cause of all his actions. None of the conditions determining the human being according to this character fails to be contained in the series of natural effects and to obey its law, according to which no empirically unconditioned causality of what happens in time is found at all. Hence no given action (since it can be perceived only as appearance) can begin absolutely of itself.

[B 581]

But of reason we cannot say that before the state in which it determines choice another precedes in which this state itself is determined. For since reason itself is no appearance and is subject to no conditions of sensibility at all, no temporal succession occurs in it even with regard to its causality. Hence the dynamical law of nature, which determines temporal succession according to rules, cannot be applied to it.

Reason is therefore the enduring condition of all voluntary actions through which the human being appears. Each is predetermined in the human being's empirical character before it occurs. With regard to the intelligible character, of which the former is only the sensible schema, no "before" or "after" holds. Every action, regardless of the temporal relation in which it stands to other appearances, is the immediate effect of the intelligible character of pure reason, which therefore acts freely without being dynamically determined in the chain of natural causes by grounds that are external or internal but precede in time.

This freedom can be regarded not merely negatively, as independence from empirical conditions (for thereby the faculty of reason would cease to be a cause of appearances).

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It can also be designated positively as a power to begin a series of events of itself, so that nothing begins in reason itself, but, as the unconditioned condition of every voluntary action, it admits above itself no conditions preceding in time. Its effect nevertheless begins in the series of appearances, but can never constitute an absolutely first beginning within it.

To elucidate the regulative principle of reason through an example of its empirical use—not to confirm it, since proofs of this kind are unsuited to transcendental assertions—take a voluntary action, for example a malicious lie through which a person has caused a certain confusion in society. We first investigate the motives from which it arose, then judge how the action, together with its consequences, can be imputed to him. For the first purpose we trace his empirical character to its sources, seeking these in a bad upbringing, bad company, and partly also in the malice of a natural disposition insensitive to shame, partly attributing it to carelessness and thoughtlessness, while not overlooking the occasional causes that prompted it. In all this we proceed as we generally do in investigating the series of determining causes of a given natural effect.

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Although we believe the action to be determined in this way, we nevertheless blame its author—not for his unfortunate natural disposition, not for the circumstances influencing him, not even for his previous conduct. For we presuppose that we can set aside entirely what that conduct was, regard the elapsed series of conditions as not having happened, and regard this deed as wholly unconditioned with respect to the previous state, as if through it the agent began a series of consequences entirely of himself. This blame rests on a law of reason, under which reason is regarded as a cause that could and ought to have determined the person's conduct otherwise, regardless of all the empirical conditions mentioned. Indeed, we regard reason's causality not merely as a contributing factor, but as complete in itself, even if sensible incentives were not in

its favor but actually against it. The action is attributed to his intelligible character; now, at the moment he lies, he is entirely at fault. Thus despite all empirical conditions of the deed, reason was wholly free, and the deed is entirely attributable to reason's omission.

It is easy to see in this imputative judgment that we have the following in mind. Reason is not affected at all by all that sensibility.

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It does not alter (although its appearances, namely the way it shows itself in its effects, do alter). In it no state precedes to determine the next, and hence it does not belong at all to the series of sensible conditions that necessitate appearances according to laws of nature. Reason is present and the same in all human actions under all temporal circumstances, but is not itself in time or entering some new state in which it was not before. With respect to that state, it determines but is not determinable. Hence we cannot ask why reason did not determine itself differently, but only why through its causality it did not determine appearances differently. Yet no answer to this is possible. For a different intelligible character would have given a different empirical one. When we say that despite his entire previous conduct the agent could nevertheless have refrained from the lie, this means only that the lie stands immediately under reason's power, and that reason in its causality is subject to no conditions of appearance or of the course of time. Difference in time does indeed make a principal difference among appearances in relation to one another; but since these are not things, and thus not causes in themselves either, it can make no difference to the action in relation to reason.

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Thus in judging free actions with respect to their causality, we can reach only as far as the intelligible cause, but not beyond it. We can cognize that this cause can be free, that is, determined independently of sensibility, and in this way can be the sensibly unconditioned condition of appearances. But why the intelligible character yields precisely these appearances and this empirical character under the circumstances at hand exceeds all our reason's power to answer, indeed all its authority even to ask, just as much as asking why the transcenden-

tal object of our outer sensible intuition yields precisely intuition in space and not some other kind. But the problem we had to solve does not oblige us to this at all. It was only whether freedom conflicts with natural necessity in one and the same action. We have sufficiently answered this by showing that, since freedom can have a relation to an entirely different kind of conditions from those of natural necessity, the law of the latter does not affect the former; thus both can occur independently of and undisturbed by one another.

* * *

It must be carefully noted that we have not thereby sought to demonstrate the actuality of freedom.

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We did not mean to show it as one of the faculties containing the cause of the appearances of our sensible world. Apart from the fact that this would not have been a transcendental consideration, which concerns only concepts, it could not succeed, since from experience we can never infer something that need not be thought according to laws of experience at all. Further, we have not even sought to prove the possibility of freedom; this, too, would not have succeeded, because from mere concepts a priori we cannot cognize the possibility of any real ground or any causality at all. Freedom is treated here only as a transcendental idea through which reason thinks to begin the series of conditions in appearance absolutely through the sensibly unconditioned, but thereby becomes entangled in an antinomy with its own laws prescribed for the empirical use of the understanding. That this antinomy rests on a mere illusion, and that nature at least does not conflict with causality from freedom, was the only thing we could accomplish, and the only thing that concerned us.

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IV. Resolution of the Cosmological Idea of the Totality of the Dependence of Appearances with Regard to Their Existence in General

In the preceding subsection we considered alterations of the sensible world in their dynamical series, where each stands under another as its cause. Now this series of states serves only as a guide toward an existence that could be the highest condition of everything alterable: namely, the necessary being. Here the

issue is not unconditioned causality, but the unconditioned existence of substance itself. Thus the series before us is properly only one of concepts, not of intuitions insofar as one is the condition of another.

But it is easy to see that, since everything in the sum total of appearances is alterable, and hence conditioned in existence, nowhere in the series of dependent existence can there be an unconditioned member whose existence would be absolutely necessary. Thus, suppose appearances were things in themselves, and for that very reason their condition always belonged with the conditioned to one and the same series of intuitions.

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Then a necessary being as the condition of the existence of appearances in the sensible world could never occur.

But dynamical regression has this peculiarity distinguishing it from mathematical regression: since the latter properly concerns only the composition of parts into a whole, or the decomposition of a whole into its parts, the conditions of this series must always be regarded as parts of it, hence as homogeneous, and consequently as appearances. In the former regression, by contrast, the question concerns not the possibility of an unconditioned whole from given parts, or of an unconditioned part for a given whole, but the derivation of a state from its cause, or of the contingent existence of substance itself from necessary existence. Here the condition need not necessarily constitute an empirical series with the conditioned.

Thus in the apparent antinomy before us, one escape remains open: both conflicting propositions can be true simultaneously in different relations. All things in the sensible world are thoroughly contingent, and therefore always have only empirically conditioned existence; yet for the whole series there can also be a nonempirical condition, that is, an unconditionally necessary being. For as an intelligible condition, this would not belong to the series as a member at all (not even as its highest member).

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Nor would it make any member of the series empirically unconditioned, but would leave the entire sensible world in its empirically conditioned existence running through all its members. This way of grounding appearances in an unconditioned existence would therefore differ from the empirically unconditioned causality (freedom) in the preceding article in this: with freedom, the thing itself as cause (Substantia phaenomenon) nevertheless belonged to the series of conditions, and only its causality was thought as intelligible. Here, however, the necessary being would have to be thought wholly outside the series of the sensible world (as ens extramundanum) and as merely intelligible. Only in this way can we prevent its being itself subjected to the law of the contingency and dependence of all appearances.

Reason's regulative principle with regard to this problem is therefore that everything in the sensible world has empirically conditioned existence, and that nowhere within it is there unconditioned necessity with regard to any property; that there is no member of the series of conditions for which we must not always expect, and seek as far as we can, the empirical condition in a possible experience; and that nothing entitles us to derive any existence from a condition outside the empirical series, or even to regard it within the series itself as absolutely independent and self-subsisting.

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Nevertheless, we must not thereby deny that the entire series could be grounded in some intelligible being (which is therefore free from every empirical condition and instead contains the ground of the possibility of all these appearances).

But the intention here is by no means to prove the unconditionally necessary existence of a being, or even to ground on this the possibility of a merely intelligible condition of the existence of appearances in the sensible world. Rather, just as we restrict reason so that it does not abandon the thread of empirical conditions and wander into transcendent grounds of explanation incapable of any presentation in concreto, so, on the other hand, we restrict the law of the merely empirical use of the understanding so that it does not decide about the possibility of things in general or declare the intelligible impossible merely

because we cannot use it to explain appearances. Thus we show only that the thoroughgoing contingency of all natural things and all their (empirical) conditions can quite well coexist with the arbitrary presupposition of a necessary, though merely intelligible, condition. There is therefore no true contradiction between these assertions, and both can be true. Such an absolutely necessary being of the understanding may indeed be impossible in itself.

[B 591]

But this can by no means be inferred from the universal contingency and dependence of everything belonging to the sensible world, or from the principle that we must stop at no single member of it insofar as it is contingent and appeal to a cause outside the world. Reason follows its course in empirical use and its separate course in transcendental use.

The sensible world contains nothing but appearances, and these are mere representations that are always sensibly conditioned in turn. Since here our objects are never things in themselves, it is no wonder that we are never entitled to leap from any member whatever of the empirical series outside the connection of sensibility, as if these were things in themselves existing outside their transcendental ground, which we could leave in order to seek the cause of their existence outside them. With contingent things this would indeed finally have to occur, but not with mere representations of things, whose contingency is itself only a phenomenon and can lead to no regression other than one determining phenomena, that is, an empirical one. But thinking an intelligible ground of appearances, that is, of the sensible world, and thinking it free from the contingency of that world, conflicts neither with unrestricted empirical regression in the series of appearances nor with their thoroughgoing contingency.

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Yet this is also the only thing we had to accomplish to remove the apparent antinomy, and it could be done only in this way. For if the respective condition of every conditioned (with regard to existence) is sensible, and for that very reason belongs to the series, it is itself conditioned in turn (as the antithesis of the fourth antinomy shows). Thus either a conflict with reason, which demands the unconditioned, had to remain, or the unconditioned had to be placed out-

side the series in the intelligible, whose necessity requires and admits no empirical condition and is therefore unconditionally necessary in relation to appearances.

The empirical use of reason (with regard to the conditions of existence in the sensible world) is not affected by granting a merely intelligible being, but proceeds according to the principle of thoroughgoing contingency from empirical conditions to higher ones that are always equally empirical. Yet this regulative principle no more excludes the assumption of an intelligible cause outside the series when the issue is the pure use of reason (with regard to ends). For there that cause signifies only the ground of the possibility of the sensible series in general, a ground that for us is merely transcendental and unknown.

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Its existence, independent of all conditions of that series and unconditionally necessary in relation to it, in no way conflicts with the unlimited contingency of the series, or therefore with regression that nowhere ends in the series of empirical conditions.

Concluding Remark on the Entire Antinomy of Pure Reason

As long as our concepts of reason have as their object only the totality of conditions in the sensible world, and what can be done in their regard to serve reason, our ideas are indeed transcendental, but still cosmological. But as soon as we place the unconditioned (which is properly at issue) in what lies wholly outside the sensible world, and hence outside all possible experience, the ideas become transcendent. They serve not merely to complete the empirical use of reason (which always remains an idea never realizable, yet still to be followed), but detach themselves entirely from it and make objects for themselves whose material is not taken from experience and whose objective reality rests not on the completion of the empirical series but on pure concepts a priori. Such transcendent ideas have a merely intelligible object. We are certainly permitted to admit it as a transcendental object of which we otherwise know nothing. But this permission does not extend to thinking it as a thing determinable through its distinguishing and inner predicates.

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For that we have on our side neither grounds of possibility (as independent of all concepts of experience) nor the slightest justification for assuming such an object. It is therefore a mere thought-entity. Yet of all cosmological ideas, the one that occasioned the fourth antinomy impels us to venture this step. For the existence of appearances, not grounded in itself at all but always conditioned, calls on us to look for something distinct from all appearances, hence an intelligible object in which this contingency would cease. But once we have taken the liberty of assuming a self-subsisting actuality outside the field of all sensibility, and of regarding appearances merely as contingent ways in which intelligible objects are represented by beings that are themselves intelligences, nothing remains to us but analogy, by which we use experiential concepts to form some concept of intelligible things of which in themselves we have not the slightest knowledge. Since we learn of the contingent only through experience, whereas here we are speaking of things that are not to be objects of experience at all, we will have to derive our knowledge of them from what is necessary in itself, from pure concepts of things in general.

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Hence the first step we take outside the sensible world compels us to begin our new knowledge with the investigation of the absolutely necessary being, and to derive from its concepts the concepts of all things insofar as they are merely intelligible. We will undertake this attempt in the following chapter.

Book Two of the Transcendental Dialectic Chapter Three The Ideal of Pure Reason

Section One The Ideal in General

We have seen above that no objects can be represented through pure concepts of the understanding without any conditions of sensibility, because the conditions of their objective reality are lacking, and nothing but the mere form of thinking is found in them. Yet they can be presented in concreto when applied to appearances; for in appearances they properly have the material for the concept of experience, which is nothing but a concept of the understanding in con-

creto. Ideas, however, are still further removed from objective reality than categories, for no appearance can be found in which they could be represented in concreto.

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They contain a certain completeness that no possible empirical cognition reaches, and in them reason has in mind only a systematic unity to which it seeks to bring empirically possible unity nearer, without ever attaining it completely.

But what I call the ideal seems still further removed from objective reality than the idea. By it I understand the idea not merely in concreto, but in individuo, that is, as a single thing determinable or even determined through the idea alone.

Humanity in its entire perfection contains not only the extension of all essential properties belonging to this nature, which constitute our concept of it, to complete congruence with its ends—which would be our idea of perfect humanity—but also everything beyond this concept that belongs to the idea's thoroughgoing determination. For of all opposed predicates, only one can accord with the idea of the most perfect human being. What to us is an ideal was to Plato an idea of the divine understanding, a single object in its pure intuition, the most perfect of each kind of possible beings and the original ground of all copies in appearance.

[B 597]

Without ascending so far, however, we must confess that human reason contains not only ideas but ideals as well. Though these have no creative force like the Platonic ones, they nevertheless have practical force (as regulative principles) and underlie the possibility of perfection in certain actions. Moral concepts are not entirely pure concepts of reason, because something empirical (pleasure or displeasure) underlies them. Yet in respect of the principle through which reason sets limits to freedom, which in itself is lawless (thus if we attend only to their form), they can quite well serve as examples of pure concepts of reason. Virtue, and with it human wisdom in its entire purity, are ideas. But the wise person (of the Stoic) is an ideal: a human being existing merely in thought,

yet wholly congruent with the idea of wisdom. Just as the idea gives the rule, so in such a case the ideal serves as the archetype for the thoroughgoing determination of the copy. We have no other standard for our actions than the conduct of this divine human being within us, with which we compare and judge ourselves, thereby improving ourselves although we can never attain it. Even if we do not grant these ideals objective reality (existence), they must not on that account be regarded as fantasies. They supply an indispensable standard for reason.

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Reason needs the concept of what is entirely complete in its kind in order to estimate and measure by it the degree and deficiencies of the incomplete. But to try to realize the ideal in an example, that is, in appearance, as one might portray the wise person in a novel, is impracticable and moreover has something absurd and hardly edifying about it. For the natural limits that continually impair completeness in the idea make all illusion in such an attempt impossible, thereby making even the good lying in the idea suspect and similar to a mere fiction.

Such is the ideal of reason, which must always rest on determinate concepts and serve as rule and archetype, whether for following or for judging. Matters are quite different with those creatures of imagination that no one can explain or give an intelligible concept of: monograms, as it were, consisting only of individual strokes determined according to no alleged rule, which constitute less a determinate image than a drawing hovering, as it were, amid various experiences. Such are what painters and physiognomists claim to have in their heads, supposedly an incommunicable shadow-image of their products or judgments. They can be called ideals of sensibility, though only improperly, because they are supposed to be the unattainable model of possible empirical intuitions.

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Yet they supply no rule capable of explanation and examination.

Reason's intention with its ideal, by contrast, is thoroughgoing determination according to a priori rules. Hence it thinks an object supposed to be thoroughly determinable according to principles, although sufficient conditions for this are lacking in experience, and the concept itself is therefore transcendent.

Chapter Three Section Two The Transcendental Ideal (Prototypon transzendentale)

Every concept is indeterminate with regard to what is not contained in it and stands under the principle of determinability: only one of any two contradictorily opposed predicates can belong to it. This rests on the principle of contradiction and is therefore a merely logical principle, abstracting from all content of cognition and having only its logical form in view.

But every thing, with regard to its possibility, also stands under the principle of thoroughgoing determination, according to which one of all possible predicates of things, insofar as they are compared with their opposites, must belong to it.

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This rests not merely on the principle of contradiction; for besides the relation of two conflicting predicates, it also considers every thing in relation to the entirety of possibility as the sum total of all predicates of things in general. Presupposing this as an a priori condition, it represents every thing as deriving its own possibility from its share in that entirety of possibility.* The principle of thoroughgoing determination thus concerns content, not merely logical form. It is the principle of the synthesis of all predicates that are to constitute the complete concept of a thing, not merely of analytical representation through one of two opposed predicates.

[B 601]

It contains a transcendental presupposition: that of the material for all possibility, which is supposed to contain a priori the data for the particular possibility of each thing.

* Through this principle every thing is thus referred to a common correlate, namely the entirety of possibility. If this (that is, the material for all possible predicates) were found in the idea of a single thing, it would prove an affinity of

everything possible through the identity of the ground of its thoroughgoing determination. The determinability of every concept is subordinated to the universality (Universalitas) of the principle excluding a middle between two opposed predicates, whereas the determination of a thing is subordinated to the allness (Universitas), or sum total, of all possible predicates.

The proposition "Everything existing is thoroughly determined" means not only that one predicate from every pair of given opposed predicates always belongs to it, but also one from all possible predicates. Through this proposition, predicates are not merely compared logically with one another; the thing itself is compared transcendentally with the sum total of all possible predicates. It means this: to cognize a thing completely, we must cognize everything possible and thereby determine the thing, whether affirmatively or negatively. Thoroughgoing determination is consequently a concept we can never present in concreto in its totality, and thus rests on an idea whose seat lies solely in reason, which prescribes to the understanding the rule of its complete use.

Now although this idea of the sum total of all possibility, insofar as it underlies the thoroughgoing determination of each thing as its condition, is itself still indeterminate regarding the predicates that might constitute it, and through it we think nothing more than a sum total of all possible predicates in general, closer investigation nevertheless shows that this idea, as an original concept, excludes a multitude of predicates that, as derivative, are already given through others or cannot coexist.

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It is purified into a concept thoroughly determined a priori, thereby becoming the concept of a single object thoroughly determined through the mere idea, and thus must be called an ideal of pure reason.

If we consider all possible predicates not merely logically, but transcendentally, that is, according to the content that can be thought in them a priori, we find that through some of them a being is represented, through others a mere nonbeing. Logical negation, indicated solely by the little word "not," never properly attaches to a concept, but only to its relation to another in a judgment, and thus falls far short of being sufficient to designate a concept with regard to its

content. The expression "not mortal" cannot at all indicate that mere nonbeing in the object is thereby represented; it leaves all content untouched. Transcendental negation, by contrast, signifies nonbeing in itself, opposed to transcendental affirmation, which is a something whose concept itself already expresses a being. Hence it is called reality (thinghood), because through it alone, and as far as it extends, objects are something (things).

[B 603]

The opposed negation, by contrast, signifies a mere lack, and where this alone is thought, the abolition of every thing is represented.

Now no one can think a negation determinately without having the opposed affirmation as its basis. A person born blind cannot form the slightest representation of darkness, because he has none of light; a person living outside civilization cannot represent poverty, because he does not know prosperity.* The ignorant person has no concept of his ignorance because he has none of science, and so on. Thus all concepts of negations are derivative, and realities contain the data and, so to speak, the material, or transcendental content, for the possibility and thoroughgoing determination of all things.

* The observations and calculations of astronomers have taught us much that is admirable, but perhaps the most important thing is that they have disclosed to us the abyss of ignorance that human reason, without this knowledge, could never have imagined so great. Reflection on it must bring about a great change in determining the ultimate aims of our use of reason.

If, therefore, thoroughgoing determination in our reason is grounded in a transcendental substratum containing, as it were, the whole stock of material from which all possible predicates of things can be taken, this substratum is nothing other than the idea of an all of reality (omnitudo realitatis).

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All true negations are then nothing but limits, which they could not be called unless the unlimited (the all) lay at their basis.

But through this possession of all reality, the concept of a thing in itself is also represented as thoroughly determined, and the concept of an ens realissimum is the concept of a single being, because of all possible opposed predicates, one—

namely, what belongs absolutely to being—is found in its determination. Thus a transcendental ideal underlies the thoroughgoing determination necessarily found in everything that exists, and constitutes the highest and complete material condition of its possibility, to which all thinking of objects in general must be traced back with regard to its content. Yet it is also the only proper ideal of which human reason is capable, because only in this single case is a concept of a thing that is in itself universal thoroughly determined through itself and cognized as the representation of an individual.

The logical determination of a concept through reason rests on a disjunctive syllogism, whose major premise contains a logical division (the division of the sphere of a universal concept), whose minor premise restricts this sphere to one part, and whose conclusion determines the concept through that part.

[B 605]

The universal concept of a reality in general cannot be divided a priori, because without experience we know no determinate kinds of reality contained under that genus. Thus the transcendental major premise of the thoroughgoing determination of all things is nothing other than the representation of the sum total of all reality: not merely a concept comprising all predicates under itself according to their transcendental content, but one comprising them within itself. The thoroughgoing determination of every thing rests on the limitation of this all of reality, some of it being attributed to the thing while the rest is excluded. This agrees with the "either–or" of the disjunctive major premise and the determination of the object through one member of this division in the minor premise. Accordingly, reason's use of the transcendental ideal as the basis for its determination of all possible things is analogous to its procedure in disjunctive syllogisms. This was the proposition I laid above at the foundation of the systematic division of all transcendental ideas, according to which they are generated parallel to and corresponding with the three kinds of syllogism.

Reason's purpose here is merely to represent the necessary thoroughgoing determination of things.

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It goes without saying that for this purpose it presupposes not the existence of a being conforming to the ideal, but only its idea, in order to derive conditioned determination, that is, that of the limited, from an unconditioned totality of thoroughgoing determination. Thus for reason the ideal is the archetype (Prototypon) of all things, which collectively, as deficient copies (ectypa), take from it the material of their possibility and, while approaching it more or less closely, nevertheless always fall infinitely short of attaining it.

Thus all possibility of things (of the synthesis of the manifold with regard to its content) is regarded as derivative, and only the possibility of what includes all reality within itself as original. For all negations (which are the only predicates through which everything else can be distinguished from the most real being) are mere limitations of a greater and ultimately of the highest reality; hence they presuppose this reality and are merely derived from it in content. All manifoldness of things is only a correspondingly manifold way of limiting the concept of the highest reality, which is their common substratum, just as all figures are possible only as different ways of limiting infinite space. Hence the object of reason's ideal, which is found merely in reason, is also called the original being (ens originarium); insofar as it has none above it, the highest being (ens summum); and insofar as everything, as conditioned, stands under it, the being of all beings (ens entium).

[B 607]

But all this signifies not the objective relation of an actual object to other things, but that of the idea to concepts, and leaves us in complete ignorance about the existence of a being of such exceptional preeminence.

Since we also cannot say that an original being consists of many derivative beings, because each of them presupposes it and therefore cannot constitute it, the ideal of the original being must also be thought as simple.

Strictly speaking, the derivation of all other possibility from this original being therefore cannot be regarded as a limitation of its highest reality, and as though a division of it. For then the original being would be regarded as a mere aggregate of derivative beings, which according to what precedes is impossible, although we initially represented it this way in our first rough outline. Rather,

the highest reality would underlie the possibility of all things as a ground, not as a sum total, and their manifoldness would rest not on limiting the original being itself, but on its complete consequence. To this would also belong our entire sensibility, together with all reality in appearance, which cannot belong as an ingredient to the idea of the highest being.

[B 608]

If we now pursue this idea further by hypostatizing it, we will be able to determine the original being through the mere concept of the highest reality as one, simple, all-sufficient, eternal, and so on—in a word, in its unconditioned completeness through all predicaments. The concept of such a being is that of God, thought in the transcendental sense, and thus the ideal of pure reason is the object of a transcendental theology, as I also stated above.

Yet this use of the transcendental idea would already exceed the boundaries of its purpose and admissibility. For reason laid it, merely as the concept of all reality, at the foundation of the thoroughgoing determination of things in general, without demanding that all this reality be objectively given and itself constitute a thing. The latter is a mere invention through which we collect and realize the manifold of our idea in an ideal as a particular being. We have no authority for this, not even to assume outright the possibility of such a hypothesis. Moreover, all consequences flowing from such an ideal have nothing to do with the thoroughgoing determination of things in general, for whose sake alone the idea was needed, and have not the slightest influence on it.

[B 609]

It is not enough to describe our reason's procedure and its dialectic; we must also seek to discover their sources in order to explain this illusion itself as a phenomenon of the understanding. For the ideal of which we speak is grounded in a natural, not merely arbitrary, idea. I therefore ask: how does reason come to regard all possibility of things as derived from a single underlying possibility, namely that of the highest reality, and then to presuppose this as contained in a particular original being?

The answer presents itself from the discussions of the Transcendental Analytic. The possibility of objects of the senses is their relation to our thinking, in which something (namely empirical form) can be thought a priori, while what constitutes the matter, the reality in appearance (what corresponds to sensation), must be given; otherwise it could not even be thought, and hence its possibility could not be represented. Now an object of the senses can be thoroughly determined only if it is compared with all predicates of appearance and represented affirmatively or negatively through them. But what constitutes the thing itself (in appearance), namely the real, must be given in it, without which it could not even be thought.

[B 610]

Moreover, that in which the real of all appearances is given is the one all-embracing experience. The material for the possibility of all objects of the senses must therefore be presupposed as given in one sum total. On its limitation alone can rest all possibility of empirical objects, their difference from one another, and their thoroughgoing determination. Now in fact no objects can be given to us except those of the senses, and nowhere except in the context of a possible experience; consequently, nothing is an object for us unless it presupposes the sum total of all empirical reality as the condition of its possibility. Through a natural illusion, we now take what properly holds only of things given as objects of our senses for a principle that must hold of all things in general. Consequently, by omitting this restriction, we will regard the empirical principle of our concepts of the possibility of things as appearances as a transcendental principle of the possibility of things in general.

That we afterward hypostatize this idea of the sum total of all reality comes from dialectically transforming the distributive unity of the experiential use of the understanding into the collective unity of a whole of experience. In this whole of appearance we think a single thing containing all empirical reality within itself.

[B 611]

This is then, through the transcendental subreption already mentioned, confused with the concept of a thing standing at the summit of the possibility of all things and supplying the real conditions of their thoroughgoing determination.*

* Thus this ideal of the most real being, although a mere representation, is first realized, that is, made into an object, then hypostatized, and finally, through a natural advance of reason toward completing unity, even personified, as we will shortly explain. For the regulative unity of experience rests not on appearances themselves (sensibility alone), but on the connection of their manifold through the understanding (in one apperception). Hence the unity of the highest reality and the thoroughgoing determinability (possibility) of all things seem to lie in a highest understanding, and thus in an intelligence.

Chapter Three Section Three The Grounds of Proof of Speculative Reason for Inferring the Existence of a Highest Being

Despite reason's urgent need to presuppose something that could serve the understanding as a complete foundation for the thoroughgoing determination of its concepts, it notices the ideal and merely invented character of such a presupposition much too readily.

[B 612]

It cannot be persuaded by this alone to accept a mere creature of its own thinking immediately as an actual being, unless it were driven by something else to seek a resting place somewhere in the regression from the given conditioned to the unconditioned. The latter is indeed not given as actual in itself and according to its mere concept, yet it alone can complete the series of conditions carried out to their grounds. This is the natural course taken by every human reason, even the most ordinary, though not every reason persists in it. It begins not from concepts but from ordinary experience, thus taking something existing as its foundation. But this ground gives way unless it rests on the immovable rock of the absolutely necessary. Yet this rock itself floats unsupported if there is still empty space outside and beneath it, and it does not itself fill everything, thereby leaving no room for any further "why"—that is, unless it is infinite in reality.

If anything, whatever it may be, exists, we must also admit that something exists necessarily. For the contingent exists only under the condition of another as its cause, and the inference continues to hold of this cause until we reach one that is not contingent and therefore exists necessarily without condition. This is the argument on which reason grounds its advance to the original being.

[B 613]

Reason now looks for the concept of a being suited to such a preeminence of existence as unconditioned necessity. It does so not so much in order then to infer its existence a priori from its concept (for if it trusted itself to do this, it would need to investigate only among mere concepts and would have no need to take a given existence as its basis), but only to find among all concepts of possible things the one containing nothing contrary to absolute necessity. For after the first inference it already regards it as settled that something must exist absolutely necessarily. If it can now eliminate everything incompatible with this necessity except one thing, that is the absolutely necessary being, whether or not we can comprehend its necessity, that is, derive it from its concept alone.

Now that whose concept contains the "because" for every "why," which is defective in no part and no respect, which suffices everywhere as a condition, seems for that very reason to be the being suited to absolute necessity. For in possessing within itself all conditions of everything possible, it needs no condition itself, indeed is not even capable of one, and consequently satisfies, at least in one respect, the concept of unconditioned necessity.

[B 614]

No other concept can equal it in this, since, being deficient and needing completion, it displays no such mark of independence from all further conditions. It is true that from this we still cannot securely infer that what does not contain within itself the highest condition, complete in every respect, must therefore itself be conditioned in its existence. But it does not possess the sole distinguishing mark of unconditioned existence available to reason for cognizing any being as unconditioned through an a priori concept.

Thus among all concepts of possible things, the concept of a being of the highest reality would best accord with the concept of an unconditionally necessary being. Even if it does not fully satisfy that concept, we have no choice, but see ourselves compelled to hold to it, because we cannot dismiss the existence of a necessary being. Yet if we admit this existence, we can find nothing throughout the field of possibility that could make a better-founded claim to such preeminence in existence.

Such, then, is the natural course of human reason. First it convinces itself of the existence of some necessary being. In this it cognizes an unconditioned existence.

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It now seeks the concept of what is independent of every condition, and finds it in what is itself the sufficient condition of everything else, that is, what contains all reality. But the all without limits is absolute unity and carries with it the concept of one being, namely the highest. Thus reason concludes that the highest being, as the original ground of all things, exists absolutely necessarily.

This concept cannot be denied a certain soundness when a decision is at issue: namely, once the existence of some necessary being is conceded and we agree that we must choose what to take it to be. We can then make no more appropriate choice—or rather, we have no choice, but are compelled to cast our vote for the absolute unity of complete reality as the original source of possibility. But if nothing drives us to decide, and we would rather leave the whole matter unsettled until compelled to assent by the full weight of grounds of proof—that is, if the issue is merely to judge how much we know of this problem and what we merely flatter ourselves that we know—then the above inference appears in a far less favorable light and needs favor to make up for its lack of rightful claims.

For let us allow everything to stand as it is before us.

[B 616]

First, from some given existence (even merely my own) there is a valid inference to the existence of an unconditionally necessary being. Second, I must regard a being containing all reality, and hence every condition, as absolutely uncondi-

tioned, so that the concept of the thing suited to absolute necessity has thereby been found. Even so, we cannot infer that the concept of a limited being, which does not possess the highest reality, therefore contradicts absolute necessity. For although I do not find in its concept the unconditioned that already carries with it the all of conditions, we cannot infer from this that its existence must for that very reason be conditioned; just as in a hypothetical syllogism I cannot say that where a certain condition (here, completeness according to concepts) is absent, the conditioned is also absent. Rather, we remain free to regard all other limited beings as likewise unconditionally necessary, although we cannot infer their necessity from the general concept we have of them. In this way, however, the argument would have supplied us not the slightest concept of the properties of a necessary being and would have accomplished nothing at all.

Nevertheless, this argument retains a certain importance and authority that its objective inadequacy cannot immediately take away.

[B 617]

For suppose there were obligations that would be entirely correct in the idea of reason, but without any reality in application to ourselves—that is, without incentives—unless a highest being were presupposed that could give practical laws effect and force. Then we would also have an obligation to follow concepts that, though perhaps not objectively sufficient, nevertheless preponderate by the measure of our reason, and in comparison with which we cognize nothing better or more convincing. Here the duty to choose would tip speculation's indecision out of equilibrium through a practical addition. Indeed, reason would find no justification even before itself, as the most indulgent judge, if under pressing motives, though with only deficient insight, it had failed to follow these grounds of judgment, than which we at least know none better.

Although this argument is in fact transcendental, since it rests on the inner inadequacy of the contingent, it is so simple and natural that it accords with the most ordinary human sense as soon as this sense is once directed to it. We see things alter, arise, and pass away; they, or at least their state, must therefore have a cause. But the same question can be asked in turn of every cause that may ever be given in experience.

[B 618]

Where, then, should we more reasonably place the supreme causality than where the highest causality also is: in that being which originally contains within itself sufficiency for the possible effect, whose concept is also very easily formed through the single feature of all-embracing perfection? We then regard this highest cause as absolutely necessary because we find it absolutely necessary to ascend to it and find no ground to go beyond it. Hence among all peoples, even through their blindest polytheism, we see some sparks of monotheism shining through. They were led to it not by reflection and deep speculation, but only by a natural course of ordinary understanding that gradually became intelligible.

Only Three Kinds of Proof of God's Existence from Speculative Reason Are Possible

All paths we may take for this purpose begin either from determinate experience and the particular constitution of our sensible world cognized through it, ascending from this according to laws of causality to the highest cause outside the world; or they take only indeterminate experience, that is, some existence, as their empirical basis; or, finally, they abstract from all experience and infer the existence of a highest cause entirely a priori from mere concepts.

[B 619]

The first proof is the physicotheological, the second the cosmological, the third the ontological. There are no more, nor can there be any more.

I will show that reason accomplishes as little on the one path (the empirical) as on the other (the transcendental), and spreads its wings in vain to pass beyond the sensible world through the mere power of speculation. As for the order in which these kinds of proof must be presented for examination, it will be precisely the reverse of the order taken by reason as it gradually extends itself, in which we also first presented them. For it will become evident that, although experience gives the first occasion, the transcendental concept alone guides reason in this endeavor and in all such attempts marks out the goal it has set itself. I will therefore begin by examining the transcendental proof and then see what the addition of the empirical can do to increase its force.

[B 620]

Chapter Three Section Four The Impossibility of an Ontological Proof of God's Existence

It is easy to see from what precedes that the concept of an absolutely necessary being is a pure concept of reason, that is, a mere idea whose objective reality is far from proved by reason's need for it. It points only to a certain, though unattainable, completeness, and properly serves more to bound the understanding than to extend it to new objects. Here we now find the strange and absurd situation that the inference from a given existence in general to some absolutely necessary existence seems compelling and correct, yet all the conditions of the understanding for forming a concept of such necessity are entirely against us.

People have always spoken of an absolutely necessary being, taking pains not so much to understand whether and how one can even think a thing of this kind as to prove its existence. A nominal definition of this concept is indeed quite easy: it is something whose nonbeing is impossible.

[B 621]

But this makes us no wiser about the conditions that make it impossible to regard a thing's nonbeing as absolutely unthinkable, which are properly what we want to know: whether through this concept we think anything at all or not. For throwing away, by means of the word "unconditioned," all conditions the understanding always needs to regard something as necessary does not remotely make it intelligible to me whether through a concept of the unconditionally necessary I still think something, or perhaps nothing at all.

Still more: people believed they had explained this concept, ventured at mere random and finally become quite familiar, through a multitude of examples, so that any further inquiry into its intelligibility seemed quite unnecessary. Every proposition of geometry—for example, that a triangle has three angles—is absolutely necessary, and so they spoke of an object lying wholly outside the sphere of our understanding as if they understood perfectly well what they meant by its concept.

All the alleged examples, without exception, are taken only from judgments, not from things and their existence. But the unconditioned necessity of judgments is not an absolute necessity of things. For the absolute necessity of the judgment is only a conditioned necessity of the thing, or of the predicate in the judgment.

[B 622]

The preceding proposition did not say that three angles are absolutely necessary, but that under the condition that a triangle exists (is given), three angles also necessarily exist (in it). Yet this logical necessity has demonstrated such a powerful illusion that, after forming an a priori concept of a thing, a concept so framed that, in their opinion, existence was included in its scope, people believed they could securely infer that, because existence necessarily belongs to the object of this concept, that is, under the condition that I posit this thing as given (existing), its existence is also necessarily posited (according to the rule of identity), and this being is therefore itself absolutely necessary, because its existence is thought along with it in a concept arbitrarily assumed and under the condition that I posit its object.

If I abolish the predicate in an identical judgment while retaining the subject, a contradiction arises; hence I say the former necessarily belongs to the latter. But if I abolish the subject together with the predicate, no contradiction arises, for nothing remains that could be contradicted. To posit a triangle while abolishing its three angles is contradictory; but to abolish the triangle together with its three angles is no contradiction. Precisely the same holds for the concept of an absolutely necessary being.

[B 623]

If you abolish its existence, you abolish the thing itself with all its predicates; where, then, is the contradiction to come from? Externally there is nothing to contradict, since the thing is not supposed to be externally necessary; internally there is also nothing, because by abolishing the thing itself you have abolished everything internal along with it. "God is omnipotent" is a necessary judgment. Omnipotence cannot be abolished if you posit a deity, that is, an infinite being with whose concept that predicate is identical. But if you say "God does not

exist," neither omnipotence nor any other predicate of his is given; for all are abolished together with the subject, and not the slightest contradiction appears in this thought.

You have therefore seen that if I abolish a judgment's predicate together with its subject, no inner contradiction can ever arise, whatever the predicate may be. You now have no escape but to say that there are subjects that cannot be abolished at all and must therefore remain. But this would amount to saying that there are absolutely necessary subjects: the very presupposition whose correctness I have doubted and whose possibility you intended to show me. For I cannot form the slightest concept of a thing that, if abolished together with all its predicates, would leave a contradiction behind.

[B 624]

And without contradiction I have, through mere pure concepts a priori, no mark of impossibility.

Against all these general inferences (which no one can refuse), you challenge me with a case you present as proof by the fact itself: that there is nevertheless one concept, and only this one, in which the nonbeing or abolition of its object is self-contradictory, namely the concept of the most real being. It has, you say, all reality, and you are entitled to assume such a being as possible (which I concede for now, although a concept free of contradiction is far from proving the possibility of its object)*. Now existence is also included among all reality. Thus existence lies in the concept of something possible.

[B 625]

If this thing is now abolished, the inner possibility of the thing is abolished, which is contradictory.

* A concept is always possible if it does not contradict itself. This is the logical mark of possibility, distinguishing its object from the nihil negativum. Yet it can still be an empty concept unless the objective reality of the synthesis through which it is generated is separately demonstrated. As shown above, this always rests on principles of possible experience, not on the principle of analysis (the principle of contradiction). This is a warning not to infer immediately from the (logical) possibility of concepts to the (real) possibility of things.

I answer: you have already committed a contradiction when, into the concept of a thing you intended to think solely with regard to its possibility, you have already introduced, under whatever concealed name, the concept of its existence. If we grant you this, you have seemingly won the game, but in fact said nothing, for you have committed a mere tautology. I ask you: is the proposition "This or that thing (which I grant you as possible, be it what it may) exists"—is this proposition, I ask, analytic or synthetic? If the former, then through the thing's existence you add nothing to your thought of the thing; but then either the thought in you would have to be the thing itself, or you have presupposed an existence as belonging to possibility and then purported to infer existence from inner possibility, which is nothing but a miserable tautology. The word "reality," which sounds different in the concept of the thing from "existence" in the concept of the predicate, makes no difference. For even if you call all positing reality (leaving indeterminate what you posit), you have already posited the thing with all its predicates in the concept of the subject and assumed it as actual; in the predicate you merely repeat it.

[B 626]

If, by contrast, you admit, as every rational person rightly must, that every existential proposition is synthetic, how can you then maintain that the predicate of existence cannot be abolished without contradiction, when this privilege belongs peculiarly only to analytic propositions, whose character rests precisely on it?

I would hope to dispose of this subtle sophistry without further ado through a precise determination of the concept of existence, had I not found that the illusion arising from confusing a logical predicate with a real one (that is, the determination of a thing) resists nearly all instruction. Anything we please can serve as a logical predicate; even the subject can be predicated of itself, for logic abstracts from all content. But a determination is a predicate added to the concept of the subject and enlarging it. It must therefore not already be contained in it.

Being is plainly no real predicate, that is, no concept of something that could be added to the concept of a thing. It is merely the positing of a thing, or of certain determinations in themselves. In logical use it is merely the copula of a judgment. The proposition "God is omnipotent" contains two concepts having their objects: God and omnipotence.

[B 627]

The little word "is" is not an additional predicate, but only what posits the predicate in relation to the subject. If I now take the subject (God) together with all its predicates (including omnipotence) and say "God is," or "There is a God," I posit no new predicate in addition to the concept of God, but only the subject in itself with all its predicates, and indeed the object in relation to my concept. Both must contain exactly the same thing, and hence nothing further can be added to the concept, which expresses only possibility, by my thinking its object as absolutely given (through the expression "it is"). Thus the actual contains no more than the merely possible. A hundred actual thalers contain not the slightest bit more than a hundred possible ones. For since the latter signify the concept, while the former signify the object and its positing in itself, if the object contained more than the concept, my concept would not express the whole object and thus would not be its adequate concept. But my financial condition contains more with a hundred actual thalers than with their mere concept (that is, their possibility). For in actuality the object is not merely analytically contained in my concept, but is synthetically added to my concept (which is a determination of my state), without this being outside my concept in the least increasing those hundred thalers themselves as thought.

[B 628]

Thus if I think a thing through whatever predicates and however many I please (even in thoroughgoing determination), adding that this thing exists adds not the slightest thing to it. Otherwise, not exactly the same thing, but more than I had thought in the concept, would exist, and I could not say that precisely the object of my concept exists. Even if I think in a thing all reality except one, saying that such a deficient thing exists does not add the missing reality; it exists burdened with precisely the same deficiency with which I thought it.

Otherwise something other than what I thought would exist. If I now think a being as the highest reality (without deficiency), the question still remains whether it exists or not. For although nothing is lacking in my concept of the possible real content of a thing in general, something is still lacking in its relation to my entire state of thinking: namely, that cognition of that object is also possible a posteriori. Here the cause of the difficulty becomes evident. If we were speaking of an object of the senses, I could not confuse the existence of the thing with its mere concept. For through the concept the object is thought only as agreeing with the universal conditions of a possible empirical cognition in general, whereas through existence it is thought as contained in the context of all experience.

[B 629]

Through connection with the content of all experience, the concept of the object is not in the least enlarged, but our thinking gains one more possible perception through it. If, by contrast, we wish to think existence through the pure category alone, it is no wonder that we can specify no mark distinguishing it from mere possibility.

Thus whatever and however much our concept of an object may contain, we must go outside it to confer existence on the object. With objects of the senses this occurs through connection with some perception of mine according to empirical laws. But for objects of pure thinking there is no means whatever of cognizing their existence, because it would have to be cognized entirely a priori, whereas our consciousness of all existence (whether immediately through perception or through inferences connecting something with perception) belongs wholly to the unity of experience. An existence outside this field cannot indeed be declared absolutely impossible, but it is a presupposition we can justify through nothing.

The concept of a highest being is an idea very useful in many respects; but precisely because it is a mere idea, it is wholly incapable, by itself alone, of extending our cognition regarding what exists.

[B 630]

It cannot even instruct us about the possibility of anything further. The analytical mark of possibility—that mere positings (realities) produce no contradiction—cannot indeed be denied it. But the connection of all real properties in one thing is a synthesis whose possibility we cannot judge a priori, because realities are not given to us specifically; and even if they were, no judgment could be made in this matter at all, because the mark of the possibility of synthetic cognitions must always be sought only in experience, to which the object of an idea cannot belong. Thus the famous Leibniz has by far not accomplished what he flattered himself with, namely wanting to have a priori insight into the possibility of so sublime an ideal being.

All effort and labor expended on the famous ontological (Cartesian) proof of the existence of a highest being from concepts is therefore lost. A person would be no more likely to become richer in insight from mere ideas than a merchant would in wealth by adding a few zeros to his cash balance to improve his position.

[B 631]

Chapter Three Section Five The Impossibility of a Cosmological Proof of God's Existence

Trying to extract the existence of the corresponding object itself from an entirely arbitrarily devised idea was something wholly unnatural, a mere innovation of scholastic ingenuity. In fact, no one would ever have attempted this path had there not first been our reason's need to assume, for existence in general, something necessary (at which we could stop in ascending); and had reason not been compelled, since this necessity must be unconditioned and certain a priori, to seek a concept that could, if possible, satisfy such a demand and make an existence known entirely a priori. People now believed they had found it in the idea of a most real being, and thus used this idea only for a more determinate knowledge of what they were already otherwise convinced or persuaded must exist, namely the necessary being. But they concealed this natural course of reason and, instead of ending with this concept, tried to begin with it in order to derive from it the necessity of existence, which it was intended only to complete.

[B 632]

From this arose the unsuccessful ontological proof, which offers satisfaction neither to natural and sound understanding nor to scholastic examination.

The cosmological proof we will now investigate retains the connection of absolute necessity with the highest reality. But instead of inferring, like the former proof, from highest reality to necessity in existence, it infers rather from the previously given unconditioned necessity of some being to its unbounded reality. To that extent, it at least brings everything into the track of an inference that, whether rational or sophistical I do not know, is at least natural and carries the greatest persuasive force for both ordinary and speculative understanding. Indeed, it visibly draws the first outlines for all proofs of natural theology, which people have always followed and will continue to follow, however much foliage and ornament they may use to embellish and conceal them. We will now present and examine this proof, which Leibniz also called the proof a contingentia mundi.

It runs as follows: if anything exists, an absolutely necessary being must also exist. Now at least I myself exist. Therefore an absolutely necessary being exists.

[B 633]

The minor premise contains an experience; the major contains the inference from an experience in general to the existence of the necessary.* Thus the proof properly begins from experience and is consequently not conducted wholly a priori, or ontologically. Since the object of all possible experience is called the world, it is therefore called the cosmological proof. Since it also abstracts from every particular property of objects of experience through which this world might differ from any possible world, its very name distinguishes it from the physicotheological proof, which uses observations of the particular constitution of this sensible world of ours as grounds of proof.

* This inference is too familiar to need an extensive presentation here. It rests on the supposedly transcendental natural law of causality: everything contingent has its cause, which, if itself contingent, must likewise have a cause, until the series of causes subordinated to one another must end at an absolutely necessary cause, without which it would have no completeness.

The proof now continues: the necessary being can be determined in only one way, that is, with regard to all possible opposed predicates, only through one of them; consequently, it must be thoroughly determined through its concept. Now only one concept of a thing is possible that determines it thoroughly a priori, namely that of the ens realissimum.

[B 634]

Thus the concept of the most real being is the only one through which a necessary being can be thought; that is, a highest being necessarily exists.

So many sophistical principles converge in this cosmological argument that speculative reason seems here to have summoned all its dialectical art to produce the greatest possible transcendental illusion. We will set their examination aside for a while, however, to expose just one of its tricks. It presents an old argument in disguise as a new one and appeals to the agreement of two witnesses, one a witness of pure reason, the other empirically accredited, when in fact there is only the former, who merely changes his dress and voice to be taken for a second. To secure its foundation, this proof rests on experience and thereby gives itself the appearance of differing from the ontological proof, which puts all its trust in nothing but pure concepts a priori. But the cosmological proof uses this experience only to take a single step: to the existence of a necessary being in general. The empirical ground of proof cannot teach what properties this being has; here reason takes complete leave of it and investigates among mere concepts what properties an absolutely necessary being in general must have.

[B 635]

(That is, it asks which among all possible things contains the required conditions (requisita) for absolute necessity.) Now it believes these requirements are found solely in the concept of a most real being, and then concludes that this is the absolutely necessary being. But it is clear that this presupposes that the concept of a being of the highest reality fully satisfies the concept of absolute necessity in existence, that is, that the latter can be inferred from the former. This is a proposition asserted by the ontological argument, which is therefore accepted and taken as the basis in the cosmological proof, though it was precisely what

we intended to avoid. For absolute necessity is an existence from mere concepts. If I now say that the concept of the ens realissimum is such a concept, indeed the only one suited and adequate to necessary existence, I must also concede that the latter can be inferred from it. Thus it is properly only the ontological proof from mere concepts that contains all the force of proof in the so-called cosmological argument. The alleged experience is quite idle, useful perhaps only to lead us to the concept of absolute necessity, but not to demonstrate this in any determinate thing. For as soon as we intend this, we must immediately abandon all experience and seek among pure concepts which of them contains the conditions of the possibility of an absolutely necessary being.

[B 636]

But if in this way only the possibility of such a being is understood, its existence is also demonstrated; for this amounts to saying that among everything possible there is one thing carrying absolute necessity with it—that is, this being exists absolutely necessarily.

All deceptions in inference are most easily discovered when presented in scholastic form. Here is such a presentation.

If the proposition "Every absolutely necessary being is also the most real being" is correct (which is the nervus probandi of the cosmological proof), then, like all affirmative judgments, it must allow conversion at least per accidens: some most real beings are also absolutely necessary beings. Now an ens realissimum does not differ from another in any respect, and what holds of some contained under this concept therefore holds of all. Hence I will also be able to convert it (in this case) simply, that is, every most real being is a necessary being. Now since this proposition is determined solely from its concepts a priori, the mere concept of the most real being must also carry its absolute necessity with it. This is precisely what the ontological proof asserted.

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The cosmological proof refused to acknowledge it, yet covertly made it the basis of its inferences.

Thus the second path speculative reason takes to prove the existence of the highest being is not only as deceptive as the first, but has this further fault: it commits an ignoratio elenchi, promising to lead us along a new path but, after a short detour, bringing us back to the old one we had abandoned for its sake.

I said shortly before that a whole nest of dialectical pretensions lies hidden in this cosmological argument, which transcendental critique can readily discover and destroy. I will now merely list them, leaving the already practiced reader to investigate and remove these deceptive principles further.

We find here, for example: 1. The transcendental principle of inferring a cause from the contingent, which has significance only in the sensible world, but outside it has not even a meaning. For the merely intellectual concept of the contingent can produce no synthetic proposition such as that of causality, and the principle of causality has no significance or mark of its use except in the sensible world; yet here it was intended precisely to carry us beyond that world. 2.

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The inference from the impossibility of an infinite series of causes given one above another in the sensible world to a first cause. The principles of reason's use do not entitle us to this even in experience, much less to be able to extend this principle beyond experience (to which this chain cannot be prolonged at all). 3. Reason's false self-satisfaction regarding the completion of this series: finally removing every condition, without which no concept of necessity can occur, and, since we can then comprehend nothing further, taking this for a completion of the concept. 4. The confusion of the logical possibility of a concept of all reality united (without inner contradiction) with its transcendental possibility, which requires a principle of the feasibility of such a synthesis—a principle that in turn can concern only the field of possible experiences, and so on.

The artifice of the cosmological proof aims solely to evade proving the existence of a necessary being a priori through mere concepts, which would have to proceed ontologically, something we feel wholly incapable of doing. For this pur-

pose we infer, as best we can, from an actual existence taken as our basis (an experience in general) to some absolutely necessary condition of it. We then have no need to explain that condition's possibility.

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For if its existence is proved, the question of its possibility is quite unnecessary. If we now wish to determine this necessary being more closely in its constitution, we seek not what is sufficient to comprehend the necessity of existence from its concept—for if we could do that, we would need no empirical presupposition—but only the negative condition (conditio sine qua non), without which a being would not be absolutely necessary. This would work well enough in every other kind of inference from a given consequence to its ground. Unfortunately, however, here the condition required for absolute necessity can be found in only one being, which would therefore have to contain in its concept everything required for absolute necessity and thus make an a priori inference to it possible. That is, I would also have to be able to infer conversely: whatever thing this concept (of the highest reality) belongs to is absolutely necessary. If I cannot infer in this way (as I must confess if I wish to avoid the ontological proof), I have also failed on my new path and find myself back where I began. The concept of the highest being does indeed satisfy a priori all questions that can be raised about the inner determinations of a thing.

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It is therefore an incomparable ideal, because the universal concept also singles it out as an individual among all possible things. But it does not at all satisfy the question of its own existence, which was the sole point properly at issue. To someone who assumed the existence of a necessary being and wished only to know which among all things must be regarded as such, we could not answer: this here is the necessary being.

It may well be permissible to assume the existence of a being of the highest sufficiency as cause of all possible effects, to facilitate for reason the unity of explanatory grounds it seeks. But to presume so far as to say that such a being necessarily exists is no longer the modest expression of a permissible hypothesis,

but the bold pretension to apodictic certainty. For the cognition of what we profess to cognize as absolutely necessary must itself carry absolute necessity with it.

The entire problem of the transcendental ideal comes down to finding either a concept for absolute necessity or, for the concept of some thing, its absolute necessity. If we can do one, we must also be able to do the other; for reason cognizes as absolutely necessary only what is necessary from its concept.

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But both wholly exceed every utmost effort to satisfy our understanding on this point, and also every attempt to reconcile it to this incapacity.

The unconditioned necessity that we so indispensably need as the ultimate support of all things is the true abyss for human reason. Even eternity, however awesomely sublime a Haller may depict it, falls far short of producing the same dizzying impression on the mind; for it merely measures the duration of things, but does not support them. We cannot resist the thought, yet cannot bear it either, that a being we represent as the highest among all possible beings should say to itself, as it were: "I am from eternity to eternity; outside me there is nothing except what is something merely through my will. But where, then, do I come from?" Here everything beneath us gives way, and the greatest perfection, like the smallest, floats unsupported before speculative reason, which has no difficulty letting either vanish without the slightest hindrance.

Many forces of nature that manifest their existence through certain effects remain unfathomable to us, for we cannot trace them far enough through observation. The transcendental object underlying appearances is and remains unfathomable to us.

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And so is the ground why our sensibility has these rather than other highest conditions, although the thing itself is otherwise given, only not understood. But an ideal of pure reason cannot be called unfathomable, because it can display no further warrant for its reality than reason's need to complete all synthetic unity through it. Since it is thus not even given as a thinkable object, it is also not unfathomable as such. Rather, as a mere idea, it must find its seat and

its solution in the nature of reason, and thus be capable of investigation. For reason consists precisely in our being able to account for all our concepts, opinions, and assertions, whether from objective grounds or, if they are mere illusion, from subjective ones.

Discovery and Explanation of the Dialectical Illusion in All Transcendental Proofs of the Existence of a Necessary Being

Both proofs conducted so far were transcendental, that is, attempted independently of empirical principles. For although the cosmological proof takes an experience in general as its basis, it proceeds not from any particular constitution of that experience but from pure principles of reason in relation to an existence given through empirical consciousness in general, and even abandons this guidance to rest on nothing but pure concepts.

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What, then, in these transcendental proofs causes the dialectical yet natural illusion that connects the concepts of necessity and highest reality, realizing and hypostatizing what can only be an idea? What causes the inevitability of assuming something necessary in itself among existing things, yet at the same time recoiling before the existence of such a being as before an abyss? And how can reason be brought to understand itself on this point and pass from the wavering state of a timid assent, repeatedly withdrawn, to tranquil insight?

It is exceedingly noteworthy that if we presuppose that something exists, we cannot avoid the inference that something also exists necessarily. The cosmological argument rested on this entirely natural (though not therefore secure) inference. By contrast, whatever concept of a thing I may assume, I find that I can never represent its existence as absolutely necessary, and that nothing prevents me, whatever may exist, from thinking its nonbeing. Thus I must indeed assume something necessary for the existing in general, but can think no single thing itself as necessary in itself.

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That is, I can never complete the regression to the conditions of existing without assuming a necessary being, but I can never begin from it.

If I must think something necessary for existing things in general, but am not entitled to think any thing as necessary in itself, it follows inevitably that necessity and contingency must not concern and apply to the things themselves, since otherwise a contradiction would arise. Consequently, neither of these principles is objective; at most they can be only subjective principles of reason: on the one hand, to seek for everything given as existing something necessary, that is, never to stop except at an explanation completed a priori; on the other, never to hope for this completion, that is, to assume nothing empirical as unconditioned and thereby exempt ourselves from further derivation. In this meaning, both principles can quite well coexist as merely heuristic and regulative, concerned only with reason's formal interest. For one says: you should philosophize about nature as if everything belonging to existence had a necessary first ground, solely to bring systematic unity into your cognition by following such an idea, namely an imagined highest ground.

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The other, however, warns you not to take any single determination concerning the existence of things as such a highest ground, that is, as absolutely necessary, but always to keep open the path to further derivation, and therefore always to treat it as still conditioned. But if we must regard everything perceived in things as conditionally necessary, then no thing (that may be empirically given) can be regarded as absolutely necessary either.

From this it follows, however, that you must assume the absolutely necessary outside the world, because it is to serve only as a principle of the greatest possible unity of appearances, as their highest ground, and you can never reach it within the world, since the second rule commands you always to regard all empirical causes of unity as derivative.

The ancient philosophers regarded all form in nature as contingent, but matter, according to the judgment of ordinary reason, as original and necessary. Had they considered matter in its existence not relatively, as the substratum of appearances, but in itself, the idea of absolute necessity would immediately have disappeared. For nothing absolutely binds reason to this existence; it can

always abolish it in thought without conflict, yet absolute necessity lay only in thought as well. Some regulative principle must therefore have underlain this persuasion.

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Indeed, extension and impenetrability (which together constitute the concept of matter) are the highest empirical principle of the unity of appearances, and insofar as it is empirically unconditioned, it possesses a property of the regulative principle. Nevertheless, since every determination of matter constituting its reality, and hence impenetrability too, is an effect (action) that must have its cause and is therefore always still derivative, matter is unsuited to the idea of a necessary being as a principle of all derivative unity. For each of its real properties, as derivative, is only conditionally necessary and can therefore be abolished in itself; but thereby matter's entire existence would be abolished. If this did not happen, we would have reached empirically the highest ground of unity, which the second regulative principle forbids. It follows that matter, and generally whatever belongs to the world, is unsuited to the idea of a necessary original being as a mere principle of the greatest empirical unity, and that this being must instead be placed outside the world. We can then always confidently derive the appearances of the world and their existence from others, as if there were no necessary being.

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And yet we can strive unceasingly for completeness of derivation, as if such a being were presupposed as a highest ground.

According to these considerations, the ideal of the highest being is nothing other than a regulative principle of reason: to regard every combination in the world as if it arose from an all-sufficient necessary cause, in order to ground on this the rule of a systematic unity, necessary according to universal laws, in explaining that combination. It is not an assertion of an existence necessary in itself. Yet it is at the same time inevitable, through a transcendental subreption, to represent this formal principle as constitutive and think this unity hypostatically. For just as space, because it originally makes possible all shapes, which are merely different limitations of it, is nevertheless taken for that very reason as an

absolutely necessary, self-subsisting something and an object given a priori in itself, although it is only a principle of sensibility, so too it happens quite naturally that, since the systematic unity of nature can be established as a principle of the empirical use of our reason only insofar as we take the idea of a most real being as highest cause as our foundation, this idea is thereby represented as an actual object, and this object in turn, because it is the highest condition, as necessary.

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Thus a regulative principle is transformed into a constitutive one. This substitution reveals itself in the fact that, if I now consider this highest being—which was absolutely (unconditionally) necessary in relation to the world—as a thing on its own, this necessity admits of no concept. Hence it must have been found in my reason only as a formal condition of thinking, not as a material and hypostatic condition of existence.

Chapter Three Section Six The Impossibility of the Physicotheological Proof

If neither the concept of things in general nor the experience of any existence in general can accomplish what is required, one means remains to be tried: whether a determinate experience, namely that of the things of the present world, their constitution and arrangement, provides a ground of proof that can securely convince us of the existence of a highest being. Such a proof we would call physicotheological. If this too should be impossible, then no satisfactory proof from merely speculative reason is possible at all for the existence of a being corresponding to our transcendental idea.

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After all the remarks above, it will readily be seen that we can expect a quite easy and conclusive answer to this inquiry. For how could experience ever be given that was commensurate with an idea? The peculiarity of the latter consists precisely in the fact that no experience can ever be congruent with it. The transcendental idea of a necessary, all-sufficient original being is so extravagantly great, so elevated above everything empirical, which is always conditioned, that on the one hand we can never find enough material in experience

to fill such a concept, and on the other we will always grope among the conditioned, searching forever in vain for the unconditioned, of which no law of any empirical synthesis gives us an example or the slightest guidance.

If the highest being stood in this chain of conditions, it would itself be a member of their series and, like the lower members placed beneath it, would require further investigation concerning its still higher ground. If, by contrast, we wish to separate it from this chain and not include it, as a merely intelligible being, in the series of natural causes, what bridge can reason build to reach it? For all laws of transition from effects to causes, indeed all synthesis and extension of our cognition in general, are founded on nothing other than possible experience.

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They are thus founded merely on objects of the sensible world and can have meaning only in relation to them.

The present world opens before us so immeasurable a theater of manifoldness, order, purposiveness, and beauty, whether we pursue these into the infinity of space or into its unbounded division, that even after the knowledge our feeble understanding has been able to acquire of it, all language lacks its force before so many unsurveyably great wonders, all numbers their power to measure, and even our thoughts all boundary. Thus our judgment of the whole must dissolve into a speechless yet all the more eloquent astonishment. Everywhere we see a chain of effects and causes, of ends and means, regularity in arising and passing away; and since nothing has entered of itself into the state in which it is found, that state always points further to another thing as its cause, which makes precisely the same further inquiry necessary. In this way the entire universe would have to sink into the abyss of nothingness unless we assumed something that, outside this infinite contingent whole, originally and independently subsisting on its own, sustained it and, as the cause of its origin, also secured its continuance. This highest cause (in regard to all things of the world)—how great are we to think it?

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We do not know the world in its entire content, still less do we know how to estimate its magnitude by comparison with everything possible. But since we once need an ultimate and highest being with regard to causality, what prevents us from placing it above everything else possible in degree of perfection as well? We can easily accomplish this, though admittedly only through the delicate outline of an abstract concept, by representing in it, as one single substance, all possible perfection united. This concept favors our reason's demand for economy of principles, is subject to no contradictions in itself, and even helps extend reason's use within experience through the guidance such an idea gives toward order and purposiveness, while nowhere decisively conflicting with any experience.

This proof always deserves to be mentioned with respect. It is the oldest, clearest, and most suited to ordinary human reason. It enlivens the study of nature, just as it owes its own existence to that study and continually gains new strength from it. It introduces ends and intentions where our observation would not have discovered them on its own, and extends our knowledge of nature along the guiding thread of a special unity whose principle lies outside nature.

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But this knowledge in turn acts back on its cause, namely the idea that prompted it, increasing faith in a highest author to an irresistible conviction.

It would therefore be not only disheartening but quite futile to try to diminish the authority of this proof. Reason, ceaselessly elevated by grounds of proof so powerful and continually growing in its hands, though only empirical, cannot be so depressed by the doubts of subtle abstract speculation that a glance at the wonders of nature and the majesty of the world's structure would not tear it from every brooding indecision as from a dream, to rise from greatness to greatness up to the very highest, from the conditioned to the condition up to the supreme and unconditioned author.

Yet although we have nothing to object to in the rationality and usefulness of this procedure, and must instead recommend and encourage it, we cannot therefore approve the claims this kind of proof might make to apodictic cer-

tainty and to an assent needing no favor or outside support. And it can by no means harm the good cause to lower the dogmatic language of a scornful reasoner to the tone of moderation and modesty, of a faith sufficient to bring peace, though not commanding unconditional submission.

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I therefore maintain that the physicotheological proof can never by itself demonstrate the existence of a highest being, but must always leave it to the ontological proof (to which it serves only as an introduction) to remedy this deficiency. The latter thus still contains the only possible ground of proof (if a speculative proof takes place at all) which no human reason can bypass.

The main elements of this physicotheological proof are these: 1. Everywhere in the world are clear signs of an arrangement according to a determinate intention, carried out with great wisdom, in a whole of indescribable manifoldness of content and unbounded magnitude of extent. 2. This purposive arrangement is quite foreign to the things of the world and attaches to them only contingently. That is, the nature of different things could not of itself harmonize toward determinate ultimate ends through so many different means converging together unless they had expressly been chosen and designed for this by an ordering rational principle according to underlying ideas. 3. Thus there exists a sublime and wise cause (or several), which must be the cause of the world not merely through fecundity, as blindly acting omnipotent nature, but through freedom, as intelligence. 4. Its unity can be inferred from the unity of the reciprocal relation of the world's parts.

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These are members of an artful structure; the inference is certain in what our observation reaches, and beyond that probable according to all principles of analogy.

Natural reason infers, from the analogy of certain natural products with what human art produces when it does violence to nature, compelling it to proceed not according to its own ends but to accommodate ours (from their resemblance to houses, ships, and clocks), that just such a causality, namely understanding and will, also underlies nature. It derives the inner possibility of freely

operating nature (which first makes all art, and perhaps even reason itself, possible) from yet another, though superhuman, art. Without quibbling here with this inference, which might not withstand the strictest transcendental critique, we must nevertheless confess that if we are once to name a cause, we can proceed no more securely than by analogy with such purposive productions, the only ones whose causes and mode of operation are fully known to us. Reason could not justify to itself passing from a causality it knows to obscure and unprovable grounds of explanation it does not know.

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According to this inference, the purposiveness and harmony of so many natural arrangements would have to prove merely the contingency of form, not of matter, that is, of the substance in the world. For the latter would additionally require proof that the things of the world were in themselves unsuited to such order and harmony according to universal laws unless, even in their substance, they were products of a highest wisdom. This would require quite different grounds of proof from those of analogy with human art. Thus the proof could at most demonstrate an architect of the world, always very much limited by the suitability of the material he works with, but not a creator of the world, to whose idea everything is subject. This falls far short of sufficing for the great aim before us: proving an all-sufficient original being. If we wished to prove the contingency of matter itself, we would have to take refuge in a transcendental argument, which was precisely what was to be avoided here.

The inference therefore proceeds from the order and purposiveness so thoroughly observable in the world, as a thoroughly contingent arrangement, to the existence of a cause proportionate to it. But the concept of this cause must make something quite determinate about it known to us; thus it can be none other than the concept of a being possessing all power, wisdom, and so on—in a word, all perfection—as an all-sufficient being.

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For predicates of very great, astonishing, or immeasurable power and excellence give no determinate concept and do not properly say what the thing is in itself. They are only relative representations of the magnitude of the object that the

observer (of the world) compares with himself and his power of comprehension, and turn out equally laudatory whether we enlarge the object or diminish the observing subject in relation to it. Where the magnitude (of perfection) of a thing in general is at issue, no concept is determinate except one comprehending all possible perfection, and only the all (omnitudo) of reality is thoroughly determined in the concept.

Now I would not expect anyone to presume to understand the relation of the world's magnitude as he observes it (both in extent and content) to omnipotence, of the world's order to the highest wisdom, of the world's unity to the author's absolute unity, and so on. Thus physicotheology can give no determinate concept of the supreme cause of the world, and therefore cannot suffice as a principle of theology, which in turn is to constitute the foundation of religion.

The step to absolute totality is wholly impossible by the empirical path. Yet this step is nevertheless taken in the physicotheological proof.

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What means, then, is used to cross so vast a gulf?

After reaching admiration for the greatness of the wisdom, power, and so on of the author of the world, and being unable to go further, one suddenly abandons this argument conducted through empirical grounds of proof and turns to the world's contingency, inferred at the very beginning from its order and purposiveness. From this contingency alone one now proceeds, solely through transcendental concepts, to the existence of something absolutely necessary; and from the concept of the absolute necessity of the first cause, to its thoroughly determined or determining concept, namely an all-embracing reality. Thus the physicotheological proof became stuck in its undertaking and, in this predicament, suddenly leaped over to the cosmological proof. Since that is only a concealed ontological proof, it actually accomplished its aim solely through pure reason, although at first it had denied all kinship with pure reason and staked everything on evident proofs from experience.

Physicotheologians therefore have no reason to be so disdainful toward the transcendental kind of proof and, with the conceit of clear-sighted students of nature, look down on it as the cobweb of obscure speculators. For if they would only examine themselves, they would find the following.

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After advancing a good distance on the ground of nature and experience and nevertheless seeing themselves still just as far from the object that appears before their reason, they suddenly abandon this ground and pass into the realm of mere possibilities. There, on the wings of ideas, they hope to approach what has eluded all their empirical searching. After finally imagining they have gained firm footing through so mighty a leap, they extend the now determinate concept (which they have come to possess without knowing how) over the whole field of creation, and elucidate through experience—though poorly enough and far beneath the dignity of its object—the ideal that was solely a product of pure reason, without wishing to confess that they reached this knowledge or presupposition by a path other than experience.

Thus the physicotheological proof rests on the cosmological, and that in turn on the ontological proof of the existence of one original being as the highest being. Since no path beyond these three is open to speculative reason, the ontological proof from nothing but pure concepts of reason is the only possible one, if any proof at all is possible of a proposition so far elevated above every empirical use of the understanding.

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Chapter Three Section Seven Critique of All Theology from Speculative Principles of Reason

If by theology I understand cognition of the original being, it is either from mere reason (theologia rationalis) or from revelation (revelata). The former thinks its object either solely through pure reason, by means of nothing but transcendental concepts (ens originarium, realissimum, ens entium), and is called transcendental theology; or through a concept it borrows from nature (our soul), as the highest intelligence, and would have to be called natural theology. Someone who admits only a transcendental theology is called a deist;

someone who also accepts a natural theology, a theist. The former concedes that we can at most cognize the existence of an original being through mere reason, but that our concept of it is merely transcendental: only that of a being possessing all reality, which we cannot determine more closely. The latter maintains that reason is capable of determining the object more closely by analogy with nature: as a being that through understanding and freedom contains within itself the original ground of all other things.

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Thus the former represents by it merely a cause of the world (whether through the necessity of its nature or through freedom remains undecided), the latter an author of the world.

Transcendental theology either intends to derive the existence of the original being from an experience in general (without determining anything more closely about the world to which it belongs), and is called cosmotheology; or believes it can cognize its existence through mere concepts without the aid of the slightest experience, and is called ontotheology.

Natural theology infers the properties and existence of an author of the world from the constitution, order, and unity found in this world, in which two kinds of causality and their rule must be assumed, namely nature and freedom. It therefore ascends from this world to the highest intelligence, either as the principle of all natural order and perfection or of all moral order and perfection. In the former case it is called physicotheology, in the latter moral theology.*

* Not theological morality; for that contains moral laws presupposing the existence of a highest ruler of the world, whereas moral theology is a conviction of the existence of a highest being grounded in moral laws.

By the concept of God we are accustomed to understand not merely a blindly acting eternal nature as the root of things, but a highest being.

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It is to be the author of things through understanding and freedom. And since this concept alone interests us, strictly speaking we could deny the deist all faith in God, leaving him only the assertion of an original being or supreme cause.

Yet because no one may be accused of wishing to deny something merely because he does not venture to assert it, it is gentler and fairer to say that the deist believes in a God, the theist in a living God (summam intelligentiam). We will now seek the possible sources of all these attempts of reason.

I am content here to explain theoretical cognition as cognition through which I cognize what is, practical cognition as that through which I represent what ought to be. Accordingly, the theoretical use of reason is that through which I cognize a priori (as necessary) that something is; the practical use is that through which what ought to happen is cognized a priori. Now if either that something is, or that it ought to happen, is indubitably certain but still only conditioned, then either a certain determinate condition of it can be absolutely necessary, or it can be presupposed only as optional and contingent. In the first case the condition is postulated (per thesin), in the second supposed (per hypothesin).

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Since there are practical laws that are absolutely necessary (the moral laws), if these necessarily presuppose some existence as the condition of the possibility of their binding force, this existence must be postulated, because the conditioned from which we infer this determinate condition is itself cognized a priori as absolutely necessary. Later we will show of moral laws that they not only presuppose the existence of a highest being, but also, since in another respect they are absolutely necessary, rightly postulate it—though admittedly only practically. For now we set this mode of inference aside.

Since, when we speak merely of what is (not what ought to be), the conditioned given to us in experience is always also thought as contingent, its corresponding condition cannot be cognized from it as absolutely necessary. Rather, it serves for rational cognition of the conditioned only as a relatively necessary —or, more properly, requisite—presupposition, but one arbitrary in itself and a priori. Thus if the absolute necessity of a thing is to be cognized in theoretical cognition, this could occur only from concepts a priori, never as the necessity of a cause in relation to an existence given through experience.

A theoretical cognition is speculative if it concerns an object, or concepts of an object, that we can reach in no experience.

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It is opposed to cognition of nature, which concerns no objects or predicates of them except those that can be given in a possible experience.

The principle of inferring a cause from what happens (the empirically contingent) as effect is a principle of cognition of nature, but not of speculative cognition. For if we abstract from its being a principle containing the condition of possible experience in general and, omitting everything empirical, intend to assert it of the contingent in general, not the slightest justification of such a synthetic proposition remains by which to see how I can pass from something that is to something entirely different from it (called a cause). Indeed, in such merely speculative use, the concept of a cause, like that of the contingent, loses all meaning whose objective reality could be made comprehensible in concreto.

Now if we infer from the existence of things in the world to their cause, this belongs not to the natural but to the speculative use of reason. For the former refers not things themselves (substances), but only what happens, hence their states as empirically contingent, to some cause. That substance itself (matter) is contingent in existence would have to be a merely speculative rational cognition.

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But even if we spoke only of the world's form, the manner of its combination and its changes, yet wished to infer from this a cause wholly distinct from the world, this would again be a judgment of merely speculative reason, because the object here is no object of a possible experience at all. The principle of causality, however, which holds only within the field of experiences and outside it has no use, indeed no meaning, would then be wholly diverted from its purpose.

I now maintain that all attempts at a merely speculative use of reason regarding theology are wholly fruitless and, by their inner constitution, null and void; but that the principles of reason's natural use lead to no theology at all. Consequently, unless moral laws are taken as a basis or used as a guiding thread,

there can be no theology of reason whatever. For all synthetic principles of the understanding have an immanent use, whereas cognition of a highest being requires a transcendent use of them, for which our understanding is not equipped at all. If the empirically valid law of causality is to lead to the original being, this being would have to belong to the chain of objects of experience; but then, like all appearances, it would itself be conditioned in turn.

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Even if we permitted the leap beyond the boundary of experience by means of the dynamical law relating effects to their causes, what concept could this procedure supply? By no means a concept of a highest being, because experience never presents us with the greatest of all possible effects (which is supposed to bear witness to its cause). If, merely to leave nothing empty in our reason, we are to be allowed to fill this lack of complete determination through a mere idea of the highest perfection and original necessity, this can indeed be granted as a favor, but not demanded by right of an irresistible proof. Thus the physicotheological proof might perhaps lend force to other proofs, if such are available, by connecting speculation with intuition; but by itself it does more to prepare the understanding for theological cognition and give it a straight and natural direction toward it than it could complete the work alone.

We can thus clearly see that transcendental questions admit only transcendental answers, that is, answers from nothing but concepts a priori without the slightest empirical admixture. But here the question is plainly synthetic and demands an extension of our cognition beyond all boundaries of experience: to the existence of a being supposed to correspond to our mere idea, which no experience can ever equal.

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Now according to our proofs above, all synthetic cognition a priori is possible only by expressing the formal conditions of a possible experience, and all principles thus have only immanent validity: they refer solely to objects of empirical cognition, or appearances. Thus nothing is accomplished by a transcendental procedure either, regarding the theology of a merely speculative reason.

But if someone would rather cast doubt on all the above proofs of the Analytic than let himself be deprived of his persuasion about the weight of the long-used grounds of proof, he cannot refuse to meet the challenge when I demand that he at least justify how, and through what illumination, he ventures to soar above all possible experience by the power of mere ideas. I would ask to be spared new proofs or revisions of old ones. Admittedly, there is not much choice here, since all merely speculative proofs ultimately come down to a single one, the ontological, so I need not fear being particularly burdened by the fertility of the dogmatic champions of that reason free of the senses.

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Moreover, without imagining myself especially combative, I will not decline the challenge to expose the fallacy in every attempt of this kind and thereby frustrate its pretension. Yet this never entirely extinguishes the hope of better fortune in those once accustomed to dogmatic persuasions. I therefore hold to the single reasonable demand that they justify, in general and from the nature of human understanding together with all other sources of cognition, how they intend to extend their cognition wholly a priori, carrying it where no possible experience, and hence no means, reaches to assure any concept we have devised ourselves of its objective reality. However the understanding may have arrived at this concept, the existence of its object cannot be found analytically in it, because cognition of the object's existence consists precisely in its being posited in itself outside the thought. But it is wholly impossible to go outside a concept of itself and, without following empirical connection (through which only appearances are ever given), arrive at the discovery of new objects and extravagant beings.

Although reason in its merely speculative use falls far short of sufficing for this great aim, namely reaching the existence of a supreme being, it is nevertheless of very great use.

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It corrects cognition of that being, if it could be drawn from elsewhere; makes it agree with itself and with every intelligible purpose; and purifies it of everything that might conflict with the concept of an original being and of every

admixture of empirical limitations.

Despite all its inadequacy, transcendental theology thus retains an important negative use and is a constant censor of our reason when reason deals only with pure ideas, which for that very reason admit no standard other than a transcendental one. For if, in another, perhaps practical relation, the presupposition of a highest and all-sufficient being as supreme intelligence once maintained its validity without dispute, it would be of the greatest importance to determine this concept precisely on its transcendental side as the concept of a necessary and most real being; to remove what conflicts with the highest reality and belongs to mere appearance (anthropomorphism in the wider sense); and at the same time to clear away all opposed assertions, whether atheistic, deistic, or anthropomorphic. This is very easy in such a critical treatment, since the same grounds by which human reason's inability to assert the existence of such a being is displayed must also suffice to prove the unfitness of every counterassertion.

[B 669]

For where could anyone derive through pure speculation of reason the insight that there is no highest being as the original ground of everything; or that none of the properties belongs to it that, according to their consequences, we represent as analogous to the dynamical realities of a thinking being; or that, in the latter case, these properties must also be subject to all the limitations that sensibility inevitably imposes on the intelligences we know through experience?

Thus for the merely speculative use of reason, the highest being remains a mere but faultless ideal, a concept that completes and crowns the whole of human cognition, whose objective reality can neither be proved nor refuted on this path. And if there should be a moral theology capable of remedying this deficiency, the previously merely problematic transcendental theology then proves its indispensability by determining its concept and ceaselessly censuring a reason often enough deceived by sensibility and not always in agreement with its own ideas. Necessity, infinity, unity, existence outside the world (not as a world-soul), eternity without conditions of time, omnipresence without conditions of space, omnipotence, and so on, are all transcendental predicates.

[B 670]

Hence their purified concept, which every theology so greatly needs, can be drawn solely from transcendental theology.

Appendix to the Transcendental Dialectic The Regulative Use of the Ideas of Pure Reason

The outcome of all dialectical attempts of pure reason confirms not only what we have already proved in the Transcendental Analytic: that all inferences meant to carry us beyond the field of possible experience are deceptive and unfounded. It also teaches us something more specific: human reason has a natural tendency to cross this boundary, and transcendental ideas are as natural to it as the categories are to the understanding. The difference is that, while the latter lead to truth—that is, to the agreement of our concepts with the object—the former produce a mere but irresistible illusion whose deception even the most searching critique can scarcely prevent.

Everything grounded in the nature of our powers must be purposive and consistent with their proper use.

[B 671]

That holds, if only we can prevent a certain misunderstanding and discover their true direction. We may therefore presume that transcendental ideas have a sound and consequently immanent use, although, when their meaning is misunderstood and they are taken for concepts of actual things, their application can become transcendent and thus deceptive. For it is not the idea itself but only its use that can either soar beyond all possible experience (be transcendent) or remain at home within it (be immanent), depending on whether we direct it immediately to an object supposedly corresponding to it or merely to the use of the understanding in general with regard to the objects with which it deals. All errors of subreption must always be attributed to a deficiency in the power of judgment, never to the understanding or reason.

Reason never relates directly to an object, but only to the understanding and, through it, to its own empirical use. It therefore creates no concepts (of objects), but merely orders them and gives them the unity they can possess in their greatest possible extension: that is, in relation to the totality of series. The

understanding pays no attention to this totality, but only to the connection through which series of conditions arise everywhere in accordance with concepts.

[B 672]

Thus reason has as its proper object only the understanding and its purposive employment. Just as the understanding unites the manifold in the object through concepts, reason in turn unites the manifold of concepts through ideas, setting a certain collective unity as the goal of the understanding's actions, which are otherwise concerned only with distributive unity.

I therefore maintain that transcendental ideas never have a constitutive use, as though they supplied concepts of certain objects; when understood in this way, they are merely sophistical (dialectical) concepts. They do, however, have an excellent and indispensably necessary regulative use: they direct the understanding toward a certain goal, with a view to which the lines of direction of all its rules converge at a point. Although this point is only an idea (focus imaginarius), that is, a point from which the concepts of the understanding do not actually proceed, since it lies entirely outside the boundaries of possible experience, it nevertheless serves to give them the greatest unity together with the greatest extension. This does indeed give rise to the deception that these lines of direction issue from an object itself lying outside the field of empirically possible cognition (just as objects are seen behind the surface of a mirror). Yet this illusion (which can be prevented from deceiving us) is nonetheless indispensably necessary.

[B 673]

That is so if, besides the objects before our eyes, we also want to see those lying far off behind our backs—that is, in our case, if we want to train the understanding to go beyond every given experience (as a part of the whole of possible experience), and thus to its greatest and furthest possible extension.

If we survey the cognitions of our understanding in their full extent, we find that what reason peculiarly prescribes for them and seeks to bring about is the systematic character of cognition: its coherence through a principle. This unity of reason always presupposes an idea, namely that of the form of a whole of

cognition that precedes determinate cognition of the parts and contains the conditions for determining a priori each part's place and relation to the others. This idea accordingly postulates complete unity in the cognition of the understanding, making it not a merely accidental aggregate but a system connected according to necessary laws. Strictly speaking, we cannot say that this idea is a concept of the object; it is a concept of the thoroughgoing unity of these concepts, insofar as that unity serves the understanding as a rule. Such concepts of reason are not drawn from nature. Rather, we question nature in accordance with these ideas and regard our cognition as deficient so long as it is not adequate to them.

[B 674]

It is admitted that pure earth, pure water, pure air, and so on can scarcely be found. Nevertheless, we need concepts of them (which, as regards complete purity, therefore originate only in reason) to determine properly the share each of these natural causes has in the appearance. We thus reduce all materials to earths (as it were the mere load), salts and combustible substances (as the force), and finally water and air as vehicles (as it were machines through which the former act), in order to explain the chemical interactions of materials according to the idea of a mechanism. For although people do not actually express themselves this way, such an influence of reason on natural scientists' classifications is very easy to discover.

If reason is a faculty for deriving the particular from the universal, then either the universal is already certain in itself and given, in which case only the power of judgment is needed for subsumption, and the particular is thereby necessarily determined. I shall call this the apodictic use of reason. Or the universal is assumed only problematically and is a mere idea; the particular is certain, but the universality of the rule for this consequence remains a problem. Several particular cases, all of them certain, are then tested against the rule to see whether they follow from it.

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In that case, if it appears that all the particular cases that can be cited follow from it, we infer the universality of the rule, and subsequently infer from this universality all cases, including those not given in themselves. I shall call this the hypothetical use of reason.

The hypothetical use of reason, proceeding from ideas laid down as problematic concepts, is not properly constitutive. That is, judged with complete rigor, it is not such that the truth of the universal rule assumed as a hypothesis follows from it. For how could we know all the possible consequences which, by following from the same assumed principle, would prove its universality? Rather, it is only regulative, serving to bring unity into particular cognitions as far as possible and thereby to bring the rule closer to universality.

The hypothetical use of reason thus aims at the systematic unity of the understanding's cognitions, and this unity is the touchstone of the truth of rules. Conversely, systematic unity (as a mere idea) is only a projected unity, which must be regarded not as given in itself but only as a problem. Yet it serves to find a principle for the manifold and particular use of the understanding, and thereby to guide that use beyond the cases that are given and make it coherent. [B 676]

From this we see only that the systematic unity, or unity of reason, of the understanding's manifold cognition is a logical principle. Where the understanding alone cannot arrive at rules, this principle assists it through ideas; at the same time it brings its diverse rules into agreement under one principle (systematic) and thus gives them coherence as far as possible. But whether the constitution of objects, or the nature of the understanding that cognizes them as such, is in itself destined for systematic unity; whether this unity can to some degree be postulated a priori, even without regard to such an interest of reason; and whether we can therefore say that all possible cognitions of the understanding (including empirical ones) possess unity of reason and fall under common principles from which, despite their diversity, they can be derived—this would be a transcendental principle of reason. It would make systematic unity necessary not merely subjectively and logically, as a method, but objectively.

Let us illustrate this with a case of reason's use. Among the different kinds of unity according to concepts of the understanding is the unity of a substance's causality, which is called force. The various appearances of one and the same substance at first seem so heterogeneous that we must initially assume almost as many kinds of force in it as there are effects that manifest themselves.

[B 677]

Examples in the human mind are sensation, consciousness, imagination, memory, wit, the power of discrimination, pleasure, desire, and so on. A logical maxim initially commands us to reduce this apparent diversity as far as possible by discovering hidden identity through comparison and examining whether imagination combined with consciousness might be memory, wit, the power of discrimination, perhaps even understanding and reason. The idea of a fundamental power—though logic does not at all establish whether such a thing exists—is at least the problem of a systematic representation of the manifold of forces. The logical principle of reason requires us to bring about this unity as far as possible. The more the appearances of one force and another are found to be identical, the more probable it becomes that they are merely different manifestations of one and the same force, which can be called (comparatively) their fundamental power. We proceed in the same way with the rest.

These comparatively fundamental powers must in turn be compared with one another, so that, by discovering their agreement, we may bring them closer to a single radical, that is, absolute fundamental power. But this unity of reason is merely hypothetical. We do not assert that such a fundamental power must actually be found, but that we must seek it for reason's sake, namely to establish certain principles for the various rules that experience may supply.

[B 678]

In this way, wherever it can be done, we must bring systematic unity into cognition.

Yet if we attend to the transcendental use of the understanding, we find that this idea of a fundamental power in general is not intended merely as a problem for hypothetical use. It lays claim to objective reality, thereby postulating the systematic unity of the various forces of a substance and establishing an apodic-

tic principle of reason. For even before we have tested the agreement of the various forces—and even if all our attempts to discover it fail—we nevertheless presuppose that such agreement will be found. We do so not only, as in the case cited, on account of the unity of the substance. Where very many forces, though to some degree homogeneous, are found, as in matter in general, reason likewise presupposes the systematic unity of manifold forces, since particular laws of nature fall under more general ones, and economy of principles becomes not merely an economical principle of reason but an inner law of nature.

Indeed, it is impossible to see how a logical principle of the unity of reason in rules could hold unless a transcendental principle were presupposed, through which such systematic unity, as belonging to the objects themselves, is assumed a priori to be necessary.

[B 679]

For by what right can reason, in its logical use, require us to treat the manifold forces that nature makes known to us as a merely hidden unity, and to derive them as far as possible from some fundamental power, if reason were free to concede that all forces might equally well be heterogeneous and that systematic unity in their derivation might not accord with nature? In that case, reason would act directly against its own vocation by making an idea its goal that wholly contradicted nature's arrangement. Nor can we say that reason has first gathered this unity, according to its own principles, from nature's contingent constitution. For reason's law requiring us to seek this unity is necessary: without it we would have no reason at all; without reason, no coherent use of the understanding; and without this, no sufficient mark of empirical truth. With regard to this last, therefore, we must absolutely presuppose nature's systematic unity as objectively valid and necessary.

We also find this transcendental presupposition concealed in a remarkable way in philosophers' principles, although they have not always recognized it there or admitted it to themselves.

[B 680]

That all the manifold differences of individual things do not exclude identity of species; that the various species must be treated merely as different determinations of a few genera, and these in turn of still higher genera, and so on; and that a certain systematic unity of all possible empirical concepts must therefore be sought, insofar as they can be derived from higher and more general ones—this is a scholastic rule or logical principle without which reason could not be used at all. For we can infer from the universal to the particular only insofar as universal properties of things are laid down under which the particular properties fall.

But philosophers also presuppose that such agreement is found in nature in the familiar scholastic rule that beginnings (principles) must not be multiplied unnecessarily (entia praeter necessitatem non esse multiplicanda). This says that the nature of things itself provides material for the unity of reason, and that its apparently infinite diversity must not prevent us from suspecting behind it a unity of fundamental properties, from which the manifold can be derived merely through further determination. Although this unity is a mere idea, it has always been pursued so eagerly that there has been more reason to moderate the desire for it than to encourage it. It was already a considerable achievement for chemists to reduce all salts to two principal genera, acids and alkalis; they even attempt to regard this distinction itself as merely a variation or different manifestation of one and the same basic material.

[B 681]

People have gradually tried to reduce the various kinds of earths (the material of stones and even of metals) to three, and finally to two. Yet, still dissatisfied, they cannot abandon the thought of a single genus behind these varieties, or even of a principle common to them and to salts. One might perhaps believe this to be merely an economical expedient of reason, intended to save as much effort as possible, and a hypothetical attempt which, if successful, lends probability to the presupposed ground of explanation through this very unity. But such a self-serving intention is very easily distinguished from the idea according to which

everyone presupposes that this unity of reason accords with nature itself, and that reason here does not beg but commands, although it cannot determine the boundaries of this unity.

Suppose the appearances presented to us displayed such great diversity—not, I mean, of form, for they might resemble one another in that respect, but of content, that is, in the manifold of existing beings—that even the sharpest human understanding could not, by comparing one with another, discover the slightest similarity. Such a case can certainly be conceived. The logical law of genera would then have no place at all.

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There would be no concept of a genus or any universal concept, indeed no understanding, since the understanding deals only with such concepts. Thus the logical principle of genera presupposes a transcendental principle if it is to be applied to nature (by which I here understand only objects given to us). According to this principle, homogeneity is necessarily presupposed in the manifold of a possible experience (although we cannot determine its degree a priori); for without it no empirical concepts, and therefore no experience, would be possible.

The logical principle of genera, which postulates identity, is opposed by another, that of species. This requires a manifold and differences among things despite their agreement under the same genus, and prescribes that the understanding attend no less to the former than to the latter. This principle (of acuteness, or of the faculty of discrimination) greatly restricts the recklessness of the first principle (that of wit). Here reason displays a twofold, conflicting interest: on the one hand, an interest in extension (universality) with regard to genera; on the other, an interest in content (determinacy) with regard to the manifold of species, because in the first case the understanding thinks much under its concepts, in the second all the more within them.

[B 683]

This is also expressed in the very different ways natural scientists think. Some (who are chiefly speculative), as it were hostile to heterogeneity, always look toward the unity of the genus; others (chiefly empirical minds) constantly seek

to divide nature into so great a manifold that we might almost have to abandon hope of judging its appearances according to universal principles.

This latter way of thinking clearly also rests on a logical principle aimed at the systematic completeness of all cognitions when, beginning with the genus, I descend to the manifold that may be contained under it, seeking in this way to give the system extension, just as in the first case, by ascending to the genus, I seek to give it simplicity. For the sphere of the concept that designates a genus no more reveals how far its division can proceed than does the space that matter can occupy. Every genus therefore requires different species, and these in turn different subspecies. Since none of the latter can exist without again having a sphere (extension as conceptus communis), reason, in its full scope, requires that no species be regarded as in itself the lowest. For it always remains a concept containing only what different things have in common; it therefore cannot be thoroughly determined, and so cannot relate immediately to an individual. [B 684]

It must consequently always contain other concepts, that is, subspecies, under itself. This law of specification could be expressed as follows: entium varietates non temere esse minuendas.

It is easy to see, however, that this logical law too would lack meaning and application unless it rested on a transcendental law of specification. This law certainly does not demand an actual infinity of differences among the things that can become our objects; the logical principle gives no grounds for that, since it asserts only the indeterminacy of the logical sphere with regard to possible division. Nevertheless, it obliges the understanding to seek subspecies under every species we encounter, and smaller differences within every difference. For if there were no lower concepts, there would be no higher ones either. Now the understanding cognizes everything only through concepts; hence, however far it proceeds in division, it never cognizes through mere intuition but always through lower concepts in turn. Cognition of appearances in their thoroughgoing determination (which is possible only through the understanding)

requires an endlessly continued specification of its concepts and a progression toward differences that still remain, from which abstraction was made in the concept of the species and still more in that of the genus.

[B 685]

Nor can this law of specification be borrowed from experience, for experience cannot yield disclosures of such reach. Empirical specification soon comes to a halt in distinguishing the manifold unless it is guided by the antecedent transcendental law of specification, as a principle of reason, to seek differences and always to suspect them even when they do not reveal themselves to the senses. The discovery that absorbent earths are of different kinds (calcareous and muriatic earths) required a prior rule of reason. This set the understanding the task of seeking the difference, presupposing nature to be rich enough to warrant suspecting it. For we possess understanding only on the presupposition of differences in nature, just as we possess it only on the condition that nature's objects are homogeneous in themselves, because the manifold of what can be gathered under a concept is precisely what constitutes the use of that concept and the activity of the understanding.

Reason thus prepares the understanding's field for it: 1. through a principle of the homogeneity of the manifold under higher genera; 2. through a principle of the variety of the homogeneous under lower species; and, to complete systematic unity, 3. it adds a law of the affinity of all concepts.

[B 686]

This law commands a continuous transition from every species to every other through a graduated increase in difference. We can call these the principles of homogeneity, specification, and continuity of forms. The last arises from uniting the first two after we have completed systematic coherence in the idea, both in ascending to higher genera and in descending to lower species. For all the manifold is then related, because all of it descends through every degree of expanded determination from a single highest genus.

We can give sensible form to systematic unity under these three logical principles in the following way. Every concept can be regarded as a point which, as the standpoint of a spectator, has its horizon: a multitude of things that can be

represented and, as it were, surveyed from it. Within this horizon an infinite multitude of points must be assignable, each of which in turn has its narrower field of view. That is, every species contains subspecies according to the principle of specification, and the logical horizon consists only of smaller horizons (subspecies), not of points without extension (individuals). But for different horizons—that is, genera determined by as many concepts—we can conceive a common horizon drawn, from which they can all be surveyed as from a center.
[B 687]
This is the higher genus, until finally the highest genus is the universal and true horizon, determined from the standpoint of the highest concept and encompassing all the manifold as genera, species, and subspecies.
The law of homogeneity leads me to this highest standpoint; the law of specification leads me to all lower ones and their greatest variety. But since in this way there is nothing empty throughout the entire extension of all possible concepts, and nothing can be found outside it, the presupposition of that universal field of view and its thoroughgoing division gives rise to the principle: non datur vacuum formarum. That is, there are no different original and first genera that are, as it were, isolated and separated from one another (by an empty intervening space). Rather, all the manifold genera are merely divisions of a single highest and universal genus. From this principle follows its immediate consequence: datur continuum formarum. That is, all differences of species border on one another and permit no transition from one to another by a leap, but only through all the smaller degrees of difference by which one can get from one to the other. In a word, no species or subspecies are nearest to one another (in reason's concept); intermediate species are always still possible.
[B 688]
Their difference from the first and the second is smaller than the difference of those two from one another.
The first law thus prevents us from straying into a manifold of different original genera and recommends homogeneity. The second in turn restricts this inclination toward agreement and commands us to distinguish subspecies before turning with our universal concept to individuals. The third unites the

two: even amid the greatest manifold, it prescribes homogeneity through a graduated transition from one species to another. This indicates a kind of kinship among the different branches, insofar as they have all sprung from one stem.

But this logical law of the continui specierum (formarum logicarum) presupposes a transcendental one (lex continui in natura). Without it, the understanding's use would only be misled by this precept, since it might take a path directly opposed to nature. This law must therefore rest on purely transcendental, not empirical, grounds. In the latter case it would come later than the systems, whereas it has in fact first produced the systematic character of our cognition of nature. Nor do these laws conceal intentions to put them to the test as mere experiments.

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Certainly this coherence, wherever it holds, provides a powerful ground for regarding the hypothetically devised unity as well founded, and the laws are thus useful in this respect as well. But they clearly show that they judge economy of fundamental causes, multiplicity of effects, and the resulting kinship among nature's members to be in themselves rational and appropriate to nature. These principles thus carry their recommendation directly, not merely as expedients of method.

It is easy to see, however, that this continuity of forms is a mere idea for which no congruent object can be exhibited in experience. This is not only because species in nature are actually divided and must therefore in themselves constitute a quantum discretum, and, if the graduated progression in their kinship were continuous, would also have to contain a true infinity of intermediate members lying between two given species, which is impossible. It is also because we can make no determinate empirical use of this law: it indicates not the slightest mark of affinity by which, or how far, we should seek the graduated sequence of their differences. It gives only a general indication that we are to seek it.

[B 690]

If we rearrange the principles just cited to bring them into line with their use in experience, the principles of systematic unity would stand roughly as follows: manifoldness, kinship, and unity, each taken as an idea at the highest degree of its completeness. Reason presupposes the understanding's cognitions, which are applied in the first instance to experience, and seeks their unity according to ideas that extend far beyond experience's reach. The kinship of the manifold under a principle of unity, without prejudice to its differences, concerns not only things but still more their mere properties and forces. Thus, for example, if an experience (not yet fully corrected) presents the planets' courses as circular, and we find differences, we suspect them in that which can, according to a constant law and through all infinitely many intermediate degrees, transform a circle into one of these deviating orbits. That is, the planets' motions that are not circular will perhaps approximate the circle's properties more or less closely, and fall upon the ellipse. Comets show still greater differences in their paths, since (as far as observation reaches) they do not even return in a circuit. Yet we conjecture a parabolic course, which is nevertheless related to the ellipse and cannot in any of our observations be distinguished from it when the ellipse's major axis is very greatly extended.

[B 691]

Guided by these principles, we thus arrive at unity of genus among these orbits in respect of their shape, and thereby proceed to the unity of the cause of all the laws of their motion (gravitation). From there we extend our conquests, seeking to explain all varieties and apparent deviations from those rules by the same principle. Finally, we even add more than experience can ever confirm: following the rules of kinship, we conceive even hyperbolic cometary orbits in which these bodies leave our solar system altogether and, passing from sun to sun, unite in their course the remoter parts of a cosmic system unbounded to us and connected by one and the same moving force.

What is remarkable about these principles, and alone concerns us here, is this: they appear to be transcendental. Although they contain merely ideas for the empirical use of reason to follow—ideas which that use can follow only asymptotically, as it were, by approaching without ever reaching them—they never-

theless have objective though indeterminate validity as synthetic propositions a priori. They serve as rules of possible experience and are indeed successfully employed as heuristic principles in working on it.

[B 692]

Yet no transcendental deduction of them can be accomplished, which, as proved above, is always impossible with regard to ideas.

In the Transcendental Analytic we distinguished, among the principles of the understanding, the dynamical principles, as merely regulative principles of intuition, from the mathematical principles, which are constitutive with regard to intuition. Despite this, those dynamical laws are certainly constitutive with regard to experience, since they make possible a priori the concepts without which no experience occurs. Principles of pure reason, by contrast, cannot be constitutive even with regard to empirical concepts, because no corresponding schema of sensibility can be given for them, and they can therefore have no object in konkreto. If I now abandon such an empirical use of them as constitutive principles, how can I nevertheless secure for them a regulative use and, with it, some objective validity? And what meaning can that use have?

The understanding is an object for reason just as sensibility is for the understanding. Making the unity of all possible empirical acts of the understanding systematic is reason's task, just as the understanding connects the manifold of appearances through concepts and brings it under empirical laws. But without schemata of sensibility, acts of the understanding are indeterminate.

[B 693]

Likewise, the unity of reason is in itself indeterminate both as to the conditions under which the understanding should combine its concepts systematically and as to how far it should do so. Yet although no schema can be found in intuition for the thoroughgoing systematic unity of all concepts of the understanding, an analogue of such a schema can and must be given. This is the idea of the maximum of division and unification of the understanding's cognition in one principle. For the greatest and absolutely complete can be thought determinately, since all restrictive conditions, which yield an indeterminate manifold, are omitted. The idea of reason is thus an analogue of a schema of sensibility,

but with this difference: applying concepts of the understanding to reason's schema does not yield cognition of the object itself (as applying the categories to their sensible schemata does). It yields only a rule or principle of the systematic unity of every use of the understanding. Now every principle that establishes thoroughgoing unity a priori for the understanding's use also holds, although only indirectly, of the object of experience. The principles of pure reason will therefore also have objective reality with regard to this object, not to determine anything about the objects, but only to indicate the procedure.

[B 694]

By this procedure the understanding's empirical and determinate use in experience can become thoroughly consistent with itself, through being brought into connection with the principle of thoroughgoing unity as far as possible, and derived from it.

I call all subjective principles drawn not from the constitution of the object but from reason's interest in a certain possible perfection of cognition of that object maxims of reason. Thus there are maxims of speculative reason resting solely on its speculative interest, although they may seem to be objective principles.

If merely regulative principles are regarded as constitutive, they can conflict as objective principles. But if they are regarded merely as maxims, there is no true conflict, only a difference in reason's interests that causes a divergence in ways of thinking. In fact, reason has only one single interest, and the conflict of its maxims is merely a difference and reciprocal limitation among methods of satisfying that interest.

In this way, one reasoner is more strongly moved by the interest in manifoldness (according to the principle of specification), and another by the interest in unity (according to the principle of aggregation).

[B 695]

Each believes his judgment arises from insight into the object, yet bases it solely on a greater or lesser attachment to one of two principles, neither of which rests on objective grounds but only on reason's interest; they might therefore be better called maxims than principles. When I see discerning men disputing about

the characteristics of human beings, animals, plants, or even bodies in the mineral kingdom—for example, when some assume particular national characters grounded in descent, or definite and hereditary differences among families, races, and so on, while others insist that nature has provided entirely identical predispositions in this respect and that every difference rests only on external contingencies—I need only consider the nature of the object to understand that it lies far too deeply concealed from both parties for them to speak from insight into its nature. It is nothing other than reason's twofold interest, one side taking one interest to heart, the other the other, or even merely affecting to do so. Thus it is the difference between the maxims of nature's manifoldness and nature's unity. These can very well be united; but so long as they are taken for objective insights, they occasion not only conflict but also obstacles that long hold up truth.

[B 696]

So it remains until a means is found to reconcile the conflicting interest and to satisfy reason on this point.

The same holds of the assertion or denial of the much-discussed law of a continuous scale of creatures, put into circulation by Leibniz and splendidly embellished by Bonnet. This is nothing but obedience to the principle of affinity resting on reason's interest; for observation and insight into nature's arrangement could never have supplied it as an objective assertion. The rungs of such a ladder, as experience can disclose them to us, stand much too far apart, and our supposedly small differences are commonly such wide chasms in nature itself that nothing at all can be built on such observations (especially given a great manifold of things, where it must always be easy to find certain similarities and approximations) as evidence of nature's intentions. By contrast, the method of seeking order in nature according to such a principle, and the maxim of regarding such order as grounded in nature in general, although leaving indeterminate where or how far, is certainly a legitimate and excellent regulative principle of reason. As such, however, it goes far beyond anything experience or observation could match, yet determines nothing, but merely traces out for experience the path toward systematic unity.

[B 697]

On the Final Aim of the Natural Dialectic of Human Reason

The ideas of pure reason can never be dialectical in themselves. Their misuse alone must produce the deceptive illusion that arises for us from them. For they are assigned to us by the nature of our reason, and this highest court of all the rights and claims of our speculation cannot possibly itself contain original deceptions and delusions. Presumably, then, they have a sound and purposive vocation in the natural predisposition of our reason. But the rabble of reasoners cries out, as usual, about absurdity and contradictions and reviles the government whose innermost plans it cannot penetrate, although it ought to owe to that government's beneficent influence its own preservation and even the cultivation that enables it to criticize and condemn it.

We cannot use a concept a priori with any security without having accomplished its transcendental deduction. The ideas of pure reason admittedly permit no deduction of the kind possible for the categories. Suppose, however, that they are to have any objective validity at all, even if only indeterminate, and are not to represent merely empty thought-entities (entia rationis ratiocinantis).

[B 698]

Then a deduction of them must certainly be possible, even if it differs greatly from the one that can be undertaken with the categories. This is the completion of pure reason's critical task, and we shall now undertake it.

There is a great difference between something being given to my reason as an object without qualification and being given merely as an object in the idea. In the first case, my concepts aim to determine the object. In the second, it is really only a schema to which no object is directly assigned, not even hypothetically; it serves only to represent other objects to us indirectly in their systematic unity, through their relation to this idea. Thus I say that the concept of a highest intelligence is a mere idea. That is, its objective reality is not to consist in its relating directly to an object (for in that sense we could not justify its objective validity). Rather, it is only a schema of the concept of a thing in general, ordered according to the conditions of the greatest unity of reason. It serves

only to maintain the greatest systematic unity in our reason's empirical use, by deriving the object of experience, as it were, from the imagined object of this idea as its ground or cause. We then say, for example, that things in the world must be regarded as if they owed their existence to a highest intelligence.
[B 699]
In this way the idea is properly only a heuristic, not an ostensive, concept. It indicates not how an object is constituted but how, under its guidance, we should seek the constitution and connection of objects of experience in general. Now suppose we can show that, although the three kinds of transcendental ideas (psychological, cosmological, and theological) are not directly related to any corresponding object and its determination, all rules of reason's empirical use nevertheless lead to systematic unity on the presupposition of such an object in the idea, always extending experiential cognition and never being able to contradict it. It is then a necessary maxim of reason to proceed according to such ideas. This is the transcendental deduction of all ideas of speculative reason: not as constitutive principles for extending our cognition to more objects than experience can give, but as regulative principles of the systematic unity of the manifold of empirical cognition in general. Through them this cognition is cultivated and corrected within its own boundaries more than could be accomplished without such ideas through the mere use of the understanding's principles.
[B 700]
Let me make this clearer. Following the ideas just mentioned as principles, we shall first (in psychology) connect all the appearances, actions, and receptivity of our mind along the guiding thread of inner experience as if the mind were a simple substance that, with personal identity, exists enduringly (at least during life), while its states, to which those of the body belong only as external conditions, change continuously. Secondly (in cosmology), we must pursue the conditions of both inner and outer natural appearances in an inquiry that can nowhere be completed, as if this inquiry were in itself infinite and without a first or highest member. We do not thereby deny their merely intelligible first grounds outside all appearances, but we must never bring these into the con-

text of explanations of nature, since we do not know them at all. Finally and thirdly (with regard to theology), we must consider everything that can possibly belong to the context of possible experience as if this experience constituted an absolute unity, yet one that is thoroughly dependent and always still conditioned within the sensible world. At the same time, we must regard the sum of all appearances (the sensible world itself) as if it had outside its compass one single highest and all-sufficient ground: a reason that is, as it were, self-subsistent, original, and creative.

[B 701]

In relation to it, we direct every empirical use of our reason in its greatest extension as if the objects themselves had sprung from that archetype of all reason. This means: not to derive the soul's inner appearances from a simple thinking substance, but to derive them from one another according to the idea of a simple being; not to derive the world's order and its systematic unity from a highest intelligence, but to take from the idea of a supremely wise cause the rule according to which reason may best be used, to its own satisfaction, in connecting causes and effects in the world.

Now there is not the slightest thing to prevent us from also assuming these ideas objectively and hypostatically, except in the case of the cosmological idea, where reason encounters an antinomy if it tries to accomplish this (the psychological and theological ideas contain nothing of the kind). For there is no contradiction in them. How, then, could anyone dispute their objective reality, since he knows as little of their possibility in denying it as we do in affirming it? Yet the absence of a positive obstacle is not enough to warrant an assumption. We cannot be permitted to introduce thought-entities that surpass all our concepts, though they contradict none of them, as actual and determinate objects merely on the credit of speculative reason, which is eager to complete its task.

[B 702]

They are therefore not to be assumed in themselves. Their reality is to count only as that of a schema of the regulative principle of the systematic unity of all cognition of nature. They are thus to be laid down only as analogues of actual things, not as such things in themselves. We remove from the object of the idea

the conditions that restrict our concept of the understanding, but which alone also make it possible for us to have a determinate concept of anything. We now think of a something of which we have no concept at all as to what it is in itself, but whose relation to the sum of appearances we nevertheless conceive as analogous to the relation appearances have to one another.

When we assume such ideal beings, then, we do not really extend our cognition beyond the objects of possible experience. We extend only the empirical unity of these objects through the systematic unity for which the idea supplies the schema; the idea thus holds not as a constitutive but merely as a regulative principle. For when we posit a thing corresponding to the idea—a something, or an actual being—we do not thereby mean to extend our cognition of things through transcendent concepts. For this being is laid down only in the idea, not in itself.

[B 703]

It is thus laid down only to express the systematic unity that is to guide reason's empirical use. Nothing is thereby settled about the ground of this unity or about the inner character of such a being on which it rests as its cause.

Thus the transcendental and only determinate concept of God that merely speculative reason gives us is deistic in the strictest sense. That is, reason does not even supply the objective validity of such a concept, but only the idea of a something on which all empirical reality grounds its highest and necessary unity. We can think of this something only by analogy with an actual substance that is the cause of all things according to laws of reason—if indeed we undertake to think of it at all as a particular object, rather than remain content with the mere idea of reason's regulative principle and set aside the completion of all conditions of thinking as extravagant for the human understanding. Yet this latter course cannot be reconciled with the aim of a perfect systematic unity in our cognition, to which reason at least sets no limits.

Hence it happens that, when I assume a divine being, I have not the slightest concept either of the inner possibility of its supreme perfection or of the necessity of its existence.

[B 704]

Nevertheless, I can then satisfy all other questions concerning the contingent and provide reason with the most perfect satisfaction regarding the greatest unity to be sought in its empirical use, though not regarding this presupposition itself. This proves that it is reason's speculative interest, not its insight, that entitles it to proceed from a point so far above its sphere, in order to view its objects from there within a complete whole.

Here, given one and the same presupposition, a difference in ways of thinking emerges that is rather subtle, but nevertheless very important in transcendental philosophy. I can have sufficient ground for assuming something relatively (suppositio relativa), without being entitled to assume it absolutely (suppositio absoluta). This distinction applies when we are concerned only with a regulative principle whose necessity in itself we cognize, but not its source, and for which we assume a highest ground merely in order to think the principle's universality more determinately: for example, when I think as existing a being corresponding to a mere, specifically transcendental, idea. For in that case I can never assume the existence of this thing in itself.

[B 705]

That is because no concepts through which I can think any object determinately reach it, and because the conditions of my concepts' objective validity are excluded by the idea itself. The concepts of reality, substance, causality, and even necessity in existence have no object-determining meaning apart from the use in which they make empirical cognition of an object possible. They can therefore be used to explain the possibility of things in the sensible world, but not the possibility of a world-whole itself, since this ground of explanation would have to lie outside the world and thus be no object of a possible experience. Nevertheless, I can assume such an incomprehensible being, the object of a mere idea, in relation to the sensible world, though not in itself. For suppose the greatest possible empirical use of my reason rests on an idea (of systematically complete unity, about which I shall shortly speak more determinately) that can never itself be adequately exhibited in experience, although it is unavoidably necessary for bringing empirical unity as close as possible to the highest degree. I shall then be not only entitled but compelled to realize this

idea, that is, to posit an actual object for it, but only as a something in general that I do not know at all in itself. Only as a ground of that systematic unity, and in relation to it, do I give it properties analogous to concepts of the understanding in their empirical use.

[B 706]

Thus, by analogy with the realities in the world of substances, of causality, and of necessity, I shall think of a being that possesses all these in the highest perfection. Since this idea rests solely on my reason, I shall be able to think of this being as self-subsistent reason that, through ideas of the greatest harmony and unity, is the cause of the world-whole. I thereby omit all conditions restricting the idea, solely to make possible, under the protection of such an original ground, the systematic unity of the manifold in the world-whole and, through it, the greatest possible empirical use of reason. I regard all combinations as if they were arrangements of a highest reason, of which ours is a faint copy. I then think of this highest being entirely through concepts that properly have their application only in the sensible world. But since I have this transcendental presupposition only for a relative use, namely to provide the substratum of the greatest possible unity of experience, I may quite legitimately think of a being that I distinguish from the world through properties belonging solely to the sensible world. For I by no means demand, nor am I entitled to demand, to cognize this object of my idea according to what it may be in itself.

[B 707]

For I have no concepts for that, and even the concepts of reality, substance, causality, and indeed necessity in existence lose all meaning and become empty titles for concepts, without any content, if I venture with them beyond the field of the senses. I think only the relation of a being wholly unknown to me in itself to the greatest systematic unity of the world-whole, solely to make it the schema of the regulative principle of the greatest possible empirical use of my reason.

If we now turn our gaze to the transcendental object of our idea, we see that we cannot presuppose its actuality in itself according to the concepts of reality, substance, causality, and so on, because these concepts have not the slightest

application to something wholly distinct from the sensible world. Thus reason's supposition of a highest being as supreme cause is conceived merely relatively, for the sake of the systematic unity of the sensible world, and a mere something in the idea, of which we have no concept as to what it is in itself. This also explains why, in relation to what is given to the senses as existing, we need the idea of an original being necessary in itself, yet can never have the slightest concept of this being and its absolute necessity.

We can now clearly present the result of the entire Transcendental Dialectic.

[B 708]

We can also determine precisely the final aim of the ideas of pure reason, which become dialectical only through misunderstanding and carelessness. Pure reason is in fact occupied with nothing but itself, nor can it have any other task, because it is given not objects to bring to the unity of the concept of experience, but cognitions of the understanding to bring to the unity of reason's concept, that is, to coherence in a principle. The unity of reason is the unity of a system. This systematic unity serves reason not objectively as a principle for extending it over objects, but subjectively as a maxim for extending it over all possible empirical cognition of objects. Nevertheless, the systematic coherence that reason can give the empirical use of the understanding not only furthers its extension but at the same time attests its correctness. The principle of such systematic unity is also objective, but in an indeterminate way (principium vagum), not as a constitutive principle for determining something concerning its direct object, but as a merely regulative principle and maxim. By opening new paths unknown to the understanding, it furthers and secures the empirical use of reason to infinity (the indeterminate), without ever contradicting the laws of empirical use in the slightest.

[B 709]

But reason cannot think this systematic unity without at the same time giving its idea an object, which, however, cannot be given through any experience; for experience never supplies an example of perfect systematic unity. This being of reason (ens rationis ratiocinatae) is admittedly a mere idea. It is therefore not assumed absolutely and in itself as something actual, but is laid down only

problematically (since we cannot reach it through any concepts of the understanding). Its purpose is to let us regard every connection of things in the sensible world as if they had their ground in this being of reason, solely in order to ground on it the systematic unity that is indispensable to reason and can further the understanding's empirical cognition in every way, yet can never hinder it.

We immediately misunderstand this idea if we take it for the assertion, or even merely the presupposition, of an actual thing to which we intend to ascribe the ground of the world's systematic constitution. Rather, we leave entirely unsettled what character this ground, which eludes our concepts, has in itself, and set up only an idea as a standpoint from which alone we can extend that unity so essential to reason and so beneficial to the understanding.

[B 710]

In a word, this transcendental thing is merely the schema of the regulative principle through which reason, so far as it can, extends systematic unity over all experience. The first object of such an idea is myself, considered merely as a thinking nature (soul). If I want to investigate the properties with which a thinking being exists in itself, I must consult experience; even among all the categories, I can apply none to this object except insofar as its schema is given in sensible intuition. But in this way I never arrive at a systematic unity of all appearances of inner sense. Instead of the experiential concept (of what the soul actually is), which cannot carry us far, reason therefore takes the concept of the empirical unity of all thinking. By thinking this unity as unconditioned and original, it makes that concept into a concept of reason (idea) of a simple substance that is in itself unchangeable (personally identical) and in community with other actual things outside it: in a word, of a simple self-subsistent intelligence. Here, however, reason has in view nothing but principles of systematic unity in explaining the soul's appearances: to regard all determinations as in one single subject, all forces as far as possible as derived from one fundamental power, and all change as belonging to the states of one and the same enduring being.

[B 711]

Its principles likewise require us to represent all appearances in space as entirely distinct from acts of thinking. That simplicity of substance and so on was meant to be only the schema for this regulative principle; it is not presupposed as the actual ground of the soul's properties. For these may rest on entirely different grounds of which we know nothing, just as we could not properly cognize the soul in itself through these assumed predicates even if we wanted to grant them to it without qualification, since they constitute a mere idea that cannot be represented in concreto at all. Nothing but benefit can arise from such a psychological idea, provided we take care to allow it to count as no more than a mere idea, that is, merely in relation to reason's systematic use concerning the appearances of our soul. For then no empirical laws of bodily appearances, which are of an entirely different kind, intrude into explanations of what belongs solely to inner sense. No flimsy hypotheses about the generation, destruction, and palingenesis of souls, and so on, are admitted. The consideration of this object of inner sense is thus kept entirely pure and unmixed with heterogeneous properties. Moreover, reason's inquiry is directed toward reducing the grounds of explanation in this subject, as far as possible, to a single principle.

[B 712]

All this is best accomplished—indeed, can be accomplished only—through such a schema, as if it were an actual being. The psychological idea can also mean nothing but the schema of a regulative concept. For if I were even to ask whether the soul is not of spiritual nature in itself, this question would have no meaning at all. For through such a concept I remove not merely bodily nature but all nature whatsoever: all predicates of any possible experience, and thus all conditions for thinking an object for such a concept. Yet this alone makes it possible to say that the concept has a meaning.

The second regulative idea of merely speculative reason is the concept of the world in general. For nature is properly the only given object with regard to which reason needs regulative principles. This nature is twofold: either thinking or corporeal nature. But to think the latter according to its inner possibility, that is, to determine the application of the categories to it, we need no idea, that

is, no representation exceeding experience. Nor is any possible with regard to it, because here we are guided solely by sensible intuition, unlike in the psychological fundamental concept (the I), which contains a priori a certain form of thinking, namely its unity.

[B 713]

Thus nothing remains for pure reason but nature in general and the completeness of its conditions according to some principle. The absolute totality of the series of these conditions in the derivation of their members is an idea that can never be fully realized in reason's empirical use, but nevertheless serves as a rule for how we should proceed with regard to them. In explaining given appearances (by going backward or ascending) we proceed as if the series were infinite in itself, that is, in indefinitum. But where reason itself is regarded as a determining cause (in freedom), and thus in the case of practical principles, we proceed as if we had before us not an object of the senses but one of the pure understanding. Here conditions can be posited no longer within the series of appearances but outside it, and the series of states can be regarded as if it began absolutely (through an intelligible cause). All this proves that cosmological ideas are nothing but regulative principles, far from positing, as though constitutively, an actual totality of such series. The rest may be sought in its proper place under the Antinomy of Pure Reason.

The third idea of pure reason, which contains a merely relative supposition of a being as the single and all-sufficient cause of all cosmological series, is reason's concept of God.

[B 714]

We have not the slightest ground for assuming the object of this idea absolutely (supposing it in itself). For what could move us, or even entitle us, to believe in or assert a being of the highest perfection, absolutely necessary by its nature, merely from its concept in itself, were it not for the world, in relation to which alone this supposition can be necessary? Here it becomes clear that the idea of this being, like all speculative ideas, means nothing more than that reason commands us to consider every connection in the world according to principles of systematic unity, hence as if they had all sprung from one single all-encompass-

ing being as their highest and all-sufficient cause. It is clear from this that reason can intend nothing here but its own formal rule in extending its empirical use, never an extension beyond all boundaries of empirical use. Consequently, this idea conceals no constitutive principle for reason's use directed toward possible experience.

This highest formal unity, which rests solely on concepts of reason, is the purposive unity of things. Reason's speculative interest makes it necessary to regard every arrangement in the world as if it had sprung from the intention of a supreme reason.

[B 715]

Such a principle opens entirely new prospects for our reason as applied to the field of experience: to connect things in the world according to teleological laws and thereby arrive at their greatest systematic unity. The presupposition of a highest intelligence as the sole cause of the world-whole, though admittedly only in the idea, can therefore always benefit reason and never harm it. For if, with regard to the earth's shape (round, though somewhat flattened)*, or mountains and seas, and so on, we presuppose wise intentions of an author throughout, we can make a host of discoveries along this path. Provided we hold to this presupposition as a merely regulative principle, even error cannot harm us. For at most, it can only follow that, where we expected a teleological connection (nexus finalis), we encounter a merely mechanical or physical one (nexus effectivus).

[B 716]

In such a case we merely miss one additional unity, but do not spoil the unity of reason in its empirical use. Yet even this setback cannot touch the law itself in its general teleological intent. For although an anatomist can be convicted of error if he relates some member of an animal body to an end that can clearly be shown not to result from it, it is nevertheless entirely impossible to prove in any case that a natural arrangement, whatever it may be, has no end at all. Thus physiology (of physicians) also extends its very limited empirical knowledge of the ends of the structure of an organic body through a principle supplied by pure reason alone, to the point where we quite boldly assume, with the agree-

ment of all discerning people, that everything in an animal has its use and good purpose. If this presupposition were meant to be constitutive, it would go much further than observation to date can justify. From this we can see that it is nothing but a regulative principle of reason for arriving at the highest systematic unity through the idea of the purposive causality of the highest cause of the world, as if this cause, as a highest intelligence, were the cause of everything according to the wisest intention.

* The advantage afforded by a spherical earth is well enough known. But few know that its flattening into a spheroid alone prevents protrusions of the mainland, or even smaller mountains perhaps thrown up by earthquakes, from continuously and, within no very long time, considerably shifting the earth's axis, were the earth's bulge at the equator not so mighty a mountain that the impetus of any other mountain can never appreciably displace it from its position in relation to the axis. Yet we have no hesitation in explaining this wise arrangement from the equilibrium of the earth's formerly fluid mass.

[B 717]

But if we abandon this restriction of the idea to merely regulative use, reason is misled in many ways. It then leaves the ground of experience, which must nevertheless contain the landmarks of its course, and ventures above it into the incomprehensible and inscrutable. At that height it necessarily grows dizzy, because from this standpoint it sees itself entirely cut off from every use consistent with experience.

The first error arising from using the idea of a highest being not merely regulatively but (which is contrary to the nature of an idea) constitutively, is lazy reason (ignava ratio)*. We can give this name to every principle that causes us to regard our investigation of nature, at any point whatsoever, as absolutely complete.

[B 718]

Reason then retires to rest, as if it had fully accomplished its task. Thus even the psychological idea, when used as a constitutive principle for explaining the appearances of our soul, and afterward even for extending our cognition of this subject beyond all experience (its state after death), admittedly makes things

very comfortable for reason, but also completely spoils and destroys every natural use of it guided by experience. Thus the dogmatic spiritualist explains the unity of the person, which remains unchanged through every change of states, by the unity of the thinking substance that he believes he immediately perceives in the I. He explains our interest in things that are to occur only after our death by our consciousness of the immaterial nature of our thinking subject, and so on. He thereby dispenses with all natural inquiry into the cause of these inner appearances through physical grounds of explanation. As though by the decree of a transcendent reason, he bypasses the immanent sources of cognition in experience for the sake of his own comfort, but at the cost of all insight. This harmful consequence is still more evident in the dogmatism of our idea of a highest intelligence and the theological system of nature (physicotheology) falsely grounded on it.

[B 719]

For here all the ends manifest in nature—often only made into ends by us—serve to make the investigation of causes very comfortable for us. Instead of seeking these causes in the universal laws of the mechanism of matter, we appeal directly to the inscrutable decree of supreme wisdom and regard reason's labor as complete once we dispense with its use. Yet reason finds a guiding thread nowhere except where nature's order and the series of changes, according to their inner and more general laws, supply one. This error can be avoided if we consider from the standpoint of ends not merely some parts of nature, such as the distribution of the mainland, its structure, and the constitution and location of mountains, or even merely organization in the plant and animal kingdoms, but make this systematic unity of nature, in relation to the idea of a highest intelligence, entirely universal. For then we take as our basis a purposiveness according to universal laws of nature, from which no particular arrangement is excepted, but is only marked out more or less recognizably for us. We have a regulative principle of the systematic unity of a teleological connection, which we must not determine in advance.

[B 720]

Rather, in expectation of it, we may only pursue the physical-mechanical connection according to universal laws. Only in this way can the principle of purposive unity always extend reason's use with regard to experience without impairing it in any case.

* The ancient dialecticians gave this name to a fallacy that ran as follows: if it is your fate to recover from this illness, it will happen whether you consult a physician or not. Cicero says this kind of inference received its name because, if we followed it, no use of reason in life would remain. This is why I give the sophistical argument of pure reason the same name.

The second error arising from a misinterpretation of this principle of systematic unity is that of inverted reason (perversa ratio, ysteron proteron rationis). The idea of systematic unity was meant to serve only as a regulative principle for seeking that unity in the combination of things according to universal laws of nature; insofar as something of it can be found empirically, we should believe that we have come that much closer to completeness in its use, although we shall admittedly never attain it. Instead, people reverse the matter. They begin by laying down as hypostatic the actuality of a principle of purposive unity, determine the concept of such a highest intelligence anthropomorphically because it is in itself entirely inscrutable, and then impose ends on nature forcibly and dictatorially instead of seeking them, as they rightly should, along the path of physical inquiry. Thus teleology, which should serve merely to supplement nature's unity according to universal laws, now acts rather to abolish it.

[B 721]

Reason also defeats its own purpose of subsequently proving from nature the existence of such an intelligent highest cause. For unless we can presuppose the highest purposiveness in nature a priori, that is, as belonging to its essence, how could we be directed to seek it and, ascending its scale, to approach an author's highest perfection as an absolutely necessary and thus a priori cognizable perfection? The regulative principle requires us to presuppose systematic unity as a unity of nature that is not merely cognized empirically but presupposed a priori, though still indeterminately—to presuppose it absolutely, therefore, as fol-

lowing from the essence of things. But if I first lay down a highest ordering being, the unity of nature is in fact abolished. For it is then entirely foreign and contingent to the nature of things and cannot be cognized from its universal laws. A vicious circle in proof thus arises, since we presuppose what was actually to be proved.

Taking the regulative principle of nature's systematic unity for a constitutive one, and hypostatically presupposing as a cause what is laid down only in the idea as the ground of reason's harmonious use, merely confuses reason.

[B 722]

The investigation of nature follows its course solely along the chain of natural causes according to their universal laws. It does so according to the idea of an author, but not in order to derive from him the purposiveness it pursues everywhere. Rather, it seeks to cognize his existence from this purposiveness, which is sought in the essences of natural things and, if possible, in the essences of all things whatsoever, and thus as absolutely necessary. Whether this last aim succeeds or not, the idea always remains correct, as does its use when restricted to the conditions of a merely regulative principle.

Complete purposive unity is perfection (considered absolutely). If we do not find it in the essence of the things that constitute the whole object of experience, that is, of all our objectively valid cognition, and thus in universal and necessary laws of nature, how can we infer directly from it the idea of the highest and absolutely necessary perfection of an original being that is the source of all causality? The greatest systematic and consequently purposive unity is the school, and indeed the very foundation of the possibility, of the greatest use of human reason.

[B 723]

Its idea is therefore inseparably bound up with the essence of our reason. This same idea is thus legislative for us, and so it is very natural to assume a corresponding legislative reason (intellectus archetypus) from which all systematic unity of nature, as the object of our reason, is to be derived.

On the occasion of the Antinomy of Pure Reason, we said that all questions raised by pure reason must be absolutely answerable, and that an excuse based on the limits of our cognition, as unavoidable as it is legitimate in many questions about nature, cannot be permitted here, because these questions are posed to us not by the nature of things but only by the nature of reason, and solely concerning its inner constitution. We can now confirm this seemingly bold assertion with regard to the two questions in which pure reason takes its greatest interest, and thereby bring our consideration of its dialectic to full completion.

Suppose, then, that we ask first (with a view to a transcendental theology)*.

[B 724]

Is there something distinct from the world that contains the ground of the world's order and its coherence according to universal laws? The answer is: undoubtedly. For the world is a sum of appearances, and there must therefore be some transcendental ground of them, that is, a ground thinkable only by the pure understanding. If the second question is whether this being is substance, possesses the greatest reality, is necessary, and so on, I answer that this question has no meaning at all. For all the categories through which I try to form a concept of such an object have only an empirical use, and have no meaning unless applied to objects of possible experience, that is, to the sensible world. Outside this field they are merely titles for concepts, which one can concede but through which one can understand nothing. Finally, if the third question is whether we may at least think of this being distinct from the world by analogy with objects of experience, the answer is: certainly.

[B 725]

But only as an object in the idea, not in reality; namely, only insofar as it is a substratum, unknown to us, of the systematic unity, order, and purposiveness of the world's arrangement, which reason must make a regulative principle of its investigation of nature. More than this, we can freely and blamelessly permit in this idea certain anthropomorphisms that further the regulative principle in question. For it always remains only an idea, related not directly to a being distinct from the world but to the regulative principle of the world's systematic

unity, and only through a schema of that unity: a highest intelligence that is its author according to wise intentions. We were not thereby meant to think what this original ground of the world's unity is in itself, but how we should use it—or rather its idea—in relation to reason's systematic use concerning things in the world.

* What I have already said about the psychological idea and its true vocation as a principle for reason's merely regulative use saves me the lengthy task of separately discussing the transcendental illusion through which that systematic unity of the whole manifold of inner sense is represented hypostatically. The procedure here is very similar to that followed by the critique with regard to the theological ideal.

But in this way can we nevertheless (someone will continue to ask) assume a single wise and almighty author of the world? Without any doubt; and not only that, we must presuppose such an author. But do we not then extend our cognition beyond the field of possible experience? Not at all.

[B 726]

For we have presupposed only a something of which we have no concept whatever as to what it is in itself (a merely transcendental object). But in relation to the systematic and purposive order of the world's structure, which we must presuppose when we study nature, we have thought of this unknown being only by analogy with an intelligence (an empirical concept). That is, with regard to the ends and the perfection grounded on them, we have endowed it with precisely those properties that, according to the conditions of our reason, can contain the ground of such systematic unity. This idea is thus entirely well founded in relation to our reason's use in the world. But if we wanted to give it objective validity without qualification, we would forget that what we think is merely a being in the idea. By then starting from a ground that cannot be determined at all through consideration of the world, we would make ourselves unable to apply this principle appropriately to reason's empirical use.

But (someone will ask further) in this way I can nevertheless make use of the concept and presupposition of a highest being in rational consideration of the world? Yes; this was indeed the very purpose for which reason laid down this

idea.

[B 727]

But may I now regard arrangements resembling ends as intentions, by deriving them from the divine will, though through particular predispositions established in the world for that purpose? Yes, you can do this too, but in such a way that it must be all the same to you whether someone says that divine wisdom has ordered everything thus for its highest ends, or that the idea of the highest wisdom is a regulative guide in investigating nature and a principle of its systematic and purposive unity according to universal laws of nature, even where we do not perceive that unity. That is, where you do perceive it, it must be entirely the same to you to say, "God has wisely willed it so," or, "Nature has wisely ordered it so." For the greatest systematic and purposive unity, which your reason required you to lay down as a regulative principle for every investigation of nature, was precisely what entitled you to lay down the idea of a highest intelligence as a schema of that regulative principle. As much purposiveness as you now find in the world according to it, so much confirmation do you have of your idea's legitimacy. But since the principle in question intended nothing but the search for nature's necessary and greatest possible unity, we shall admittedly owe this unity, insofar as we attain it, to the idea of a highest being.

[B 728]

Yet we cannot, without contradicting ourselves, bypass the universal laws of nature, for whose sake alone the idea was laid down, in order to regard nature's purposiveness as contingent and hyperphysical in origin. For we were not entitled to assume a being above nature with the properties in question, but only to lay down its idea, in order to regard appearances as systematically connected with one another by analogy with a causal determination.

For this very reason, we are also entitled to think the cause of the world in the idea not only according to a subtler anthropomorphism (without which nothing at all could be thought of it), namely as a being that has understanding, pleasure and displeasure, and likewise a desire and will appropriate to these, and so on, but also to ascribe to it infinite perfection. This far exceeds the per-

fection we could be entitled to assume through empirical knowledge of the world's order. For the regulative law of systematic unity requires us to study nature as if systematic and purposive unity were to be found everywhere to infinity, amid the greatest possible manifold. For although we shall discern or attain only a little of this perfection of the world, it nevertheless belongs to our reason's legislation to seek and suspect it everywhere. Considering nature according to this principle must always be advantageous to us and can never be harmful.

[B 729]

But under this representation of the underlying idea of a highest author, it is also clear that I lay down not the existence and knowledge of such a being, but only its idea. Thus I actually derive nothing from this being, but only from its idea, that is, from the nature of things in the world according to such an idea. A certain, though undeveloped, consciousness of the genuine use of this concept of our reason also seems to have prompted the modest and fair language of philosophers in every age. They speak of nature's wisdom and providence and of divine wisdom as equivalent expressions; indeed, so long as merely speculative reason is at issue, they prefer the former expression, because it restrains the presumption of making a greater assertion than we are entitled to make and at the same time directs reason back to its own proper field, nature.

Thus pure reason, which at first seemed to promise us nothing less than an extension of knowledge beyond all boundaries of experience, contains, when rightly understood, nothing but regulative principles. These admittedly command a greater unity than the empirical use of the understanding can attain.

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Yet precisely by moving the goal of its approximation so far away, they bring its agreement with itself through systematic unity to the highest degree. But if these principles are misunderstood and taken for constitutive principles of transcendent cognitions, they produce, through a brilliant but deceptive illusion, persuasion and imagined knowledge, and with these, endless contradictions and disputes.

* * *

Thus all human cognition begins with intuitions, proceeds from them to concepts, and ends with ideas. Although it has sources of cognition a priori for all three elements, which at first sight seem to disdain the boundaries of all experience, a completed critique nevertheless convinces us that reason, in its speculative use of these elements, can never get beyond the field of possible experience, and that the true vocation of this highest faculty of cognition is to use all methods and their principles only to pursue nature into its innermost depths according to every possible principle of unity, foremost among them the unity of ends, but never to fly beyond nature's boundary, outside which there is nothing for us but empty space.

[B 731]

The critical investigation in the Transcendental Analytic of all propositions capable of extending our cognition beyond actual experience has admittedly convinced us sufficiently that they can never lead to anything more than a possible experience. If we were not distrustful even of the clearest abstract and universal doctrines, and if enticing and apparent prospects did not tempt us to throw off the constraint of the former, we could certainly have been spared the laborious examination of all the dialectical witnesses whom a transcendent reason calls to support its pretensions. For we already knew in advance, with complete certainty, that all their allegation, though perhaps honestly intended, must be utterly null, because it concerned information no human being can ever obtain. Yet talk will never end unless we discover the true cause of the illusion through which even the most rational person can be deceived. And the analysis of all our transcendent cognition into its elements (as a study of our inner nature) has no small value in itself and is even a duty for the philosopher. It was therefore necessary not only to trace this entire, though futile, labor of speculative reason in detail back to its first sources.

[B 732]

Since dialectical illusion is here not only deceptive in its judgment but also alluring in the interest we take in that judgment, and is always natural and will remain so for all time to come, it was also advisable to draw up, as it were, a

detailed record of these proceedings and deposit it in the archive of human reason, to prevent future errors of a similar kind.

Transcendental Doctrine of Method



[B 733]

II. Transcendental Doctrine of Method

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If I regard the sum of all cognition of pure and speculative reason as a building of which we at least have the idea within us, I can say that in the Transcendental Doctrine of Elements we have assessed the building materials and determined what sort of building, of what height and solidity, they will suffice for. Admittedly, we found that, although we had in mind a tower reaching to the heavens, the stock of materials sufficed only for a dwelling spacious enough for our business on the plain of experience and just high enough to survey it; but that that bold undertaking had to fail for lack of material, even without reckoning on the confusion of languages that inevitably divided the workers over the plan and scattered them throughout the world, each to build separately according to his own design. We are now concerned less with the materials than with the plan. Warned not to risk a blind design of our choosing that might exceed all our resources, yet unable simply to abandon the establishment of a secure dwelling, we must draw up the estimate for a building in proportion to the stock given us and at the same time suited to our needs.

By the transcendental doctrine of method, then, I understand the determination of the formal conditions of a complete system of pure reason.

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With this aim we shall be concerned with a discipline, a canon, an architectonic, and finally a history of pure reason. In a transcendental respect, we shall accomplish what the schools seek, but poorly achieve, under the name of practical logic with regard to the use of the understanding in general. For general logic is restricted neither to any particular kind of cognition of the understanding (for example, not to pure cognition), nor to particular objects. Without borrowing knowledge from other sciences, it can therefore do no more than present titles for possible methods and technical expressions used for the systematic aspect of various sciences, acquainting the learner in advance with names whose meaning and use he is to learn only later.

Transcendental Doctrine of Method Chapter One The Discipline of Pure Reason

Negative judgments, negative not merely in logical form but also in content, enjoy no particular esteem with humanity's thirst for knowledge. They are even regarded as envious enemies of our drive for cognition, which ceaselessly strives for expansion.

[B 737]

An apology is almost needed to win them mere toleration, and still more to win them favor and high regard.

Logically, we can of course express any propositions we please negatively. But with regard to the content of our cognition in general, as to whether a judgment extends or restricts it, negative judgments have the distinctive task of merely warding off error. Hence negative propositions meant to ward off false cognition where no error is possible are admittedly very true, but empty—that is, wholly unsuited to their purpose—and for that very reason often ridiculous. Such is the proposition of that school orator: Alexander could not have conquered countries without an army.

But where the limits of our possible cognition are very narrow, the temptation to judge great, the illusion presented very deceptive, and the harm resulting from error considerable, the negative side of instruction, which serves merely to protect us from errors, has still greater importance than some positive instruction that might increase our cognition. The constraint through which a constant tendency to deviate from certain rules is restricted and finally eradicated is called discipline. It differs from cultivation, which is meant merely to provide a skill without canceling another already present.

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In developing a talent that already has an impulse of its own to express itself, discipline will therefore make a negative* contribution, while cultivation and doctrine make a positive one.

* I am well aware that scholastic usage commonly treats the name discipline as equivalent to instruction. Yet there are so many other cases in which the former expression, as training, is carefully distinguished from the latter, as teaching, and the nature of things itself so requires us to reserve the only suitable expressions for this distinction, that I wish the word might never be allowed any but a negative meaning.

Everyone will readily concede that temperament, and likewise talents that readily indulge in free and unrestricted movement (such as imagination and wit) need discipline in many respects. But that reason, whose proper task is to prescribe discipline to all other endeavors, should itself need such discipline may certainly seem strange. Indeed, reason has so far escaped this humiliation precisely because, given the solemnity and thorough decorum with which it presents itself, no one could easily suspect it of frivolously playing with imaginings instead of concepts and words instead of things.

No critique of reason is needed in its empirical use.

[B 739]

For its principles are subjected to continuous examination at the touchstone of experience. Nor is one needed in mathematics, where its concepts must immediately be exhibited in concreto in pure intuition, so that everything unfounded and arbitrary becomes apparent at once. But where neither empiri-

cal nor pure intuition keeps reason on a visible track—namely, in its transcendental use according to mere concepts—it so urgently needs a discipline to curb its tendency to extend itself beyond the narrow boundaries of possible experience and keep it from excess and error that even the entire philosophy of pure reason is concerned only with this negative benefit. Individual aberrations can be remedied through censure, and their causes through critique. But where, as in pure reason, an entire system of deceptions and delusions is found, well combined among themselves and united under common principles, an entirely distinctive and indeed negative legislation seems required. Under the name of discipline, this would establish, as it were, a system of caution and self-examination drawn from the nature of reason and the objects of its pure use. No false sophistical illusion could withstand it, but would have to betray itself at once despite every ground offered to excuse it.

[B 740]

It should be carefully noted, however, that in this second main part of the transcendental critique I direct the discipline of pure reason not toward the content but merely toward the method of cognition from pure reason. The former has already been dealt with in the Doctrine of Elements. Yet reason's use has so much in common whatever object it is applied to, while, insofar as it is to be transcendental, it is at the same time so essentially different from every other use, that without the cautionary negative teaching of a discipline specifically directed to it, we cannot prevent the errors that must necessarily arise from inappropriately following methods otherwise suited to reason, but not here.

Chapter One Section One The Discipline of Pure Reason in Its Dogmatic Use

Mathematics provides the most brilliant example of pure reason successfully extending itself by its own powers without assistance from experience. Examples are contagious, especially for the same faculty, which naturally flatters itself that it will have the same good fortune in other cases as it has enjoyed in one.

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Pure reason therefore hopes to extend itself just as successfully and thoroughly in its transcendental use as it has in its mathematical use, especially if it applies there the same method that has proved so evidently useful here. It therefore matters greatly to us to know whether the method of attaining apodictic certainty called mathematical in the latter science is identical with the method through which the very same certainty is sought in philosophy, where it would have to be called dogmatic.

Philosophical cognition is rational cognition from concepts; mathematical cognition is rational cognition from the construction of concepts. To construct a concept means to exhibit a priori the intuition corresponding to it. Constructing a concept thus requires a nonempirical intuition which, as intuition, is consequently an individual object, yet, as the construction of a concept (a universal representation), must nevertheless express in the representation universal validity for all possible intuitions falling under the same concept. Thus I construct a triangle by exhibiting the object corresponding to this concept either through mere imagination in pure intuition or, following it, on paper in empirical intuition as well. In both cases I do so entirely a priori, without borrowing the model from any experience.

[B 742]

The individual drawn figure is empirical, yet serves to express the concept without impairing its universality. For in this empirical intuition we attend only to the act of constructing the concept, to which many determinations, such as size, sides, and angles, are entirely indifferent. We thus abstract from these differences, which do not alter the concept of the triangle.

Philosophical cognition thus considers the particular only in the universal; mathematical cognition considers the universal in the particular, indeed even in the individual, yet a priori and through reason. Just as this individual is determined under certain universal conditions of construction, so the object of the concept, to which this individual corresponds only as its schema, must be thought as universally determined.

The essential difference between these two kinds of rational cognition thus lies in this form, not in a difference of their matter or objects. Those who thought to distinguish philosophy from mathematics by saying that the former has only quality as its object and the latter only quantity have mistaken the effect for the cause. The form of mathematical cognition is the cause that it can concern only quanta. For only the concept of magnitudes can be constructed, that is, presented a priori in intuition.

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Qualities, by contrast, can be exhibited only in empirical intuition. Rational cognition of qualities can therefore be possible only through concepts. Thus no one can obtain an intuition corresponding to the concept of reality from anywhere but experience, never from himself a priori and before empirical consciousness of it. We can make a conical shape intuitive without any empirical assistance, merely according to the concept, but the color of this cone must first have been given in some experience. I cannot exhibit the concept of a cause in general in intuition in any way except through an example supplied by experience, and so on. Moreover, philosophy deals with magnitudes just as mathematics does—for example, with totality, infinity, and so on. Mathematics also concerns itself with differences among lines and surfaces as spaces of different quality, and with continuity of extension as a quality of it. But although they have a common object in such cases, the way reason treats it is entirely different in philosophical and mathematical consideration. The former adheres solely to universal concepts. The latter can accomplish nothing with the mere concept, but immediately hastens to intuition, in which it considers the concept in concreto; yet not empirically, but solely in an intuition that it has exhibited a priori, that is, constructed.

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In this intuition, whatever follows from the universal conditions of construction must also hold universally of the object of the constructed concept.

Give a philosopher the concept of a triangle and let him discover in his own way how the sum of its angles may relate to a right angle. He has nothing but the concept of a figure enclosed by three straight lines and, in it, the concept of

as many angles. He may reflect on this concept as long as he likes; he will bring nothing new out of it. He can analyze and clarify the concept of a straight line, an angle, or the number three, but cannot arrive at other properties that do not lie in these concepts at all. Now let the geometer take up this question. He immediately begins by constructing a triangle. Knowing that two right angles together equal all the adjacent angles that can be drawn from a point on a straight line, he extends one side of his triangle and obtains two adjacent angles together equal to two right angles. He then divides the exterior of these angles by drawing a line parallel to the opposite side of the triangle, and sees that an exterior adjacent angle arises here that equals an interior one, and so on.
[B 745]
In this way, through a chain of inferences always guided by intuition, he arrives at a fully evident and at the same time universal solution to the question.
But mathematics constructs not only magnitudes (quanta), as in geometry, but also mere magnitude (quantitatem), as in algebra, where it abstracts entirely from the constitution of the object to be thought according to such a concept of magnitude. It then chooses a certain notation for all constructions of magnitudes in general (numbers, as in addition, subtraction, and so on) and for extracting roots. Having also designated the universal concept of magnitudes according to their different relations, it exhibits in intuition, according to certain universal rules, every operation that is generated and altered through magnitude. Where one magnitude is to be divided by another, it puts together their symbols according to the notation for division, and so on. Through a symbolic construction it thus reaches, just as geometry does through an ostensive or geometrical construction (of the objects themselves), a point that discursive cognition through mere concepts could never reach.
What can account for the very different situations of these two practitioners of reason, one proceeding by concepts, the other by intuitions that he exhibits a priori in accordance with concepts?
[B 746]

The transcendental fundamental doctrines presented above make the cause clear. We are concerned here not with analytic propositions, which can be produced by mere analysis of concepts (in this the philosopher would undoubtedly have the advantage over his rival), but with synthetic propositions, specifically those to be cognized a priori. For I am not to consider what I actually think in my concept of the triangle (this is nothing more than the mere definition); rather, I am to go beyond it to properties that do not lie in this concept but nevertheless belong to it. This is possible only if I determine my object according to the conditions either of empirical or of pure intuition. The first would yield only an empirical proposition (by measuring its angles) containing no universality, still less necessity, and nothing of that kind is at issue. The second procedure, however, is mathematical—in this case geometrical—construction. Through it, in a pure intuition just as in an empirical one, I add the manifold belonging to the schema of a triangle in general, and thus to its concept; in this way universal synthetic propositions must certainly be constructed.

I would therefore philosophize about the triangle, that is, reflect discursively on it, in vain.

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I would get not the least bit further than its mere definition, from which I would rightly have to begin. There is indeed a transcendental synthesis from concepts alone, which in turn only the philosopher achieves. But it never concerns more than a thing in general and the conditions under which its perception can belong to possible experience. Mathematical problems, however, are not concerned with this or with existence at all, but with the properties of objects in themselves, solely insofar as these are combined with their concept.

In the example cited, we have sought only to clarify the great difference between the discursive use of reason according to concepts and its intuitive use through the construction of concepts. The question now naturally arises: what makes this twofold use of reason necessary, and by what conditions can we recognize whether only the first or also the second has a place?

All our cognition ultimately relates to possible intuitions, for through these alone is an object given. Now a concept a priori (a nonempirical concept) either already contains a pure intuition, in which case it can be constructed, or contains nothing but the synthesis of possible intuitions not given a priori.
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In the latter case we can indeed judge synthetically and a priori through it, but only discursively, according to concepts, never intuitively through construction of the concept.
Of all intuition, only the mere form of appearances, space and time, is given a priori. A concept of these, as quantis, can be exhibited a priori in intuition, that is, constructed, either together with their quality (their shape), or merely their quantity (the mere synthesis of the homogeneous manifold), through number. But the matter of appearances, through which things in space and time are given to us, can be represented only in perception and thus a posteriori. The sole concept that represents this empirical content of appearances a priori is the concept of a thing in general. Synthetic cognition of it a priori can supply nothing beyond the mere rule for synthesizing what perception may give a posteriori, never the intuition of the real object a priori, because this must necessarily be empirical.
Synthetic propositions concerning things in general, whose intuition cannot be given a priori at all, are transcendental. Thus transcendental propositions can never be given through construction of concepts, but only according to concepts a priori. They contain merely the rule according to which a certain synthetic unity of what cannot be represented intuitively a priori (of perceptions) is to be sought empirically.
[B 749]
But they cannot exhibit a single one of their concepts a priori in any case; they do this only a posteriori, through experience, which first becomes possible according to those synthetic principles.
If we are to judge synthetically about a concept, we must go beyond it, specifically to the intuition in which it is given. For if we remained with what the concept contains, the judgment would be merely analytic, an elucidation of the

thought according to what is actually contained in it. But I can pass from the concept to the corresponding pure or empirical intuition, to consider it there in concreto and cognize a priori or a posteriori what belongs to its object. The former is rational and mathematical cognition through construction of the concept; the latter is merely empirical (mechanical) cognition, which can never yield necessary and apodictic propositions. Thus I could analyze my empirical concept of gold without gaining anything beyond the ability to enumerate everything I actually think with this word. My cognition would thereby undergo a logical improvement, but acquire no increase or addition. I instead take the matter bearing this name and make observations of it, which will supply me with various synthetic but empirical propositions.

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I would construct the mathematical concept of a triangle, that is, give it a priori in intuition, and thereby obtain synthetic but rational cognition. But if I am given the transcendental concept of a reality, substance, force, and so on, it designates neither an empirical nor a pure intuition, but only the synthesis of empirical intuitions (which therefore cannot be given a priori). Since the synthesis cannot go out a priori to its corresponding intuition, no determining synthetic proposition can arise from it, but only a principle of the synthesis* of possible empirical intuitions. Thus a transcendental proposition is synthetic rational cognition according to mere concepts, and hence discursive: it first makes possible all synthetic unity of empirical cognition, but gives no intuition a priori.

* Through the concept of cause I do indeed go beyond the empirical concept of an event (where something happens), but not to the intuition that exhibits the concept of cause in concreto. Rather, I go to the conditions of time in general that might be found in experience in conformity with the concept of cause. I therefore proceed merely according to concepts, and cannot proceed through their construction, because the concept is a rule for the synthesis of perceptions, which are not pure intuitions and thus cannot be given a priori.

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There is, then, a twofold use of reason. Despite the universality of its cognition and its production a priori, which both uses share, they proceed very differently. This is because appearance, through which all objects are given to us, has two components: the form of intuition (space and time), which can be cognized and determined entirely a priori; and matter (the physical), or content, which signifies a something found in space and time and thus contains an existence and corresponds to sensation. With regard to the latter, which can never be given determinately except empirically, we can have nothing a priori but indeterminate concepts of the synthesis of possible sensations insofar as they belong to the unity of apperception (in a possible experience). With regard to the former, we can determine our concepts a priori in intuition by producing the objects themselves in space and time through uniform synthesis, considering them merely as quanta. The first is called reason's use according to concepts, since we can do no more than bring appearances, as regards their real content, under concepts; these appearances can then be determined only empirically, that is, a posteriori (but in conformity with those concepts as rules of an empirical synthesis). The second is reason's use through construction of concepts.

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Since these already relate to an intuition a priori, they can for that very reason also be given determinately a priori in pure intuition, without any empirical data. To consider everything that exists (a thing in space or time), as to whether and how far it is a quantum or not; whether existence or its absence must be represented in it; how far this something (which fills space or time) is a first substratum or a mere determination; whether its existence bears a relation to something else as cause or effect; and finally whether in its existence it stands isolated or in reciprocal dependence with others; to consider the possibility, actuality, and necessity of this existence, or their opposites—all this belongs to rational cognition from concepts, which is called philosophical. But to determine an intuition a priori in space (shape), to divide time (duration), or merely to cognize the universal character of the synthesis of one and the same thing in time

and space, and the resulting magnitude of an intuition in general (number)—this is reason's work through construction of concepts, and is called mathematical.

Reason's great success through mathematics quite naturally produces the supposition that, if not reason itself, at least its method will also succeed outside the field of magnitudes.

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For it brings all its concepts to intuitions that it can give a priori, thereby becoming, so to speak, master over nature; pure philosophy, by contrast, fumbles about in nature with discursive concepts a priori, unable to make their reality intuitive a priori and thereby authenticate them. The masters of this art seem to lack neither this confidence in themselves nor the public's great expectations of their skill, should they once undertake such a task. For since they have scarcely ever philosophized about their mathematics (a difficult undertaking!), the specific difference between the two uses of reason never enters their minds. Familiar rules employed empirically, borrowed from common reason, then serve them as axioms. They care nothing about the possible origin of the concepts of space and time with which they deal (as the only original quantis). Likewise, they seem to regard investigating the origin of pure concepts of the understanding, and thereby the extent of their validity, as useless; they want only to employ them. In all this they are quite right, provided they do not cross their assigned boundary, that of nature. But in this way they pass unnoticed from the field of sensibility onto the uncertain ground of pure and even transcendental concepts, where the ground (instabilis tellus, innabilis unda) permits them neither to stand nor to swim.

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Only fleeting steps can be taken there, of which time preserves not the slightest trace, whereas their course in mathematics makes a highway that even the most distant posterity can confidently follow.

We have made it our duty to determine the boundaries of pure reason in its transcendental use precisely and with certainty. But this kind of endeavor has the peculiarity that, despite the most emphatic and clearest warnings, it still

allows itself to be put off by hope before entirely abandoning the plan of passing beyond the boundaries of experience into the enticing regions of the intellectual. We must therefore remove, as it were, the last anchor of a hope rich in fantasy and show that following the mathematical method in this kind of cognition can offer not the slightest advantage, unless it were this: to expose its own weaknesses all the more clearly, namely that geometry and philosophy are two entirely different things, although they join hands in natural science, and hence that the procedure of one can never be imitated by the other.

The thoroughness of mathematics rests on definitions, axioms, and demonstrations. I shall content myself with showing that none of these, in the sense in which the mathematician takes them, can be accomplished or imitated by philosophy.

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I shall show also that the geometer, following his method, produces nothing in philosophy but houses of cards, and that the philosopher, following his, can stir up only chatter in the domain of mathematics, although philosophy consists precisely in knowing one's boundaries, and even the mathematician, unless nature has already bounded his talent and restricted it to his specialty, cannot reject philosophy's warnings or set himself above them.

1 On Definitions. To define, as the expression itself indicates, should properly mean only to present originally the complete concept of a thing within its boundaries*. By this requirement, an empirical concept cannot be defined at all, but only explicated. For since in it we have only some marks of a certain kind of sensible object, it is never certain whether, under the word designating the same object, we think more of its marks at one time and fewer at another.

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Thus, in the concept of gold, one person may think, besides its weight, color, and ductility, of its property of not rusting, while another may know nothing of this. We employ certain marks only so long as they suffice for distinguishing; new observations remove some and add others, so the concept never stands within secure boundaries. What purpose would defining such a concept serve,

anyway? When discussing water and its properties, for example, we do not linger over what we think with the word water, but proceed to experiments. The word, with the few marks attached to it, is meant to constitute only a designation, not a concept of the thing; the purported definition is thus nothing but a determination of a word. Second, strictly speaking, no concept given a priori can be defined either—for example, substance, cause, right, equity, and so on. For I can never be sure that the clear representation of a concept given (still confusedly) has been completely developed unless I know that it is adequate to the object. But as given, the concept of the object may contain many obscure representations that we pass over in analysis, although we always employ them in application. The completeness of my concept's analysis is therefore always doubtful.

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It can be made probable only through many fitting examples, never apodictically certain. Instead of definition, I would prefer the expression exposition, which remains cautious and allows the critic to accept it to a certain degree while still having reservations about its completeness. Since neither empirical concepts nor concepts given a priori can be defined, only concepts thought at will remain on which to attempt this feat. In such a case I can always define my concept: I must know what I have intended to think, since I have deliberately made it myself and it was given to me neither by the nature of the understanding nor by experience. But I cannot say that I have thereby defined a true object. For if the concept rests on empirical conditions, as with a marine chronometer, the object and its possibility are not yet given through this freely devised concept. I do not even know from it whether it has an object at all, and my explanation may better be called a declaration (of my project) than a definition of an object. Thus the only concepts left suitable for definition are those containing an arbitrary synthesis that can be constructed a priori; consequently, only mathematics has definitions. For the object it thinks it also exhibits a priori in intuition, and this certainly can contain neither more nor less than the concept.

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For through the definition the concept of the object was given originally, that is, without deriving the definition from anywhere else. German has only the one word Erklärung for exposition, explication, declaration, and definition. We must therefore relax somewhat the strictness of our demand in denying philosophical explanations the honorary name of definition, and shall restrict this entire observation to the following: philosophical definitions arise only as expositions of given concepts, mathematical definitions as constructions of originally made concepts. The former arise only analytically through analysis (whose completeness is not apodictically certain); the latter arise synthetically, and thus make the concept itself, whereas the former merely explain it. From this it follows:

* Completeness means the clarity and sufficiency of the marks; boundaries mean precision, that there are no more marks than belong to the complete concept; originally means that this determination of boundaries is not derived from elsewhere and so does not still need proof, since that would make the supposed definition unfit to stand at the head of all judgments about an object.

a) That in philosophy we must not imitate mathematics by placing the definition first, except perhaps as a mere trial. For since definitions are analyses of given concepts, these concepts precede them, though still confusedly; and incomplete exposition precedes complete exposition. Thus, from some marks drawn from an as yet unfinished analysis, we can infer much before arriving at complete exposition, that is, definition.

[B 759]

In a word, in philosophy the definition, as measured distinctness, should conclude the work rather than begin it*. In mathematics, by contrast, we have no concept at all before the definition, through which the concept is first given; mathematics must therefore, and always can, begin with it.

* Philosophy teems with faulty definitions, especially those that genuinely contain elements of a definition but not yet all of them. If we could do nothing with a concept before defining it, all philosophizing would fare very poorly. But since we can always make good and secure use of the elements (of the analysis) as far as they reach, even deficient definitions—that is, propositions not yet

properly definitions, but otherwise true and thus approximations to them—can be used very profitably. In mathematics a definition belongs ad esse; in philosophy, ad melius esse. Reaching it is desirable, but often very difficult. Jurists are still seeking a definition for their concept of right.

b) Mathematical definitions can never err. For since the concept is first given through the definition, it contains precisely what the definition intends to be thought through it. But although nothing incorrect can occur in its content, there can sometimes, though rarely, be a fault in its form (the wording), namely with regard to precision. Thus the common definition of a circle is that it is a curved line all of whose points are equally distant from a single point (the center).

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This has the fault of unnecessarily introducing the determination curved. For there must be a separate theorem, inferred from the definition and easily proved: every line whose points are all equally distant from a single point is curved (no part of it straight). Analytic definitions, by contrast, can err in many ways, either by introducing marks not actually contained in the concept or by lacking the completeness essential to a definition, since we cannot be so entirely certain of the completeness of our analysis. For this reason, mathematics' method of definition cannot be imitated in philosophy.

2 On Axioms. These are synthetic principles a priori insofar as they are immediately certain. Now one concept cannot be combined with another synthetically yet immediately, because a third, mediating cognition is needed for us to go beyond a concept. Since philosophy is rational cognition merely according to concepts, no principle deserving the name of an axiom will be found in it. Mathematics, by contrast, is capable of axioms because, through construction of concepts, it can connect the object's predicates a priori and immediately in its intuition: for example, that three points always lie in a plane.

[B 761]

A synthetic principle merely from concepts, by contrast, can never be immediately certain. Take the proposition that everything that happens has its cause: here I must look for a third element, namely the condition of temporal determination in an experience, and could not cognize such a principle directly and immediately from the concepts alone. Discursive principles are thus entirely different from intuitive ones, that is, axioms. The former always still require a deduction, with which the latter can entirely dispense. Since the latter are evident for this very reason, something philosophical principles can never claim despite all their certainty, it is infinitely far from true that any synthetic proposition of pure and transcendental reason is as obvious (as people defiantly like to put it) as the proposition that twice two is four. In the Analytic, under the table of principles of the pure understanding, I did indeed mention certain axioms of intuition. But the principle cited there was not itself an axiom; it served only to state the principle of the possibility of axioms in general, and was itself only a principle from concepts. For even the possibility of mathematics must be shown in transcendental philosophy. Philosophy therefore has no axioms and may never simply command acceptance of its principles a priori. [B 762]

It must submit to justifying its entitlement to them through a thorough deduction.

3 On Demonstrations. Only an apodictic proof, insofar as it is intuitive, can be called a demonstration. Experience does teach us what exists, but not that it cannot possibly be otherwise. Empirical grounds of proof can therefore yield no apodictic proof. Nor can intuitive certainty, that is, evidence, ever arise from concepts a priori (in discursive cognition), however apodictically certain the judgment may otherwise be. Only mathematics, then, contains demonstrations, because it derives its cognition not from concepts but from their construction, that is, from the intuition that can be given a priori corresponding to the concepts. Even algebra's procedure with its equations, from which it produces truth together with its proof by reduction, is a construction—not geometrical, but characteristic. In it, concepts, especially those of the relations of

magnitudes, are presented in intuition through signs. Even apart from its heuristic aspect, it secures every inference against error by placing each before our eyes. Philosophical cognition, by contrast, must forgo this advantage, since it must always consider the universal in abstracto (through concepts), whereas mathematics can consider the universal in concreto (in the individual intuition), yet through pure representation a priori, in which every false step becomes visible.

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I would therefore prefer to call the former acroamatic (discursive) proofs, because they can be conducted only through words (the object in thought), rather than demonstrations, which, as the expression itself indicates, proceed in intuition of the object.

From all this it follows that it is wholly inappropriate to the nature of philosophy, especially in the field of pure reason, to swagger along dogmatically and adorn itself with the titles and ribbons of mathematics, to whose order it does not belong, although it has every reason to hope for a sisterly union with it. These are vain pretensions that can never succeed. Rather, they must frustrate philosophy's intention of uncovering the delusions of a reason that mistakes its boundaries and, through sufficient clarification of our concepts, leading speculation's conceit back to modest but thorough self-cognition. In its transcendental attempts, reason will therefore be unable to look ahead so confidently, as though the path already traveled led straight to its goal. Nor can it rely so boldly on the premises laid down as to make it unnecessary to look back often and attend to whether errors emerge in the progress of its inferences that were overlooked in the principles.

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Such errors would make it necessary either to determine the principles further or to alter them entirely.

I divide all apodictic propositions (whether they be demonstrable or also immediately certain) into dogmata and mathemata. A directly synthetic proposition from concepts is a dogma; a proposition of this kind through construction of concepts is a mathema. Analytic judgments properly teach us no more

about the object than the concept we have of it already contains, because they do not extend cognition beyond the concept of the subject but merely elucidate it. They cannot therefore appropriately be called dogmas (a word one might perhaps translate as doctrinal pronouncements). But among the two kinds of synthetic propositions a priori mentioned, only those belonging to philosophical cognition can bear this name according to ordinary usage; we would scarcely call propositions of arithmetic or geometry dogmata. This usage therefore confirms our explanation that only judgments from concepts, not those from construction of concepts, can be called dogmatic.

Now the whole of pure reason in its merely speculative use contains not a single directly synthetic judgment from concepts. For through ideas it is, as we have shown, incapable of any synthetic judgments with objective validity.

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Through concepts of the understanding it does indeed establish secure principles, but not directly from concepts; always only indirectly, through the relation of these concepts to something entirely contingent, namely possible experience. When this (something as an object of possible experiences) is presupposed, the principles are certainly apodictically certain; in themselves, however, they cannot even be cognized (directly) a priori. Thus no one can gain thorough insight into the proposition that everything that happens has its cause from these given concepts alone. It is therefore no dogma, although from another standpoint, namely the sole field of its possible use, experience, it can quite well be proved apodictically. But although it must be proved, it is called a principle, not a theorem, because it has the special property of itself first making possible its ground of proof, experience, in which it must always be presupposed.

If, then, pure reason in its speculative use contains no dogmas even in content, every dogmatic method, whether borrowed from the mathematician or intended as a distinctive manner of its own, is intrinsically inappropriate. For it merely conceals faults and errors and deceives philosophy, whose true aim is to let us see every step of reason in the clearest light. Nevertheless, the method can always be systematic.

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For our reason (subjectively) is itself a system; but in its pure use through mere concepts it is only a system of inquiry according to principles of unity, for which experience alone can supply the material. Nothing can be said here about the distinctive method of a transcendental philosophy, since we are concerned only with a critique of our resources: whether we can build at all, and how high we may raise our building from the material we have (the pure concepts a priori).

Chapter One Section Two The Discipline of Pure Reason with Regard to Its Polemical Use

Reason must submit to critique in all its undertakings and cannot impair critique's freedom by any prohibition without harming itself and drawing an unfavorable suspicion upon itself. Nothing is so important in its usefulness, nothing so sacred, that it may withdraw from this scrutinizing, inspecting examination, which respects no person. The very existence of reason rests on this freedom. Reason has no dictatorial authority, and its verdict is always nothing but the agreement of free citizens.

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Each of them must be able to express his reservations, even his veto, without restraint.

But although reason can never refuse critique, it does not always have grounds to fear it. Pure reason in its dogmatic (not mathematical) use, however, is not so conscious of having observed its highest laws most exactly that it would not have to appear, timidly and with complete abandonment of every assumed dogmatic authority, before the critical eye of a higher, judging reason.

The situation is quite different when it faces not the judge's censure but the claims of a fellow citizen and is merely to defend itself against them. For since these claims seek to be just as dogmatic in denial as the others in affirmation, a justification kat' anthropon takes place, securing against every encroachment and providing a titled possession that need fear no foreign pretensions, although it cannot itself be sufficiently proved kat' aletheian.

By the polemical use of pure reason I understand the defense of its propositions against dogmatic denials of them. What matters here is not whether its assertions might themselves be false, but only that no one can ever assert their opposite with apodictic certainty (indeed even merely with greater illusion).
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For then our possession does not depend on another's grace: we have a title to it before us, though not a sufficient one, and it is entirely certain that no one can ever prove this possession illegitimate.
There is something troubling and dispiriting in the thought that there should be an antithetic of pure reason at all, and that this highest court of all disputes should fall into conflict with itself. Above, we did indeed face such an apparent antithetic. But it proved to rest on a misunderstanding: following a common prejudice, people took appearances for things in themselves and then demanded an absolute completeness of their synthesis in one way or another (which was, however, equally impossible in either way), which cannot be expected of appearances at all. There was therefore no actual contradiction of reason with itself in the propositions that the series of appearances given in themselves has an absolutely first beginning, and that this series is absolutely and in itself without any beginning. Both propositions coexist quite well, because appearances, in respect of their existence (as appearances), are in themselves nothing at all—that is, something contradictory—and assuming them as such must naturally entail contradictory consequences.
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But such a misunderstanding cannot be invoked to settle reason's dispute if, for example, it is asserted theistically that there is a highest being and atheistically that there is no highest being; or, in psychology, that everything that thinks possesses absolute enduring unity and is thus distinct from every transitory material unity, while another opposes this by saying that the soul is not an immaterial unity and cannot be exempted from transience. For here the object of the question is free of anything foreign that contradicts its nature, and the understanding deals only with things in themselves, not appearances. There would therefore certainly be a true conflict here if only pure reason on the neg-

ative side had anything to say approaching a ground for an assertion. As for critique of the dogmatic affirmer's grounds of proof, we may readily concede it without thereby surrendering these propositions, which at least have reason's interest on their side, something to which the opponent cannot appeal at all.

I do not share the opinion so often expressed by excellent and reflective men (for example, Sulzer) when they felt the weakness of previous proofs: that we may hope one day to discover evident demonstrations of the two cardinal propositions of our pure reason, "There is a God" and "There is a future life."

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Rather, I am certain this will never happen. For where is reason to obtain grounds for such synthetic assertions, which do not relate to objects of experience and their inner possibility? But it is also apodictically certain that no human being will ever appear who can assert the opposite with the slightest illusion, still less dogmatically. Since he could establish this only through pure reason, he would have to undertake to prove that a highest being, and the thinking subject in us as a pure intelligence, are impossible. But where is he to obtain the knowledge entitling him to judge so synthetically about things beyond all possible experience? We can therefore be entirely unconcerned that anyone will ever prove the opposite to us. For that very reason, we need not devise scholastic proofs, but can always accept those propositions that accord quite well with our reason's speculative interest in its empirical use and are, moreover, the only means of uniting it with its practical interest. For the opponent (who must here be considered not merely as a critic) we have our non liquet ready, which must unfailingly confound him. We do not refuse its being turned back upon ourselves.

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For we always have in reserve reason's subjective maxim, which the opponent necessarily lacks, and under whose protection we can regard all his blows at the air calmly and indifferently.

In this way there is properly no antithetic of pure reason at all. Its only battlefield would have to be sought in the field of pure theology and psychology; but this ground supports no combatant in full armor, with weapons to be feared.

He can appear only with mockery or boasting, which can be laughed at as child's play. This is a comforting observation that restores reason's courage. For what else could it rely on if it, whose sole vocation is to settle all errors, were internally torn apart, unable to hope for peace and quiet possession?

Everything nature itself arranges serves some good purpose. Even poisons serve to overcome other poisons generated in our own fluids and therefore must not be absent from a complete collection of remedies (dispensary). The objections to the persuasions and conceit of our merely speculative reason are themselves assigned to us by the nature of that reason, and must therefore have a good vocation and purpose that should not be disregarded. Why has providence placed some objects, although bound up with our highest interest, so high?

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Hardly more than an indistinct and self-doubted perception of them is granted us, which stimulates searching glances more than it satisfies them. Whether it is useful to venture bold determinations with regard to such prospects is at least doubtful, perhaps even harmful. But it is always and beyond doubt useful to set both inquiring and examining reason in complete freedom, so that it can attend unhindered to its own interest. This is furthered just as much by reason's limiting its insights as by extending them, and always suffers when foreign hands interfere to direct it, contrary to its natural course, toward imposed aims.

Let your opponent, then, speak only reason, and combat him only with the weapons of reason. Otherwise, have no anxiety for the good cause (the practical interest), for it never enters the play of a merely speculative dispute. Such a dispute then reveals only a certain antinomy of reason which, since it rests on reason's nature, must necessarily be heard and examined. It cultivates reason by considering its object from two sides, and corrects its judgment by restricting it. What becomes disputed here is not the matter but the tone.

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For enough remains to let you speak the language of firm faith, justified before the most searching reason, even if you have had to abandon the language of knowledge.

If one were to ask the coolheaded David Hume, formed precisely for balance of judgment, "What moved you, through laboriously devised doubts, to undermine the conviction, so comforting and useful to humanity, that rational insight suffices to assert and form a determinate concept of a highest being?" he would answer, "Nothing but the intention of advancing reason's self-cognition, and at the same time a certain indignation at the constraint people want to impose on reason, boasting about it while preventing it from frankly admitting the weaknesses that become apparent when it examines itself." If, by contrast, you ask Priestley, devoted solely to principles of reason's empirical use and averse to all transcendent speculation, what motives he had for tearing down freedom and immortality of our soul (his hope of a future life being only the expectation of a miracle of resurrection), two such fundamental pillars of all religion, when he is himself a pious and zealous teacher of religion, he could give no other answer than, "The interest of reason, which loses when people try to exempt certain objects from the laws of material nature, the only laws we can know and determine precisely."

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It would seem unfair to denounce the latter, who knows how to reconcile his paradoxical assertion with a religious aim, and to hurt a well-intentioned man because he cannot find his way once he has strayed from the field of natural science. But this favor must equally benefit Hume, no less well disposed and irreproachable in moral character, who cannot abandon his abstract speculation because he rightly holds that its object lies entirely outside the boundaries of natural science, in the field of pure ideas.

What, then, is to be done here, especially with regard to the danger that seems to threaten the common good? Nothing is more natural or fair than the decision you must make. Just let these people proceed. If they display talent, if they offer deep and new inquiry—in a word, if only they display reason—reason always gains. If you resort to means other than those of unconstrained reason, if you cry high treason and summon the public, which understands nothing of such subtle investigations, as though to put out a fire, you make yourselves

ridiculous. For the question is not at all what in this is advantageous or harmful to the common good, but only how far reason can get in speculation that abstracts from every interest.

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It is also a question whether we can count on this speculation at all or should rather abandon it entirely in favor of the practical. Instead of striking in with the sword, calmly watch this contest from the secure seat of critique. It must prove laborious for the combatants, entertaining for you, and, with an outcome certain to be bloodless, fruitful for your insights. For it is very absurd to expect enlightenment from reason while prescribing in advance the side on which it must necessarily come down. Moreover, reason is already so well restrained and kept within limits by reason itself that you have no need to call out patrols to offer civil resistance to the party whose feared superiority seems dangerous to you. In this dialectic there is no victory about which you have cause for concern.

Reason also greatly needs such a dispute, and one could wish it had been conducted earlier and with unrestricted public permission. A mature critique would then have come about all the sooner; on its appearance all these quarrels must fall away of themselves, as the disputants learn to recognize the delusion and prejudices that divided them.

There is a certain impurity in human nature.

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It must ultimately, like everything coming from nature, contain a predisposition toward good ends: a tendency to conceal one's true sentiments and display certain assumed ones considered good and praiseworthy. Through this tendency both to conceal themselves and to assume an advantageous illusion, human beings have certainly not merely civilized themselves but gradually, to a degree, moralized themselves as well. For no one could see through the veneer of propriety, respectability, and modesty, and thus each found a school for his own improvement in the supposedly genuine examples of goodness he saw around him. But this predisposition to present oneself as better than one is and express sentiments one does not have serves only provisionally, as it were, to

bring humanity out of its uncultivated state and initially make it assume at least the manner of the good it knows. Later, once genuine principles have developed and become part of one's way of thinking, that falsity must gradually be vigorously combated; otherwise it corrupts the heart and prevents good sentiments from growing under the rampant weed of fair illusion.

I am sorry to perceive this same impurity, dissimulation, and hypocrisy even in expressions of speculative thought, where people have far fewer obstacles to declaring their thoughts openly and frankly, as they rightly should, and no advantage at all in concealment.

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For what can be more harmful to insight than communicating even mere thoughts to one another in falsified form, concealing doubts we feel about our own assertions, or giving grounds of proof that do not satisfy us ourselves a veneer of evidence? So long, however, as private vanity alone instigates these secret intrigues (which is commonly the case in speculative judgments that have no particular interest and are not readily capable of apodictic certainty), the vanity of others opposes it with public approval. Matters finally arrive where the purest disposition and sincerity would have brought them, though much earlier. But where the public believes that subtle reasoners intend nothing less than to shake the foundations of public welfare, it seems not only prudent but permissible and even praiseworthy to aid the good cause with specious grounds rather than grant its supposed opponents even the advantage of moderating our tone to that of a merely practical conviction and forcing us to admit the lack of speculative and apodictic certainty. Yet I should think that nothing in the world could be less compatible with defending a good cause than cunning, dissimulation, and deceit.

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That everything must proceed honestly in weighing the rational grounds of mere speculation is surely the least one can demand. If we could securely count on even this little, speculative reason's dispute over the important questions of God, immortality (of the soul), and freedom would either have been settled

long ago or would very soon be brought to an end. As things stand, purity of disposition often varies inversely with the goodness of the cause itself, which perhaps has more sincere and upright opponents than defenders.

I therefore presuppose readers who do not want a just cause defended unjustly. For them it is now settled that, according to our principles of critique, if we consider not what happens but what rightly should happen, there must properly be no polemic of pure reason at all. For how can two people dispute about a thing whose reality neither can exhibit in an actual or even possible experience, brooding over its idea alone in order to bring out of it something more than an idea, namely the actuality of the object itself? By what means will they emerge from the dispute, when neither can directly make his own case comprehensible and certain, but can only attack and refute his opponent's?

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For this is the fate of all assertions of pure reason: they go beyond the conditions of all possible experience, outside which no evidence of truth can be found anywhere, yet they must employ laws of the understanding intended solely for empirical use, without which not a step in synthetic thinking can be taken. They therefore always expose weaknesses to the opponent, and each can exploit the other's weakness.

The critique of pure reason can be regarded as the true court of all reason's disputes; for it is not itself involved in these disputes, which concern objects immediately, but is appointed to determine and judge reason's rights in general according to the principles of its original institution.

Without it, reason is, as it were, in a state of nature and can assert or secure its claims and assertions only through war. Critique, by contrast, takes all its decisions from the fundamental rules of its own institution, whose authority no one can doubt. It provides us with the peace of a lawful condition in which we are to conduct our disputes only through legal proceedings. What ends quarrels in the first condition is a victory of which both sides boast, usually followed by only an insecure peace established by the authority that intervenes.

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In the second, it is a judgment which, because it strikes here at the very source of the disputes, must secure an eternal peace. The endless disputes of a merely dogmatic reason also finally compel us to seek peace in some critique of reason itself and in legislation founded upon it, just as Hobbes maintains that the state of nature is a state of injustice and violence, which we must necessarily leave in order to submit to the lawful constraint that alone restricts our freedom so that it can coexist with everyone else's freedom and thereby with the common good. This freedom also includes submitting one's thoughts, one's doubts that one cannot oneself resolve, to public judgment, without being denounced on that account as a restless and dangerous citizen. This already lies in the original right of human reason, which recognizes no other judge than universal human reason itself, in which everyone has a voice. Since every improvement of which our condition is capable must come from this, such a right is sacred and must not be curtailed. It is also very unwise to denounce as dangerous certain daring assertions or presumptuous attacks on assertions that already have the assent of the largest and best part of the public: for this gives them an importance they should not have at all.

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When I hear that an uncommon mind is supposed to have demonstrated away the freedom of the human will, the hope of a future life, and the existence of God, I am eager to read the book, for I expect his talent to advance my insights. I already know beforehand with complete certainty that he will have accomplished none of this—not because I believe myself already in possession of invincible proofs of these important propositions, but because the transcendental critique, which revealed to me the whole stock of our pure reason, has fully convinced me that, just as reason is wholly inadequate for affirmative assertions in this field, it will know just as little, and still less, for making any negative assertion about these questions. For where will the supposed freethinker obtain his knowledge that, for example, there is no highest being? This proposition lies outside the field of possible experience, and therefore also outside the boundaries of all human insight. I would not read the dogmatic defender of the good cause against this enemy at all, because I know before-

hand that he will attack the other's specious grounds only to gain admission for his own. Besides, an everyday illusion provides less material for new observations than an unfamiliar and ingeniously devised one.

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The opponent of religion, dogmatic in his own way as well, would by contrast provide my critique with welcome occupation and an opportunity to correct its principles further, without there being the least to fear on his account.

But should not the young, entrusted to academic instruction, at least be warned against such writings and kept from early acquaintance with such dangerous propositions before their power of judgment has matured—or rather, before the doctrine one wants to establish in them has taken firm root—so that they can vigorously resist every persuasion to the contrary, wherever it may come from?

If dogmatic procedure had to remain in matters of pure reason, and opponents had to be dealt with properly polemically—that is, by entering combat and arming ourselves with grounds of proof for opposing assertions—then nothing would admittedly be more advisable for the moment, but at the same time more futile and fruitless in the long run, than placing the reason of the young under guardianship for a time and protecting it at least that long from seduction. But if curiosity or the fashionable tone of the age later puts such writings into their hands, will that youthful persuasion still hold firm? Someone equipped only with dogmatic weapons to withstand his opponent's attacks is unable to unfold the hidden dialectic that lies no less in his own breast than in his adversary's.

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He sees specious grounds with the advantage of novelty confronting specious grounds that no longer possess it, but instead arouse suspicion that youthful credulity has been abused. He believes he can give no better proof of having outgrown childhood discipline than by disregarding those well-meant warnings. Habituated to dogmatism, he drinks in long drafts the poison that dogmatically corrupts his principles.

Academic instruction must do precisely the opposite of what is advised here, though only on the presupposition of thorough instruction in the critique of pure reason. For, to put its principles into practice as early as possible and show their sufficiency against the greatest dialectical illusion, it is absolutely necessary to direct the attacks so terrifying to the dogmatist against his still weak but critically enlightened reason, and let him try examining the opponent's unfounded assertions one by one against those principles. It cannot be at all difficult for him to dissolve them into mere vapor. He thus feels his own strength early on, fully securing himself against such harmful delusions, which must finally lose all illusion for him.

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Although the very same blows that strike down the enemy's building must also be equally destructive to his own speculative structure, should he intend to erect one, he is entirely unconcerned. He has no need to live in it, but still has before him a prospect into the practical field, where he has grounds to hope for firmer soil on which to erect his rational and beneficial system.

Thus there is no proper polemic in the field of pure reason. Both parties are fighting the air, grappling with their own shadows, for they go beyond nature, where there is nothing their dogmatic grasp can seize and hold. They can fight at their leisure: the shadows they hew apart grow together again in a moment, like the heroes in Valhalla, to amuse themselves anew in bloodless battles.

But there is also no permissible skeptical use of pure reason that could be called the principle of neutrality in all its disputes. Inciting reason against itself, supplying it with weapons on both sides, and then calmly and mockingly watching its fiercest combat does not look well from a dogmatic standpoint; it has the appearance of a malicious disposition delighting in harm.

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Yet when we consider the invincible delusion and boasting of reasoners who will not let any critique moderate them, there is really no other recourse than to oppose boasting on one side with boasting on the other, resting on precisely the same rights, so that resistance from an enemy may at least startle reason into some doubt about its pretensions and make it listen to critique. But to leave

matters entirely at these doubts and make it one's aim to recommend conviction and confession of one's ignorance not merely as a remedy for dogmatic conceit but also as the way of ending reason's conflict with itself is an entirely futile plan. It cannot possibly bring reason to rest, but is at most a means of awakening it from its sweet dogmatic dream to examine its condition more carefully. Since this skeptical manner of extricating oneself from a vexing affair of reason seems, as it were, the shortcut to enduring philosophical repose—or at least the highway readily taken by those who think to acquire philosophical standing through a mocking contempt for all inquiries of this kind—I find it necessary to present this way of thinking in its proper light.

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On the Impossibility of Skeptically Satisfying Pure Reason in Conflict with Itself

Consciousness of my ignorance (unless this ignorance is also cognized as necessary), far from ending my inquiries, is rather what properly awakens them. All ignorance concerns either things or the determination and boundaries of my cognition. If ignorance is contingent, it must impel me in the first case to investigate things (objects) dogmatically, and in the second to investigate the boundaries of my possible cognition critically. But that my ignorance is absolutely necessary, and thus releases me from all further inquiry, cannot be established empirically through observation, but only critically, by exploring the first sources of our cognition. Thus the determination of reason's boundaries can occur only on grounds a priori. Its restriction, however, which is a cognition, though only indeterminate, of an ignorance never wholly removable, can also be cognized a posteriori, through what always remains for us to know despite all our knowledge. The former cognition of one's ignorance, possible only through critique of reason itself, is therefore science; the latter is nothing but perception, from which we cannot say how far an inference may reach.

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If I represent the earth's surface (in accordance with sensible illusion) as a plate, I cannot know how far it extends. But experience teaches me that wherever I go I always see around me a space into which I could proceed further. I thus cog-

nize limits of my actual geographical knowledge at any given time, but not the boundaries of all possible geography. But if I have come so far as to know that the earth is a sphere and its surface spherical, then even from a small part of it, such as the size of one degree, I can cognize the diameter and, through it, the earth's complete boundary, that is, its surface, determinately and according to principles a priori. Although I am ignorant of the objects this surface may contain, I am not ignorant of the extent containing them, its magnitude and limits. The sum of all possible objects of our cognition seems to us a level surface with its apparent horizon: that which encompasses its entire extent and which we have called the concept of reason of unconditioned totality. Reaching this horizon empirically is impossible, and every attempt to determine it a priori according to a certain principle has been futile.

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Yet all the questions of our pure reason concern what may lie outside this horizon, or perhaps on its boundary line.

The celebrated David Hume was one of these geographers of human reason. He thought he had adequately disposed of all those questions by relegating them beyond reason's horizon, although he could not determine that horizon. He dwelt chiefly on the principle of causality and quite rightly observed that its truth (indeed not even the objective validity of the concept of an efficient cause in general) is not grounded on any insight, that is, cognition a priori, and that hence the entire authority of this law consists not in the least in its necessity, but in its mere general usefulness in the course of experience and a resulting subjective necessity, which he calls habit. From our reason's inability to make a use of this principle extending beyond all experience, he inferred the nullity of all reason's pretensions to go beyond the empirical in general.

Such a procedure of submitting the facts of reason to examination and, where appropriate, to blame may be called the censure of reason. It is beyond doubt that this censure inevitably leads to doubt concerning every transcendent use of principles.

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But this is only the second step, far from completing the work. The first step in matters of pure reason, marking its childhood, is dogmatic. The second, mentioned above, is skeptical and testifies to the caution of a power of judgment made wise by experience. But a third step is still needed, belonging only to a mature and fully developed power of judgment grounded on firm maxims whose universality has been established: to assess not the facts of reason but reason itself in its entire capacity and aptitude for pure cognitions a priori. This is not the censure but the critique of reason. Through it, not merely reason's limits but its determinate boundaries, not merely ignorance on one point or another but ignorance regarding all possible questions of a certain kind, is not merely conjectured but proved from principles. Skepticism is thus a resting place for human reason, where it can reflect on its dogmatic journey and sketch the region in which it finds itself, so as to choose its further path with greater security; but it is not a dwelling for permanent residence. For such a dwelling can be found only in complete certainty, whether of cognition of the objects themselves or of the boundaries.

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Within these boundaries all our cognition of objects is enclosed.

Our reason is not a plain extending indefinitely far whose limits we cognize only in a general way. It must rather be compared with a sphere whose radius can be found from the curvature of an arc on its surface (the nature of synthetic propositions a priori), and from which its content and boundary can then also be determined with certainty. Outside this sphere (field of experience) nothing is an object for reason. Even questions about such supposed objects concern only subjective principles for thoroughly determining the relations that can occur among concepts of the understanding within this sphere.

We actually possess synthetic cognition a priori, as the principles of the understanding that anticipate experience demonstrate. If someone cannot comprehend its possibility at all, he may initially doubt whether we actually possess it a priori. But he cannot yet declare that it is impossible through the understanding's powers alone, or that every step reason takes under its guidance is null. He

can only say: if we understood its origin and authenticity, we could determine our reason's extent and boundaries; until this is done, however, all reason's assertions are blindly ventured.

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In this way a thoroughgoing doubt concerning all dogmatic philosophy that proceeds without critique of reason itself would be quite well founded. Yet reason could not on that account be denied all such progress if it were prepared and secured by a better foundation. For all the concepts, indeed all the questions, pure reason presents to us lie not in experience but again only in reason itself; they must therefore be capable of solution and of being understood as valid or null. Nor are we entitled to dismiss these problems on the pretext of our inability and refuse further inquiry into them, as though their solution really lay in the nature of things, since reason alone has generated these ideas within itself and is therefore bound to account for their validity or dialectical illusion.

All skeptical polemic is properly directed only against the dogmatist who solemnly continues on his way without any mistrust of his original objective principles, that is, without critique. It is meant only to unsettle his plan and bring him to self-cognition. In itself it settles absolutely nothing about what we know and what, on the other hand, we cannot know.

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All reason's failed dogmatic attempts are facts that it is always useful to submit to censure. But this can decide nothing about reason's expectations of hoping for and claiming a better outcome from its future efforts. Mere censure can therefore never end the dispute over the rights of human reason.

Since Hume is perhaps the most ingenious of all skeptics, and indisputably the foremost with regard to the influence skeptical procedure can exert in awakening a thorough examination of reason, it is well worth the effort to present the course of his inferences and the errors of so discerning and estimable a man, which nevertheless began on the trail of truth, as far as suits my purpose.

Hume perhaps had in mind, though he never fully developed it, that in judgments of a certain kind we go beyond our concept of the object. I have called judgments of this kind synthetic. How I can go beyond my existing concept through experience presents no difficulty. Experience is itself a synthesis of perceptions that augments the concept I have through one perception by adding others. But we also believe we can go beyond our concept a priori and extend our cognition.

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We attempt this either through the pure understanding, regarding what can at least be an object of experience, or even through pure reason, regarding properties of things or even the existence of objects that can never occur in experience. Our skeptic did not distinguish these two kinds of judgment as he should have done. He simply regarded this self-augmentation of concepts—this self-generation, so to speak, of our understanding (together with reason), without impregnation by experience—as impossible. He consequently regarded all its supposed principles a priori as imaginary, and found them to be nothing but a habit arising from experience and its laws: merely empirical, that is, in themselves contingent, rules to which we ascribe a supposed necessity and universality. To support this surprising proposition, he appealed to the universally acknowledged principle of the relation of cause to effect. For since no faculty of understanding can lead us from the concept of one thing to the existence of something else universally and necessarily given through it, he believed he could infer that without experience we have nothing that could augment our concept and entitle us to such a judgment that extends itself a priori.

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That the sunlight illuminating wax also melts it while it hardens clay, no understanding could guess from concepts we previously had of these things, still less infer according to a law; experience alone could teach us such a law. In transcendental logic, however, we have seen that, although we can never go immediately beyond the content of the concept given to us, we can nevertheless cognize the law of its connection with other things entirely a priori, though in relation to a third, namely possible experience, and thus still a priori. If wax previ-

ously solid melts, I can therefore cognize a priori that something must have preceded (for example, the sun's heat), upon which this followed according to a constant law; yet without experience I could not cognize either the cause from the effect or the effect from the cause determinately, a priori and without instruction from experience. He thus falsely inferred from the contingency of our determination according to the law the contingency of the law itself. He confused going beyond the concept of a thing to possible experience (which occurs a priori and constitutes its objective reality) with the synthesis of objects of actual experience, which is admittedly always empirical. He thereby turned a principle of affinity, seated in the understanding and expressing necessary connection, into a rule of association.

[B 795]

This rule is found only in the reproductive imagination, which can represent only contingent and by no means objective combinations.

The skeptical errors of this otherwise extraordinarily acute man arose chiefly from a deficiency he shared with all dogmatists: he did not systematically survey all kinds of the understanding's synthesis a priori. Had he done so, he would have found, to mention no others here, the principle of persistence, for example, to be one that anticipates experience just as much as the principle of causality. This would also have enabled him to trace determinate boundaries for the understanding that extends itself a priori and for pure reason. But he merely restricts our understanding without bounding it, producing a general mistrust but no determinate knowledge of the ignorance unavoidable for us. He subjects some principles of the understanding to censure without placing the understanding's entire capacity on the testing scales of critique. In denying it what it actually cannot accomplish, he goes further and disputes every capacity it has to extend itself a priori, although he has not assessed that entire capacity. Thus he suffers what always overthrows skepticism: he himself is doubted.

[B 796]

For his objections rest only on contingent facts, not on principles that could bring about a necessary renunciation of the right to dogmatic assertions.

Since he also recognizes no distinction between the well-founded claims of the understanding and the dialectical pretensions of reason, against which his attacks are principally directed, reason feels that the space for its expansion has not been closed. Its own characteristic soaring has not been disturbed in the least, only hindered, and, despite being pinched here and there, it can never be entirely dissuaded from its attempts. For against attacks we arm ourselves in defense and insist all the more stubbornly on enforcing our demands. But a complete assessment of our entire capacity, and the resulting conviction of the certainty of a small possession alongside the futility of higher claims, ends every dispute and induces us to be peacefully content with a restricted but undisputed property.

Against the uncritical dogmatist, who has not measured the sphere of his understanding and therefore has not determined from principles the boundaries of his possible cognition, who thus does not already know beforehand how much he can do but thinks to discover it through mere attempts, these skeptical attacks are not only dangerous but ruinous.

[B 797]

For if he is caught out in a single assertion that he cannot justify, yet whose illusion he also cannot unfold from principles, suspicion falls on all his assertions, however persuasive they may otherwise be.

Thus the skeptic is the dogmatic reasoner's disciplinarian, leading him toward a sound critique of understanding and reason itself. Once he has reached this, he need fear no further challenge. For he then distinguishes his possession from what lies entirely outside it, to which he makes no claims and over which he cannot be drawn into disputes. Skeptical procedure is thus not in itself satisfactory for reason's questions, but it is preparatory: it awakens reason's caution and points to thoroughgoing means of securing it in its rightful possessions.

Chapter One Section Three The Discipline of Pure Reason with Regard to Hypotheses

Since through critique of our reason we finally know this much—that in its pure and speculative use we can in fact know nothing at all—should it not open a still wider field for hypotheses, since we are at least permitted to invent

and opine, even if not to assert?

[B 798]

If imagination is not to indulge in fantasy but to invent under reason's strict supervision, something must always first be completely certain, not invented or mere opinion: the possibility of the object itself. We may then indeed take refuge in opinion regarding its actuality. But if this opinion is not to be unfounded, it must be connected as a ground of explanation with what is actually given and thus certain; it is then called a hypothesis.

Now we cannot form the slightest concept a priori of the possibility of dynamical connection, and the category of the pure understanding serves not to devise such connection but only to understand it where it is encountered in experience. We therefore cannot originally invent a single object with a new constitution that cannot be indicated empirically, in conformity with these categories, and lay it down as the basis of a permissible hypothesis. That would mean supplying reason with empty fantasies instead of concepts of things. Thus we are not permitted to devise new original forces: for example, an understanding capable of intuiting its object without senses; an attractive force without any contact; or a new kind of substance, such as one present in space without impenetrability.

[B 799]

Nor, consequently, may we devise a community of substances different from any supplied by experience, a presence anywhere but in space, or a duration anywhere but in time. In a word, our reason can use only the conditions of possible experience as conditions of the possibility of things. It cannot, entirely independently of these, create such conditions for itself, as it were, because such concepts, though without contradiction, would nevertheless also be without an object.

As stated, concepts of reason are mere ideas and admittedly have no object in any experience. But they do not therefore designate invented objects assumed at the same time to be possible. They are thought merely problematically, so that, in relation to them (as heuristic fictions), regulative principles of the systematic use of the understanding in the field of experience may be grounded. If we

depart from this, they are mere thought-entities whose possibility cannot be proved and which therefore cannot be laid down as the ground of the explanation of actual appearances through a hypothesis. To think the soul as simple is quite permitted, in order, according to this idea, to make a complete and necessary unity of all powers of the mind the principle for judging its inner appearances, even though we cannot grasp that unity in concreto.

[B 800]

But assuming the soul as a simple substance (a transcendent concept) would be a proposition not merely unprovable (as many physical hypotheses are) but also entirely arbitrary and blindly ventured. For the simple cannot occur in any experience whatever, and if substance here means the enduring object of sensible intuition, the possibility of a simple appearance cannot be understood at all. Neither merely intelligible beings nor merely intelligible properties of things in the sensible world can be assumed as opinion with any well-founded entitlement of reason; although (since we have no concepts of their possibility or impossibility) neither can they be dogmatically denied through any supposedly superior insight.

To explain given appearances, we can adduce only things and grounds of explanation connected with what is given according to already known laws of appearances. A transcendental hypothesis using a mere idea of reason to explain natural things would therefore be no explanation at all: what is not sufficiently understood from known empirical principles would be explained through something of which we understand nothing. The principle of such a hypothesis would also serve properly only to satisfy reason, not to advance the use of the understanding with regard to objects. Order and purposiveness in nature must in turn be explained from natural grounds and according to natural laws.

[B 801]

Here even the wildest hypotheses, provided they are physical, are more tolerable than a hyperphysical one, that is, an appeal to a divine author presupposed for this purpose. For that would be a principle of lazy reason (ignava ratio): to bypass at once all the causes whose objective reality, at least as to their possibility, we can still come to know through continued experience, in order to rest in

a mere idea very comfortable for reason. As for the absolute totality of grounds of explanation in their series, this can create no obstacle regarding objects in the world, because, since they are nothing but appearances, we can never hope to find in them anything complete in the synthesis of the series of conditions.

Transcendental hypotheses in reason's speculative use, and a freedom to resort to hyperphysical grounds whenever physical grounds of explanation are lacking, cannot be permitted at all. For one thing, they do not advance reason in the least but rather cut off all progress in its use. For another, this license must finally deprive reason of all the fruits of cultivating its own proper soil, experience. For whenever explaining nature becomes difficult here or there, we have a transcendent ground of explanation constantly at hand that relieves us of the inquiry.

[B 802]

Our investigation then ends not with insight but with the complete incomprehensibility of a principle devised in advance to contain the concept of the absolutely first.

The second requirement for the acceptability of a hypothesis is its sufficiency for determining a priori from it the consequences that are given. If we are forced to summon auxiliary hypotheses for this purpose, they arouse suspicion of mere invention, because each in itself needs the same justification required by the underlying thought, and therefore cannot provide a competent witness. If, on the presupposition of an unlimitedly perfect cause, there is no lack of grounds for explaining all the purposiveness, order, and greatness found in the world, that presupposition still needs new hypotheses to save it from the deviations and evils that appear, at least according to our concepts, as objections. If the simple self-subsistence of the human soul, laid down as the ground of its appearances, is challenged by the difficulties posed by phenomena resembling changes of matter (growth and decline), new hypotheses must be summoned.

[B 803]

These are not without illusion, but have no authentication except what is given them by the opinion assumed as the principal ground, which they are nevertheless meant to support.

If the assertions of reason cited here as examples (the soul's incorporeal unity and the existence of a highest being) are meant to count not as hypotheses but as dogmas proved a priori, they are not under discussion at all. In that case, however, one must be careful that the proof has the apodictic certainty of a demonstration. For seeking merely to make the actuality of such ideas probable is an absurd intention, just as if one meant to prove a geometrical proposition merely probably. Reason separated from all experience can cognize anything only a priori and as necessary, or not at all. Its judgment is therefore never opinion, but either abstention from all judgment or apodictic certainty. Opinions and probable judgments about what belongs to things can occur only as grounds of explanation for what is actually given, or as consequences according to empirical laws of what is laid down as actual, and thus only in the series of objects of experience. Outside this field, opining amounts to playing with thoughts, unless it is merely an opinion about an uncertain path of judgment, that we might perhaps find truth along it.

[B 804]

Although in merely speculative questions of pure reason hypotheses have no place as foundations for propositions, they are nevertheless quite permissible only for defending those propositions if necessary, that is, not in dogmatic but in polemical use. By defense I understand not an increase in the grounds of proof for one's assertion, but merely the frustration of an opponent's specious insights intended to impair our asserted proposition. Now all synthetic propositions from pure reason have this peculiarity: although the person who asserts the reality of certain ideas never knows enough to make his proposition certain, his opponent likewise cannot know enough to assert the contrary. This equality in human reason's lot favors neither side in speculative cognition, and here is indeed the proper battlefield of feuds that can never be settled. It will emerge later, however, that with regard to practical use reason has a right to assume something it would in no way be entitled to presuppose in the field of mere speculation without sufficient grounds of proof. For all such presuppositions impair the perfection of speculation, about which the practical interest is

wholly unconcerned. In the practical domain, then, reason is in possession and need not prove the legitimacy of that possession; indeed, it could not furnish the proof.

[B 805]

The opponent is therefore to prove. But since he knows as little about the doubted object for establishing its nonexistence as the other, who asserts its actuality, an advantage appears here on the side of the person asserting something as a practically necessary presupposition (melior est conditio possidentis). He is free, as though in self-defense, to employ for his good cause the very same means the opponent employs against it, that is, hypotheses. These are not meant at all to strengthen its proof, but only to show that the opponent understands far too little of the disputed object to flatter himself with any advantage over us in speculative insight.

Hypotheses are therefore permitted in the field of pure reason only as weapons of war, not to found a right upon them but merely to defend it. Yet here we must always seek the opponent within ourselves. For speculative reason in its transcendental use is in itself dialectical. The objections we might fear lie within ourselves. We must seek them out, like old claims that never lapse, in order to found an eternal peace on their annulment. Outward peace is only apparent. The seed of challenges, lying in the nature of human reason, must be uprooted.

[B 806]

But how can we uproot it unless we give it freedom, even nourishment, to send up shoots and thereby reveal itself, so that we can afterward destroy it root and all? Devise objections yourselves, then, that no opponent has yet thought of, and even lend him weapons or grant him the most favorable position he could wish for. There is nothing to fear here, but indeed something to hope for: that you will secure a possession never again to be challenged in all the future.

Your complete armament also includes hypotheses of pure reason. Although only leaden weapons (since they are not tempered by any law of experience), they nevertheless always accomplish as much as those any opponent may use against you. Suppose, then, that against the (in some other, nonspeculative respect) assumed immaterial nature of the soul, subject to no bodily transfor-

mation, you encounter the difficulty that experience seems to prove both the elevation and disruption of our mental powers to be merely different modifications of our organs. You can weaken the force of this proof by assuming that our body is nothing but the fundamental appearance to which, as its condition, the whole faculty of sensibility, and thus all thinking, relates in our present state (in life). Separation from the body would be the end of this sensible use of your cognitive power and the beginning of its intellectual use.

[B 807]

The body would therefore be not the cause of thinking but a merely restrictive condition of it, and thus to be regarded as furthering sensible and animal life, but all the more as hindering pure and spiritual life. The dependence of the former on bodily constitution would prove nothing about the dependence of life as a whole on the condition of our organs. You can go still further and even discover new doubts, either not yet raised or not pursued far enough.

The contingency of procreation, which in human beings as in nonrational creatures depends on opportunity, but often also on means of support, government and its whims and fancies, and often even on vice, creates a great difficulty for the opinion that the continued existence of a creature, whose life first began under circumstances so insignificant and so entirely left to our freedom, extends into eternity. As regards the continued existence of the whole species (here on earth), this difficulty has little force, because chance in the individual case is nevertheless subject to a rule in the whole. But with regard to each individual, expecting so mighty an effect from such trivial causes certainly seems questionable.

[B 808]

Against this, however, you can deploy a transcendental hypothesis: that all life is properly only intelligible, not subject to temporal changes at all, and neither began through birth nor ends through death; that this life is nothing but a mere appearance, that is, a sensible representation of pure spiritual life, and the entire sensible world a mere image hovering before our present mode of cognition and, like a dream, without objective reality in itself; that, if we were to

intuit things and ourselves as they are, we should see ourselves in a world of spiritual natures, our sole true community with which neither began through birth nor will cease through bodily death (as mere appearances), and so on.

Although we know not the slightest thing about any of this that we hypothetically put forward against the attack, nor seriously assert it—indeed, none of it is even an idea of reason, but merely a concept devised for defense—we nevertheless proceed quite rationally. We merely show the opponent, who thinks he has exhausted all possibility by falsely presenting the absence of its empirical conditions as proof of the complete impossibility of what we believe, that he can no more encompass the whole field of possible things in themselves through mere laws of experience than we can acquire anything well founded for our reason outside experience.

[B 809]

Whoever employs such hypothetical countermeasures against the pretensions of a boldly denying opponent must not be taken as wishing to adopt them as his true opinions. He abandons them as soon as he has disposed of his opponent's dogmatic conceit. For however modest and moderate it may seem when someone merely refuses and denies the assertions of others, as soon as he wants these objections to count as proofs of the opposite, his claim is always no less proud and conceited than if he had taken up the affirmative side and its assertion.

We see, then, that in reason's speculative use hypotheses have no validity as opinions in themselves, but only in relation to opposing transcendent pretensions. For extending the principles of possible experience to the possibility of things in general is just as transcendent as asserting the objective reality of concepts whose objects can be found nowhere but outside the boundary of all possible experience. What pure reason judges assertorically must (like everything reason cognizes) be necessary, or it is nothing at all. Thus pure reason in fact contains no opinions. The hypotheses in question, however, are only problematic judgments that at least cannot be refuted, though admittedly they cannot be proved by anything either.

[B 810]

They are therefore not private opinions, yet we cannot readily dispense with them (even for inward reassurance) against arising scruples. But we must preserve them in this capacity and carefully prevent their appearing as authenticated in themselves and possessed of any absolute validity, drowning reason in inventions and delusions.

Chapter One Section Four The Discipline of Pure Reason with Regard to Its Proofs

Among all proofs of synthetic cognition a priori, proofs of transcendental and synthetic propositions have this peculiarity: through its concepts, reason may not turn directly to the object, but must first establish the objective validity of the concepts and the possibility of their synthesis a priori. This is not merely a necessary rule of caution; it concerns the essence and possibility of the proofs themselves. If I am to go beyond the concept of an object a priori, this is impossible without a particular guiding thread lying outside that concept. In mathematics, intuition a priori guides my synthesis, and all inferences there can be drawn immediately from pure intuition.

[B 811]

In transcendental cognition, so long as it deals merely with concepts of the understanding, possible experience is this guide. The proof does not show that the given concept (for example, of what happens) leads directly to another concept (that of a cause); for such a transition would be an entirely unjustifiable leap. Rather, it shows that experience itself, and thus the object of experience, would be impossible without such a connection. The proof therefore also had to indicate the possibility of arriving synthetically and a priori at a certain cognition of things not contained in their concept. Without this attention, proofs run wild and cross-country, like waters breaking their banks, wherever the inclination of hidden association happens to lead them. The illusion of conviction resting on subjective causes of association and mistaken for insight into a natural affinity cannot counterbalance the misgivings that must rightly arise over such daring steps. Hence all attempts to prove the principle of sufficient

ground have, by the general admission of experts, been futile. Before transcendental critique appeared, since people could not abandon this principle, they preferred to appeal defiantly to common sense.

[B 812]

(This is a refuge that always proves reason's cause desperate.) They preferred it to attempting new dogmatic proofs.

But if the proposition to be proved is an assertion of pure reason, and I even intend through mere ideas to go beyond my concepts of experience, the proof would all the more have to contain the justification of such a step of synthesis (if it were possible at all) as a necessary condition of its probative force. Thus, however plausible the supposed proof of the simple nature of our thinking substance from the unity of apperception may be, it faces an unavoidable objection. Absolute simplicity is not a concept immediately relatable to a perception but must merely be inferred as an idea. It is therefore impossible to see how mere consciousness, which is or at least can be contained in all thinking, though in that respect a simple representation, should lead me to consciousness and knowledge of a thing in which alone thinking can be contained. For when I represent the force of my body in motion, the body is to that extent an absolute unity for me, and my representation of it is simple. I can therefore also express it through the motion of a point, because its volume does not matter here and can be thought as small as one likes without diminishing the force, and thus also as located in a point.

[B 813]

Yet I shall not infer from this that, if nothing is given me but a body's moving force, the body can be thought as a simple substance because its representation abstracts from every magnitude of spatial content and is therefore simple. I discover a paralogism through the fact that the simple in abstraction is entirely different from the simple in the object, and that the I, which in the first sense contains no manifold at all, may in the second, where it signifies the soul itself, be a very complex concept, containing and designating very much under itself. But to anticipate this (for without such a preliminary suspicion one would suspect nothing about the proof) it is absolutely necessary to have at hand a standing

criterion of the possibility of such synthetic propositions, which are meant to prove more than experience can give. This criterion consists in conducting the proof not directly toward the predicate sought, but only through a principle of the possibility of extending our given concept a priori to ideas and realizing them. Suppose this caution is always employed, and that before the proof is even attempted we first wisely consider how, and with what grounds for hope, we can expect such an extension through pure reason.

[B 814]

Suppose we also consider where, in such a case, we mean to obtain these insights, which cannot be developed from concepts or anticipated in relation to possible experience. Then we can spare ourselves much arduous yet fruitless effort. In this way we demand of reason nothing manifestly beyond its capacity, or rather subject it to the discipline of restraint, since in its fits of craving speculative expansion it does not readily accept restriction.

The first rule is therefore this: attempt no transcendental proofs without first considering and justifying where you intend to obtain the principles on which you plan to build them, and by what right you can expect successful inferences from them. If they are principles of the understanding (for example, of causality), it is futile to reach ideas of pure reason through them, for they hold only for objects of possible experience. If they are to be principles from pure reason, all effort is again futile. For reason does indeed have such principles, but as objective principles they are all dialectical and can at most be valid only as regulative principles of the systematically coherent use of experience. If such supposed proofs are already available, oppose to their deceptive conviction the non liquet of your mature power of judgment.

[B 815]

Even if you cannot yet penetrate their delusion, you have every right to demand a deduction of the principles employed in them, which can never be supplied if those principles are supposed to have arisen from mere reason. Thus you need not even occupy yourselves with unfolding and refuting every unfounded illusion, but can dismiss at once, in whole masses, all dialectic, inexhaustible in artifices, at the court of a critical reason that demands laws.

The second peculiarity of transcendental proofs is this: only a single proof can be found for each transcendental proposition. If I am to infer not from concepts but from the intuition corresponding to a concept, whether a pure intuition as in mathematics or an empirical one as in natural science, the underlying intuition gives me manifold material for synthetic propositions. I can connect this material in more than one way and, since I may start from more than one point, reach the same proposition by different paths.

But every transcendental proposition proceeds solely from one concept and states the synthetic condition of the object's possibility according to that concept. There can therefore be only a single ground of proof, because apart from this concept there is nothing else through which the object could be determined.

[B 816]

The proof can thus contain nothing beyond the determination of an object in general according to this concept, which is itself only one. For example, in the Transcendental Analytic we drew the principle that everything that happens has a cause from the sole condition of the objective possibility of a concept of what happens in general: that the determination of an event in time, and thus this (event) as belonging to experience, would be impossible unless it stood under such a dynamical rule. This is also the only possible ground of proof. For only through an object's being determined for the concept by the law of causality does the represented event have objective validity, that is, truth. Other proofs of this principle have indeed been attempted, from contingency, for example. But examined in the light, this yields no mark of contingency except happening, that is, an existence preceded by the object's nonexistence, so we always return to the same ground of proof. If the proposition that everything that thinks is simple is to be proved, we do not dwell on the manifold of thinking but remain solely with the concept of the I, which is simple and to which all thinking is related.

[B 817]

The same holds of the transcendental proof of God's existence, which rests solely on the convertibility of the concepts of the most real being and the necessary being, and can be sought nowhere else.

This cautionary observation greatly reduces the critique of reason's assertions. Where reason conducts its business through mere concepts, only a single proof is possible, if any proof is possible at all. Hence, if we see the dogmatist appearing with ten proofs, we can safely believe he has none. For if he had one that (as must be the case in matters of pure reason) proved apodictically, why would he need the others? His intention is merely like that of the parliamentary advocate: one argument is for this person, another for that one. He means to exploit the weakness of his judges, who, without entering deeply into the matter and eager to be rid of it, seize the first thing that strikes them and decide accordingly.

The third distinctive rule of pure reason when subjected to a discipline regarding transcendental proofs is that its proofs must never be apagogic, but always ostensive. In every kind of cognition, a direct or ostensive proof combines conviction of the truth with insight into its sources. An apagogic proof, by contrast, can indeed produce certainty, but not comprehension of truth in its coherence with the grounds of its possibility.

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The latter are therefore more an emergency expedient than a procedure satisfying all reason's aims. Yet they have an advantage in evidence over direct proofs: contradiction always carries greater clarity in representation than the best connection does, and thereby comes closer to the intuitive character of a demonstration.

The actual cause for using apagogic proofs in various sciences is probably this. If the grounds from which a certain cognition is to be derived are too manifold or too deeply concealed, we try to reach it through its consequences. Now the modus ponens of inferring the truth of a cognition from the truth of its consequences would be permissible only if all possible consequences of it were true. For then only a single ground would be possible for them, which would therefore also be the true one. But this procedure is impracticable, because understanding all possible consequences of any assumed proposition exceeds our

powers. Yet we employ this manner of inference, admittedly with a certain indulgence, when we seek to prove something merely as a hypothesis. We allow the inference by analogy that, if as many consequences as we have ever tested agree well with an assumed ground, all the other possible ones will agree with it too.

[B 819]

For this reason, a hypothesis can never be transformed into demonstrated truth along this path. The modus tollens of the inferences of reason that conclude from consequences to grounds proves not only with complete rigor but also with extraordinary ease. For if even a single false consequence can be drawn from a proposition, that proposition is false. Instead of running through the whole series of grounds in an ostensive proof, which can lead to the truth of a cognition through complete insight into its possibility, we need only find a single false consequence flowing from its opposite. That opposite is then also false, and thus the cognition we had to prove is true.

But the apagogic mode of proof can be permitted only in sciences where it is impossible to substitute the subjective element of our representations for the objective, namely for cognition of what belongs to the object. Where such substitution prevails, however, it must frequently happen that the opposite of a certain proposition contradicts merely the subjective conditions of thinking, not the object; or that both propositions contradict one another only under a subjective condition falsely taken as objective. Since the condition is false, both can then be false, without our being able to infer the truth of one from the falsity of the other.

[B 820]

In mathematics this subreption is impossible; such proofs therefore have their proper place there. In natural science, since everything rests on empirical intuitions, this illicit substitution can usually be prevented through many compared observations; yet this mode of proof is mostly of little importance there. But the transcendental attempts of pure reason are all undertaken within the very medium of dialectical illusion, that is, the subjective, which presents or even forces itself upon reason in its premises as objective. Here, then, with

regard to synthetic propositions, we cannot be permitted to justify our assertions by refuting their opposite. For either this refutation merely presents the conflict of the opposed opinion with the subjective conditions of comprehensibility through our reason, which does nothing to warrant rejecting the thing itself (just as, for example, unconditioned necessity in the existence of a being cannot be comprehended by us at all, and therefore subjectively opposes, rightly, every speculative proof of a necessary highest being, but wrongly opposes the possibility of such an original being in itself). Or both the affirming and the denying party, deceived by transcendental illusion, take an impossible concept of the object as their basis.

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The rule then holds: non entis nulla sunt praedicata, that is, both what is affirmed and what is denied of the object are incorrect, and we cannot arrive at cognition of the truth apagogically through refutation of the opposite. For example, if the sensible world is presupposed as given in itself in its totality, it is false that it must be either spatially infinite or finite and bounded, because both are false. For appearances (as mere representations) that were nevertheless given in themselves (as objects) are something impossible. The infinity of this imagined whole would admittedly be unconditioned, but would conflict (since everything in appearances is conditioned) with the unconditioned determination of magnitude nevertheless presupposed in the concept.

The apagogic mode of proof is also the very delusion with which admirers of our dogmatic reasoners' thoroughness have always been put off. It is, as it were, the champion who seeks to prove the honor and indisputable right of his chosen party by undertaking to fight anyone who doubts it. Yet by such boasting nothing is settled about the matter itself, but only the relative strength of the opponents, and even this only on the side of the one who takes the attacking part.

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Seeing that each in his turn is now victorious, now defeated, spectators often take occasion to doubt skeptically the very object of the dispute. But they have no grounds for this; it is enough to call out to them: non defensoribus istis tem-

pus eget. Each must conduct his case through a lawful proof furnished by transcendental deduction of the grounds of proof, that is, directly, so that we may see what his rational claims can offer on their own behalf. For if his opponent rests on subjective grounds, he is certainly easy to refute, but without advantage to the dogmatist, who commonly adheres just as much to subjective causes of judgment and can likewise be driven into a corner by his opponent. If both parties proceed only directly, however, they will either themselves notice the difficulty, indeed impossibility, of finding a title for their assertions and finally be able to appeal only to prescription; or critique will easily discover the dogmatic illusion and compel pure reason to abandon its excessive pretensions in speculative use and retreat within the boundaries of its own proper ground, namely practical principles.

[B 823]

Transcendental Doctrine of Method Chapter Two The Canon of Pure Reason

It is humiliating for human reason that it accomplishes nothing in its pure use and even needs a discipline to curb its excesses and prevent the delusions arising from them. Yet on the other hand it is elevated again and given confidence in itself by being able and obliged to exercise this discipline itself, without permitting another censure above it, and likewise by the fact that the boundaries it is forced to set to its speculative use also restrict every opponent's sophistical pretensions and can therefore secure against all attacks whatever remains of its formerly excessive demands. The greatest and perhaps only benefit of all philosophy of pure reason is thus probably only negative; since it serves, namely, not as an organon for extension but as a discipline for determining boundaries, and instead of discovering truth has only the quiet merit of preventing errors.

Yet somewhere there must be a source of positive cognitions belonging to the domain of pure reason, which perhaps occasion errors only through misunderstanding, but in fact constitute the goal of reason's zeal.

[B 824]

For to what other cause could we ascribe the irrepressible desire to gain a firm foothold somewhere entirely beyond the boundary of experience? Reason anticipates objects of great interest to it. It takes the path of mere speculation to

approach them, but they flee before it. Better fortune may presumably be hoped for on the only path still open to it, that of practical use.

By a canon I understand the sum of principles a priori for the correct use of certain cognitive faculties in general. Thus general logic in its analytic part is a canon for understanding and reason in general, but only as to form, since it abstracts from all content. Thus the Transcendental Analytic was the canon of the pure understanding, for this alone is capable of true synthetic cognitions a priori. But where no correct use of a cognitive power is possible, there is no canon. Now, according to all the proofs conducted so far, every synthetic cognition of pure reason in its speculative use is entirely impossible. There is therefore no canon at all of its speculative use (for this is thoroughly dialectical), but all transcendental logic in this respect is nothing but discipline.

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Consequently, if there is any correct use of pure reason, in which case it must also have a canon, this will concern not speculative but practical use of reason, which we shall now investigate.

The Canon of Pure Reason Section One On the Ultimate End of the Pure Use of Our Reason

A tendency of its nature drives reason beyond its use in experience, to venture in a pure use, through mere ideas, to the furthest boundaries of all cognition, and to find rest only in the completion of its circle, in a self-subsistent systematic whole. Is this striving grounded merely in its speculative interest, or rather solely in its practical interest?

I shall now set aside the success of pure reason in its speculative aim and ask only about the problems whose solution constitutes its ultimate end, whether it attains that end or not, and in relation to which all the others have merely the value of means.

[B 826]

According to reason's nature, these highest ends must in turn possess unity, so as jointly to further that interest of humanity which is subordinate to no higher one.

The final aim toward which reason's speculation in its transcendental use ultimately runs concerns three objects: freedom of the will, immortality of the soul, and the existence of God. Regarding all three, reason's merely speculative interest is very slight. For its sake, the exhausting labor of transcendental inquiry, struggling with unceasing obstacles, would scarcely be undertaken, because no use could be made of any discoveries about these matters that would prove beneficial in concreto, that is, in the investigation of nature. Even if the will is free, this can concern only the intelligible cause of our willing. For as regards the phenomena in which it manifests itself, that is, its actions, an inviolable fundamental maxim, without which we cannot exercise reason in empirical use, requires us always to explain them just like all other appearances of nature, according to its unchangeable laws. Second, even if the spiritual nature of the soul (and with it its immortality) could be understood, we could rely on this neither as a ground for explaining the appearances of this life nor for determining the particular constitution of a future state.

[B 827]

For our concept of an incorporeal nature is merely negative; it does not extend our cognition in the least or offer any suitable material for inferences except perhaps such as can count only as inventions, which philosophy does not permit. Third, even if the existence of a highest intelligence were proved, we would indeed thereby make the purposiveness in the world's arrangement and order generally comprehensible, but would be in no way entitled to derive any particular arrangement or order from it, or boldly infer such an order where it is not perceived. For a necessary rule of reason's speculative use forbids bypassing natural causes and abandoning what experience can teach us in order to derive something we know from what entirely surpasses all our knowledge. In a word, these three propositions always remain transcendent for speculative reason. They have no immanent use, that is, no use permissible for objects of experience and thus useful to us in any way; considered in themselves, they are entirely idle and, moreover, extremely difficult exertions of our reason.

These three cardinal propositions are not at all necessary for our knowledge, and yet our reason urgently recommends them to us.

[B 828]

Their importance must therefore properly concern only the practical.

Everything possible through freedom is practical. But if the conditions for exercising our free power of choice are empirical, reason can have only a regulative use here, serving merely to bring about unity of empirical laws. In the doctrine of prudence, for example, reason's whole task is to unite all ends assigned to us by our inclinations into the single end of happiness and bring into agreement the means of attaining it. For this reason it can supply only pragmatic laws of free conduct for attaining the ends recommended to us by the senses, not pure laws determined entirely a priori. Pure practical laws, by contrast, whose end is given by reason entirely a priori, and which command absolutely rather than under empirical conditions, would be products of pure reason. Moral laws are of this kind; they alone, therefore, belong to the practical use of pure reason and permit a canon.

Thus the entire preparation of reason in the undertaking we may call pure philosophy is in fact directed solely toward the three problems mentioned. These themselves, however, have a further aim: what is to be done if the will is free, if there is a God and a future world.

[B 829]

Since this concerns our conduct in relation to the highest end, the ultimate intention of nature, which wisely provides for us, in the arrangement of our reason is properly directed only toward the moral.

Caution is needed, however, now that we turn our attention to an object foreign* to transcendental philosophy, lest we stray into digressions and violate the system's unity; on the other hand, we must also avoid saying so little about our new material that clarity or conviction suffers. I hope to accomplish both by staying as close as possible to the transcendental and setting aside entirely whatever here might be psychological, that is, empirical.

* All practical concepts relate to objects of liking or disliking, that is, of pleasure or displeasure, and thus at least indirectly to objects of our feeling. But feeling is no power of representing things; it lies outside our entire cognitive power.

Hence the elements of our judgments insofar as they relate to pleasure or displeasure, and thus of practical judgments, do not belong to the sum of transcendental philosophy, which is concerned solely with pure cognitions a priori. We must first note, then, that for the present I shall employ the concept of freedom only in its practical sense.

[B 830]

Freedom in its transcendental meaning, which cannot be empirically presupposed as a ground for explaining appearances but is itself a problem for reason, I set aside here as dealt with above. A power of choice is merely animal (arbitrium brutum) if it can be determined only through sensible impulses, that is, pathologically. But a power of choice that can be determined independently of sensible impulses, and thus by motives represented only by reason, is called the free power of choice (arbitrium liberum); everything connected with it, whether as ground or consequence, is called practical. Practical freedom can be proved through experience. For the human power of choice is determined not merely by what stimulates, that is, immediately affects the senses. We have a power to overcome impressions on our sensible faculty of desire through representations of what is useful or harmful even in a more remote way. But these reflections on what is desirable, that is, good and useful, with regard to our whole condition rest on reason. Reason therefore also gives laws that are imperatives, that is, objective laws of freedom, which say what ought to happen, although perhaps it never does happen. In this they differ from laws of nature, which deal only with what happens; hence they are also called practical laws.

[B 831]

But whether reason itself, in these acts through which it prescribes laws, is not in turn determined by other influences, and whether what is called freedom with regard to sensible impulses might not in turn be nature with regard to higher and more remote efficient causes, does not concern us in the practical sphere, where we initially ask reason only for a prescription of conduct. It is a merely speculative question, which we can set aside so long as our intention is directed toward action or inaction. We therefore cognize practical freedom through experience as one of the natural causes, namely a causality of reason in

determining the will. Transcendental freedom, by contrast, requires this reason itself to be independent (with regard to its causality of beginning a series of appearances) of all determining causes of the sensible world. To that extent it seems contrary to the law of nature, and thus to all possible experience, and therefore remains a problem. But this problem does not belong before reason in its practical use. In a canon of pure reason, then, we are concerned only with two questions involving pure reason's practical interest, regarding which a canon of its use must be possible: Is there a God? Is there a future life? The question of transcendental freedom concerns speculative knowledge alone.

[B 832]

We can set it aside as entirely indifferent when the practical is at issue, and a sufficient discussion of it is already to be found in the Antinomy of Pure Reason.

The Canon of Pure Reason Section Two On the Ideal of the Highest Good as a Determining Ground of the Ultimate End of Pure Reason

In its speculative use, reason led us through the field of experiences and, because it can never find complete satisfaction there, onward to speculative ideas. These, however, ultimately led us back to experience, thus fulfilling reason's intention in a useful way, but one entirely at odds with our expectation. One attempt remains: to see whether pure reason is also to be found in practical use; whether in this use it leads to the ideas that attain the highest ends of pure reason just cited; and whether, from the standpoint of its practical interest, it thus could not grant what it entirely refuses us with regard to its speculative interest.

Every interest of my reason (the speculative as well as the practical) unites in the following three questions:

1 [B 833]

What can I know?

2. What ought I to do?

3. What may I hope?

The first question is merely speculative. We have (as I flatter myself) exhausted all possible answers to it and finally found the one with which reason must indeed be satisfied and, if it does not look to the practical, also has grounds to be content. But we have remained just as far from the two great ends toward which this whole striving of pure reason was properly directed as if, for our own comfort, we had refused this labor from the outset. Thus, where knowledge is concerned, at least this much is certain and settled: with regard to those two problems, we can never attain it.

The second question is merely practical. As such it can indeed belong to pure reason, but it is then not transcendental but moral, and thus cannot in itself occupy our critique.

The third question—if I now do what I ought, what may I then hope?—is at once practical and theoretical. The practical serves merely as a guiding thread for answering the theoretical and, when pursued far, speculative question. For all hope concerns happiness, and in relation to the practical and the moral law it is precisely what knowledge and the law of nature are in relation to theoretical cognition of things.

[B 834]

The former ultimately issues in the inference that something is (which determines the ultimate possible end) because something ought to happen; the latter, that something is (which acts as the highest cause) because something happens.

Happiness is the satisfaction of all our inclinations (extensively in their manifoldness, intensively in their degree, and protensively in their duration). I call a practical law motivated by happiness pragmatic (rule of prudence); but a law, if there is such a law, whose motive is nothing but worthiness to be happy, I call moral (moral law). The first advises what to do if we want to attain happiness; the second commands how we ought to conduct ourselves merely to become worthy of happiness. The first rests on empirical principles, for only through experience can I know either what inclinations seek satisfaction or what natural causes can bring about their satisfaction. The second abstracts from inclinations and the natural means of satisfying them, considering only the freedom of

a rational being in general and the necessary conditions under which alone it accords with the distribution of happiness according to principles. It can therefore at least rest on mere ideas of pure reason and be cognized a priori.
[B 835]
I assume that there actually are pure moral laws determining entirely a priori (without regard to empirical motives, that is, happiness) what a rational being in general does or refrains from doing, that is, its use of freedom; and that these laws command absolutely (not merely hypothetically on the presupposition of other empirical ends), and are thus necessary in every respect. I can rightly presuppose this proposition by appealing not only to the proofs of the most enlightened moralists, but to every human being's moral judgment, if he wishes to think such a law distinctly.
Pure reason therefore contains, though not in its speculative use, in a certain practical use, namely the moral, principles of the possibility of experience: of actions that might be found in human history in accordance with moral precepts. For since it commands that such actions ought to happen, they must also be able to happen. A particular kind of systematic unity, the moral, must therefore be possible. By contrast, systematic unity of nature could not be proved according to speculative principles of reason, because reason has causality with regard to freedom in general, but not with regard to the whole of nature; moral principles of reason can produce free actions, but not laws of nature.
[B 836]
Accordingly, the principles of pure reason in its practical, specifically moral, use have objective reality.
I call the world, insofar as it would conform to all moral laws (as indeed it can be, according to the freedom of rational beings, and, according to the necessary laws of morality, ought to be), a moral world. To this extent it is thought merely as an intelligible world, because in it we abstract from all conditions (ends) and even from all obstacles to morality (weakness or impurity of human nature). To this extent it is thus a mere but nevertheless practical idea, which really can and ought to influence the sensible world so as to make it conform to this idea as far as possible. The idea of a moral world therefore has objective

reality, not as relating to an object of an intelligible intuition (of which kind we cannot think at all), but to the sensible world as an object of pure reason in its practical use, and to a corpus mysticum of rational beings in it, insofar as their free choice under moral laws has thoroughgoing systematic unity both with itself and with the freedom of everyone else.

That answered the first of the two questions of pure reason concerning its practical interest: do what makes you worthy to be happy.

[B 837]

The second now asks: if I conduct myself so as not to be unworthy of happiness, may I also hope thereby to attain it? The answer depends on whether the principles of pure reason that prescribe the law a priori also necessarily connect this hope with it.

I therefore say: just as moral principles are necessary according to reason in its practical use, it is equally necessary according to reason in its theoretical use to assume that everyone has grounds to hope for happiness in the same measure as he has made himself worthy of it in his conduct, and that thus the system of morality is inseparably, but only in the idea of pure reason, combined with that of happiness.

Now in an intelligible, that is, moral world, in whose concept we abstract from all obstacles to morality (the inclinations), such a system of happiness proportioned to and combined with morality can also be thought as necessary. For freedom, partly moved and partly restricted by moral laws, would itself be the cause of universal happiness. Rational beings themselves, guided by such principles, would thus be authors of their own enduring welfare and that of others.

[B 838]

But this system of self-rewarding morality is only an idea whose execution rests on the condition that everyone does what he ought: that all actions of rational beings occur as if they sprang from one highest will encompassing every private choice within or under itself. Yet obligation under the moral law remains valid for each particular use of freedom even if others do not conform to this law. Neither the nature of things in the world nor the causality of the actions themselves and their relation to morality therefore determines how their conse-

quences will relate to happiness. The necessary connection mentioned between the hope of being happy and the unceasing effort to make oneself worthy of happiness cannot be cognized by reason if nature alone is laid down as the basis. It may be hoped for only if a highest reason commanding according to moral laws is also laid down as the cause of nature.

I call the idea of such an intelligence—in which the morally most perfect will, combined with the highest blessedness, is the cause of all happiness in the world insofar as this stands in exact proportion to morality (as worthiness to be happy)—the ideal of the highest good. Thus only in the ideal of the highest original good can pure reason find the ground of the practically necessary connection of both elements of the highest derived good, namely an intelligible, that is, moral world.

[B 839]

Now, since we must necessarily represent ourselves through reason as belonging to such a world, although the senses exhibit nothing to us but a world of appearances, and since this sensible world does not present such a connection to us, we must therefore assume the moral world as a consequence of our conduct in the sensible world, as a world future for us. God and a future life are thus two presuppositions inseparable, according to principles of that same reason, from the obligation pure reason imposes on us.

Morality in itself constitutes a system, but happiness does not, except insofar as it is distributed in exact conformity with morality. This, however, is possible only in the intelligible world under a wise author and ruler. Reason finds itself compelled to assume such a being, together with life in such a world, which we must regard as future, or else to regard moral laws as empty fantasies. For without that presupposition their necessary consequence, which the same reason connects with them, would have to disappear. Hence everyone also regards moral laws as commands. But they could not be commands unless they connected appropriate consequences a priori with their rule, and thus carried promises and threats with them.

[B 840]

Nor can they do this unless they lie in a necessary being as the highest good, which alone can make such purposive unity possible.

Leibniz called the world, insofar as we attend in it only to rational beings and their coherence according to moral laws under the government of the highest good, the kingdom of grace. He distinguished it from the kingdom of nature, where rational beings indeed stand under moral laws but expect no consequences of their conduct other than those following the course of nature in our sensible world. To see ourselves in the kingdom of grace, where all happiness awaits us except insofar as we ourselves restrict our share through unworthiness to be happy, is therefore a practically necessary idea of reason.

Practical laws, insofar as they also become subjective grounds of actions, that is, subjective principles, are called maxims. We judge morality in its purity and consequences according to ideas; we follow its laws according to maxims.

Our entire conduct of life must necessarily be subordinated to moral maxims. Yet it is at the same time impossible for this to happen unless reason connects with the moral law, which is a mere idea, an efficient cause determining for conduct according to that law an outcome exactly corresponding to our highest ends, whether in this life or another.

[B 841]

Thus without a God and a world presently invisible to us but hoped for, the glorious ideas of morality are indeed objects of approval and admiration, but not incentives to resolution and practice. For they do not fulfill the entire end that is natural to every rational being and is determined a priori and made necessary by that very same pure reason.

Happiness alone is far from being the complete good for our reason. Reason does not approve it (however much inclination may desire it) unless it is united with worthiness to be happy, that is, moral good conduct. Yet morality alone, and with it mere worthiness to be happy, is also far from being the complete good. To complete it, someone whose conduct has not been unworthy of happiness must be able to hope to attain it. Even reason free of every private aim, if it put itself without considering any interest of its own in the place of a being required to distribute all happiness to others, could judge no differently. For in

the practical idea both elements are essentially combined, though in such a way that moral disposition, as the condition, first makes a share in happiness possible, not, conversely, the prospect of happiness the moral disposition.

[B 842]

In the latter case the disposition would not be moral and thus would not be worthy of complete happiness, which before reason recognizes no restriction except that arising from our own immoral conduct.

Thus happiness in exact proportion to the morality of rational beings, through which they are worthy of it, alone constitutes the highest good of a world into which we must absolutely place ourselves according to the precepts of pure but practical reason. This is admittedly only an intelligible world, since the sensible world promises us no such systematic unity of ends from the nature of things. Its reality can be grounded on nothing but the presupposition of a highest original good, in which self-subsistent reason, equipped with all the sufficiency of a highest cause, establishes, preserves, and carries out, according to the most perfect purposiveness, the universal order of things, though this order is deeply concealed from us in the sensible world.

This moral theology has a distinctive advantage over speculative theology: it inevitably leads to the concept of a single, most perfect, rational original being, toward which speculative theology does not even point us on objective grounds, much less could it convince us of it. For neither in transcendental nor in natural theology, however far reason may lead us there, do we find any substantial ground for assuming only a single being.

[B 843]

It would be a being that we set above all natural causes, and on which we would have sufficient reason to make them depend in every respect. By contrast, if from the standpoint of moral unity as a necessary law of the world we consider the cause that alone can give it the appropriate effect, and thus binding force for us, this must be a single highest will encompassing all these laws. For how could we find perfect unity of ends among different wills? This will must be almighty, so that all nature and its relation to morality in the world may be subject to it; omniscient, so that it may cognize the innermost dispositions and

their moral worth; omnipresent, so that it may be immediately close to every need required by the highest good of the world; eternal, so that at no time may this agreement of nature and freedom fail; and so on.

But this systematic unity of ends in this world of intelligences—which as mere nature is only a sensible world, but as a system of freedom can be called an intelligible, that is, moral world (regnum gratiae)—inevitably also leads to the purposive unity of all things making up this great whole according to universal laws of nature, just as the former does according to universal and necessary moral laws, and unites practical with speculative reason.

[B 844]

The world must be represented as having sprung from an idea if it is to agree with that use of reason without which we would regard ourselves as unworthy of reason itself: the moral use, which rests entirely on the idea of the highest good. All investigation of nature thereby receives a direction according to the form of a system of ends, and in its greatest extension becomes physicotheology. Yet because this began from moral order as a unity grounded in the essence of freedom, not contingently established through external commands, it traces nature's purposiveness to grounds that must be inseparably connected a priori with the inner possibility of things. It thereby leads to a transcendental theology that takes the ideal of the highest ontological perfection as a principle of systematic unity, connecting all things according to universal and necessary laws of nature, because all originate in the absolute necessity of one single original being.

What use can we make of our understanding, even with regard to experience, unless we set ourselves ends? But the highest ends are those of morality, and only pure reason can make these known to us. Equipped with them and guided by them, we can make no purposive use of the knowledge of nature itself with regard to cognition unless nature has itself placed purposive unity there.

[B 845]

Without this we would not even possess reason, since we would have no school for it and no cultivation through objects offering material for such concepts. But the former purposive unity is necessary and grounded in the essence of the

power of choice itself. The latter, therefore, which contains the condition for applying the former in concreto, must be necessary too. Thus the transcendental elevation of our rational cognition would be not the cause but merely the effect of the practical purposiveness pure reason imposes on us.

We therefore also find in the history of human reason that, before moral concepts had been sufficiently purified and determined, and the systematic unity of ends according to them had been understood from necessary principles, knowledge of nature and even a considerable degree of reason's cultivation in other sciences could produce only crude and wandering concepts of the deity, or else left behind a remarkable indifference to the question altogether. A fuller development of moral ideas, made necessary by the supremely pure moral law of our religion, sharpened reason's attention to the object through the interest it compelled reason to take in it. Neither extended knowledge of nature nor correct and reliable transcendental insights (of which kind have at all times been lacking) contributed to this.

[B 846]

Yet these ideas produced a concept of the divine being that we now regard as correct—not because speculative reason convinces us of its correctness, but because it agrees perfectly with moral principles of reason. Thus, in the end, pure reason alone, but only in its practical use, always deserves the credit for connecting with our highest interest a cognition that mere speculation can only suppose, not establish, thereby making it not a demonstrated dogma but an absolutely necessary presupposition for reason's most essential ends.

But once practical reason has reached this high point, the concept of a single original being as the highest good, it must not presume to start from this concept and derive the moral laws themselves from it, as though it had risen above all empirical conditions of its application and soared to immediate knowledge of new objects. For it was precisely these laws whose inner practical necessity led us to presuppose a self-subsistent cause or wise ruler of the world in order to give them effect. We cannot therefore in turn, according to this, regard them as contingent and derived from mere will, especially a will of which we would have no concept at all had we not formed it in accordance with those laws.

[B 847]

As far as practical reason has the right to lead us, we shall regard actions as obligatory not because they are God's commands, but as divine commands because we are inwardly bound to them. We shall study freedom under purposive unity according to principles of reason, and believe ourselves in conformity with the divine will only insofar as we hold sacred the moral law that reason teaches us from the nature of the actions themselves. We shall believe that we serve him solely by promoting the good of the world in ourselves and others. Moral theology therefore has only an immanent use: to fulfill our vocation here in the world by fitting into the system of all ends, and not fanatically or even impiously to abandon the guiding thread of morally legislative reason in good conduct in order to connect it immediately with the idea of the highest being. That would be a transcendent use which, like the use of mere speculation, must distort and frustrate reason's ultimate ends.

[B 848]

The Canon of Pure Reason Section Three On Opinion, Knowledge, and Faith

Holding something true is an occurrence in our understanding that may rest on objective grounds, but also requires subjective causes in the mind of the person judging. If it is valid for everyone so long as he has reason, its ground is objectively sufficient, and holding true is then called conviction. If its ground lies only in the subject's particular constitution, it is called persuasion.

Persuasion is a mere illusion, because the ground of the judgment, lying solely in the subject, is taken as objective. Such a judgment therefore also has only private validity, and the holding true cannot be communicated. Truth, however, rests on agreement with the object, with regard to which the judgments of every understanding must consequently agree (consentientia uni tertio, consentiunt inter se). The outward touchstone of holding true, whether it is conviction or mere persuasion, is therefore the possibility of communicating it and finding it valid for every human being's reason.

[B 849]

For then we at least presume that the ground of agreement among all judgments, despite the differences among subjects, will rest on their common ground, the object, with which they therefore all agree, thereby proving the judgment's truth.

Persuasion cannot, then, be distinguished subjectively from conviction if the subject regards his holding true merely as an appearance of his own mind. But testing its grounds, valid for us, on the understanding of others, to see whether they have precisely the same effect on another's reason as on ours, is nevertheless a means, though only subjective, not of producing conviction but of discovering the judgment's merely private validity, that is, something in it that is mere persuasion.

If, moreover, we can unfold the subjective causes of the judgment that we take for its objective grounds, and thus explain the deceptive holding true as an occurrence in our mind without needing the object's constitution, we expose the illusion and are no longer deceived by it, though still tempted to a degree if the subjective cause of the illusion is inherent in our nature.

I can assert nothing—that is, pronounce it as a judgment necessarily valid for everyone—except what produces conviction.

[B 850]

I may keep persuasion to myself if I feel comfortable with it, but I cannot and ought not seek to make it valid beyond myself.

Holding true, or the subjective validity of judgment, has the following three degrees in relation to conviction (which is at the same time objectively valid): opinion, faith, and knowledge. Opinion is holding true with consciousness of its subjective as well as objective insufficiency. If holding true is only subjectively sufficient and is at the same time regarded as objectively insufficient, it is called faith. Finally, holding true that is both subjectively and objectively sufficient is called knowledge. Subjective sufficiency is called conviction (for myself); objective sufficiency, certainty (for everyone). I shall not linger over the elucidation of such readily comprehensible concepts.

I must never venture to opine without knowing at least something through which the judgment, in itself merely problematic, acquires a connection with truth that, though incomplete, is more than an arbitrary invention. The law of such a connection must, moreover, be certain. For if regarding it too I have nothing but opinion, everything is merely a play of imagination without the slightest relation to truth. In judgments from pure reason, opining is not permissible at all.

[B 851]

For they are not supported by grounds of experience, but everything is to be cognized a priori, where everything is necessary. The principle of connection therefore requires universality and necessity, and thus complete certainty; otherwise no guidance toward truth is found at all. It is therefore absurd to opine in pure mathematics: we must know or refrain from all judgment. The same holds of moral principles, where we may not risk an action on the mere opinion that it is permissible, but must know this.

In reason's transcendental use, by contrast, opinion is admittedly too little, but knowledge is also too much. In a merely speculative respect we can therefore make no judgment here at all. For subjective grounds of holding true, such as those capable of producing faith, deserve no assent in speculative questions, since they cannot sustain themselves free of all empirical assistance or be communicated equally to others.

But holding true that is theoretically insufficient can be called faith only in a practical relation. This practical aim concerns either skill or morality: the first for freely chosen and contingent ends, the second for absolutely necessary ends. Once an end is set, the conditions of attaining it are hypothetically necessary.

[B 852]

This necessity is subjectively but only comparatively sufficient if I know no other conditions under which the end could be attained. It is absolutely sufficient and sufficient for everyone if I know with certainty that no one can know other conditions leading to the end set. In the first case my presupposition and holding true of certain conditions is merely contingent faith; in the second, necessary faith. A physician must do something for a patient in danger, but

does not know the illness. He considers the appearances and, knowing nothing better, judges it to be consumption. Even in his own judgment his faith is merely contingent; another might perhaps hit upon something better. I call such contingent faith, which nevertheless underlies the actual use of means for certain actions, pragmatic faith.

The usual touchstone of whether what someone asserts is mere persuasion or at least subjective conviction, that is, firm faith, is a wager. Someone often pronounces his propositions with such confident and unbending defiance that he seems to have entirely cast off all fear of error. A wager gives him pause. Sometimes it turns out that he possesses enough persuasion to be valued at one ducat, but not at ten.

[B 853]

He will still risk the first, but at ten he first becomes aware of what he had not noticed before: that he might after all be mistaken. If we imagine having to stake the happiness of our entire life on something, our triumphant judgment dwindles greatly; we become extremely timid and only then discover that our faith does not reach so far. Pragmatic faith thus has only a degree, which may be great or small according to the different interest at stake.

But although we can undertake nothing in relation to an object, so that holding it true is merely theoretical, in many cases we can nevertheless conceive and imagine an undertaking for which we believe we have sufficient grounds, if there were a means of establishing the matter's certainty. Thus in merely theoretical judgments there is an analogue of practical judgments to whose holding true the word faith applies, and which we can call doctrinal faith. If it were possible to settle the matter through some experience, I would readily wager all I possess that at least one of the planets we see has inhabitants. Hence I say that it is not mere opinion but a strong faith (on whose correctness I would already risk many advantages of life) that there are also inhabitants of other worlds.

[B 854]

Now we must admit that the doctrine of God's existence belongs to doctrinal faith. For although in theoretical knowledge of the world I have nothing at my disposal that necessarily presupposes this thought as a condition of my explana-

tions of the world's appearances—rather, I am bound to use my reason as if everything were mere nature—purposive unity is nevertheless so great a condition of applying reason to nature that, since experience also abundantly offers examples of it, I cannot disregard it. But I know no other condition for this unity that would make it a guiding thread for investigating nature than to presuppose that a highest intelligence has ordered everything thus according to the wisest ends. Consequently, presupposing a wise author of the world is a condition of an aim that, though contingent, is not insignificant: having guidance in investigating nature. The outcome of my attempts so often confirms the usefulness of this presupposition, and nothing decisive can be brought against it, that I say far too little if I call my holding true a mere opinion. Even in this theoretical relation, I can say that I firmly believe in a God. Yet this faith is still not practical in the strict sense, but must be called doctrinal faith, which the theology of nature (physicotheology) must necessarily produce everywhere.

[B 855]

In view of this same wisdom, considering the excellent endowment of human nature and the brevity of life so ill suited to it, we can likewise find sufficient ground for doctrinal faith in a future life of the human soul.

In such cases, the expression of faith is an expression of modesty in an objective respect, but at the same time of firmness of confidence in a subjective one. If I were to call this merely theoretical holding true even a hypothesis I was entitled to assume, I would already be pledging myself to possess more of a concept of the constitution of a world-cause and another world than I can actually show. For even of what I assume only as a hypothesis, I must know at least enough of its properties to be permitted to invent not its concept but only its existence. The word faith, however, refers only to the guidance an idea gives me and its subjective influence in furthering my reason's activity, which keeps me attached to it although I cannot account for it in a speculative respect.

But merely doctrinal faith has something unstable about it.

[B 856]

Difficulties encountered in speculation often unsettle it, although we invariably return to it again.

Moral faith is entirely different. Here something must happen with absolute necessity: I must follow the moral law in every respect. The end is inescapably fixed, and according to all my insight only one condition is possible under which this end coheres with all ends together and thereby has practical validity: that there is a God and a future world. I also know with complete certainty that no one knows other conditions leading to the same unity of ends under the moral law. Since the moral precept is thus also my maxim (as indeed reason commands that it ought to be), I shall inevitably believe in the existence of God and a future life. I am certain that nothing could shake this faith, because my moral principles themselves would thereby be overthrown, and I cannot renounce them without becoming detestable in my own eyes.

In this way, after all the ambitious aims of a reason roaming beyond the boundaries of all experience have been frustrated, enough remains to give us grounds for satisfaction in a practical respect. Admittedly, no one can boast that he knows there is a God and a future life.

[B 857]

For if he knows this, he is precisely the man I have long sought. All knowledge (if it concerns an object of mere reason) can be communicated, and I could therefore hope through his instruction to see my knowledge extended to so admirable a degree. No: the conviction is not logical but moral certainty. Since it rests on subjective grounds (of the moral disposition), I must not even say, "It is morally certain that there is a God," and so on, but rather, "I am morally certain," and so on. That is, faith in a God and another world is so interwoven with my moral disposition that, just as I run no danger of losing the latter, I have equally little fear that the former could ever be torn from me.

The only reservation here is that this rational faith rests on the presupposition of moral dispositions. If we depart from this and consider someone entirely indifferent to moral laws, the question reason raises becomes merely a problem for speculation. It can then still be supported by strong grounds from analogy, but not by grounds to which the most stubborn doubt would have to yield*. Yet no human being is free of all interest in these questions.

[B 858]

For although a lack of good dispositions might separate him from the moral interest, even then enough remains to make him fear a divine existence and a future. For this requires nothing more than that he at least cannot claim certainty that no such being and no future life are to be found. Since this would have to be proved through mere reason, and thus apodictically, he would have to establish the impossibility of both, something no rational person can undertake. This would be a negative faith which, though it could produce neither morality nor good dispositions, could nevertheless produce their analogue: powerfully restraining the outbreak of evil dispositions.

* The human mind takes (as I believe necessarily happens with every rational being) a natural interest in morality, although this interest is neither undivided nor practically predominant. Strengthen and enlarge this interest, and you will find reason very teachable, and even more enlightened, in uniting its speculative with its practical interest. But unless you first take care to make people good, at least halfway, you will never make sincerely believing people of them either!

But is that all, someone will say, that pure reason accomplishes by opening prospects beyond the boundaries of experience—nothing more than two articles of faith?

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Common understanding could surely have accomplished as much without consulting philosophers!

I shall not extol here philosophy's service to human reason through the laborious striving of its critique, even if the outcome should prove merely negative; something more will be said of that in the following section. But do you demand that a cognition concerning all human beings should exceed common understanding and be discovered for you only by philosophers? Precisely what you criticize is the best confirmation of the correctness of the foregoing assertions. It reveals what could not have been foreseen at the outset: that in matters concerning all human beings without distinction, nature cannot be accused of distributing its gifts partially, and that, regarding the essential ends of human nature, the highest philosophy can get no further than the guidance nature has also granted the most ordinary understanding.

[B 860]

Transcendental Doctrine of Method Chapter Three The Architectonic of Pure Reason

By an architectonic I understand the art of systems. Since systematic unity is what first makes ordinary cognition into science, that is, turns a mere aggregate of cognitions into a system, architectonic is the doctrine of the scientific in our cognition in general, and therefore necessarily belongs to the doctrine of method.

Under reason's government, our cognitions in general must not constitute a rhapsody but a system, in which alone they can support and further reason's essential ends. By a system I understand the unity of manifold cognitions under an idea. This is reason's concept of the form of a whole, insofar as through it both the extent of the manifold and the position of the parts relative to one another are determined a priori. The scientific concept of reason thus contains the end and the form of the whole congruent with it. The unity of the end, to which all parts relate, and in its idea also to one another, makes it possible to notice the absence of any part when the others are known.

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It excludes any accidental addition or indeterminate magnitude of perfection without boundaries determined a priori. The whole is thus articulated (articulatio) and not heaped together (coacervatio). It can indeed grow inwardly (per intus susceptionem), but not outwardly (per appositionem), like an animal body whose growth adds no member but makes each stronger and more capable for its ends without changing the proportions.

To be carried out, the idea needs a schema: an essential manifold and order of parts determined a priori from the principle of the end. A schema devised not according to an idea, that is, from reason's principal end, but empirically according to aims that happen to present themselves (whose number cannot be known in advance), yields technical unity. A schema arising only in accordance with an idea (where reason prescribes the ends a priori instead of awaiting them empirically) grounds architectonic unity. What we call science can arise not technically, because of the similarity of the manifold or the contingent use of

cognition in concreto for various freely chosen external ends, but architectonically, because of kinship and derivation from a single highest and inner end that first makes the whole possible.

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Its schema must contain the outline (monogramma) and the division of the whole into members in accordance with the idea, that is, a priori, and must distinguish this whole securely and according to principles from every other.

No one attempts to establish a science without an underlying idea. But in working it out, the schema, and even the definition he gives of his science at the outset, very rarely corresponds to his idea. For the idea lies like a seed in reason, in which all the parts lie hidden, still tightly enfolded and scarcely recognizable even under microscopic observation. Since all sciences are devised from the standpoint of a certain general interest, we must therefore explain and determine them not according to the description their author gives, but according to the idea we find grounded in reason itself through the natural unity of the parts he has brought together. For we shall find that the author, and often even his latest successors, wander around an idea they have not been able to make clear to themselves, and thus cannot determine the science's distinctive content, articulation (systematic unity), and boundaries.

It is unfortunate that it first becomes possible for us to see the idea in a clearer light, and to design a whole architectonically according to reason's ends, only after we have long collected, rhapsodically and under the guidance of an idea hidden within us, many cognitions relating to it as building material, and have even assembled them technically over long periods.

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Systems seem to have formed like worms through a generatio aequivoca from the mere confluence of collected concepts, initially mutilated, complete in time. Yet they all had their schema as an original seed in reason merely unfolding itself. Hence not only is each articulated in itself according to an idea, but all are also purposively united with one another in a system of human cognition as members of one whole. They permit an architectonic of all human knowledge which today, when so much material has already been collected or can be taken

from the ruins of collapsed ancient buildings, would be not only possible but not even difficult. Here we content ourselves with completing our own task: merely to design the architectonic of all cognition from pure reason. We begin only at the point where the common root of our cognitive power divides and puts out two stems, one of which is reason. But by reason here I understand the entire higher cognitive faculty, and thus oppose the rational to the empirical.

If I abstract from all the content of cognition considered objectively, all cognition is, subjectively, either historical or rational.

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Historical cognition is cognitio ex datis, the rational, however, cognitio ex principiis. Wherever a cognition may originally be given, for its possessor it is nevertheless historical if he cognizes only to the degree and extent that it has been given to him from elsewhere, whether through immediate experience, through an account, or through instruction (in general cognitions). Hence someone who has properly learned a system of philosophy, the Wolfian system, for example, possesses nothing but complete historical cognition of Wolfian philosophy, even if he has all its principles, definitions, and proofs, together with the division of the entire doctrinal structure, in his head and can count them all off on his fingers. He knows and judges only as much as was given to him. Challenge a definition, and he does not know where to obtain another. He has formed himself according to another's reason, but the imitative faculty is not the productive one. His cognition did not arise in him from reason; although objectively it was certainly rational cognition, subjectively it is merely historical. He has grasped and retained it well, that is, learned it, and is a plaster cast of a living human being. Cognitions that are objectively rational (that is, can originally arise only from a human being's own reason) may bear that name subjectively as well only then.

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They do so when they have been drawn from the universal sources of reason, from which critique, and even rejection of what has been learned, can also arise: that is, from principles.

Now all rational cognition proceeds either from concepts or from the construction of concepts. The former is called philosophical, the latter mathematical. I have already discussed their inner difference in the first chapter. A cognition can therefore be objectively philosophical yet subjectively historical, as with most learners and everyone who never goes beyond the school and remains a learner all his life. Yet it is remarkable that mathematical cognition, as one has learned it, can also count subjectively as rational cognition, and that this distinction does not occur in it as in philosophical cognition. The reason is that the sources of cognition from which alone the teacher can draw lie nowhere but in reason's essential and genuine principles, and thus can neither be obtained elsewhere by the learner nor disputed. This is because reason's use here occurs only in concreto, though still a priori, in pure intuition, which for that very reason is free from error and excludes all deception and mistake. Thus among all rational sciences (a priori), mathematics alone can be learned, never philosophy (except historically); as far as reason is concerned, we can at most learn to philosophize.

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Now the system of all philosophical cognition is philosophy. We must take it objectively when by it we understand the archetype for judging all attempts to philosophize, which is to serve in judging every subjective philosophy, whose structure is often so manifold and changeable. In this way philosophy is a mere idea of a possible science, nowhere given in concreto, which we seek to approach by various paths until the one footpath, much overgrown by sensibility, is discovered, and the copy, which has so far failed, is made to match the archetype as far as human beings are permitted. Until then, no philosophy can be learned. For where is it, who possesses it, and how can it be recognized? We can learn only to philosophize: to exercise reason's talent in following its universal principles through certain existing attempts, yet always reserving reason's right to investigate these principles themselves in their sources and confirm or reject them.

So far, however, the concept of philosophy is only a scholastic concept: that of a system of cognition sought only as science, with no further end than the systematic unity of this knowledge, and thus the logical perfection of cognition. But there is also a cosmopolitan concept (conceptus cosmicus) that has always underlain this name, especially when it was, as it were, personified and represented as an archetype in the ideal of the philosopher.

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In this respect philosophy is the science of the relation of all cognition to the essential ends of human reason (teleologia rationis humanae); and the philosopher is not a practitioner of reason but the legislator of human reason. In this sense it would be very boastful to call oneself a philosopher and presume to have equaled the archetype that lies only in the idea.

The mathematician, the natural scientist, and the logician, however excellently the former may have advanced in rational cognition generally and the latter especially in philosophical cognition, are nevertheless only practitioners of reason. There is also a teacher in the ideal who sets all these to work, using them as instruments to further the essential ends of human reason. Him alone we would have to call the philosopher. But since he himself is nowhere to be found, while the idea of his legislation is found everywhere in every human reason, we shall adhere solely to the latter.

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We shall determine more closely what systematic unity philosophy, according to this cosmopolitan concept*, prescribes from the standpoint of ends.

* Cosmopolitan concept here means one concerning what necessarily interests everyone. I therefore determine a science's aim according to scholastic concepts when it is regarded merely as one skill among others for certain freely chosen ends.

Essential ends are not on that account the highest ends, of which (in a perfect systematic unity of reason) there can be only one. They are therefore either the final end or subordinate ends necessarily belonging to it as means. The former is nothing but the entire vocation of the human being, and philosophy concerning it is called morals. Because of this priority of moral philosophy over

every other pursuit of reason, the ancients always understood by the name philosopher at the same time, and above all, the moralist. Even today the outward illusion of self-mastery through reason causes someone to be called a philosopher by a certain analogy, despite his limited knowledge.

The legislation of human reason (philosophy) has two objects, nature and freedom, and therefore contains both the law of nature and the moral law, initially in two separate philosophical systems, but ultimately in a single one. The philosophy of nature concerns everything that is; the philosophy of morals concerns only what ought to be.

All philosophy, however, is either cognition from pure reason or rational cognition from empirical principles. The former is called pure, the latter empirical philosophy.

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The philosophy of pure reason is either a propaedeutic (preliminary exercise), investigating reason's capacity with regard to all pure cognition a priori, and is called critique; or, second, the system of pure reason (science), the whole (true as well as apparent) philosophical cognition from pure reason in systematic coherence, and is called metaphysics. Yet this name can also be given to the whole of pure philosophy, including critique, to comprise both the investigation of everything that can ever be cognized a priori and the exhibition of what constitutes a system of pure philosophical cognitions of this kind, distinguished from every empirical and likewise from mathematical use of reason.

Metaphysics divides into that of the speculative and that of the practical use of pure reason, and is thus either metaphysics of nature or metaphysics of morals. The former contains all pure rational principles from mere concepts (thus with the exclusion of mathematics) of theoretical cognition of all things; the latter contains the principles that determine action and inaction a priori and make them necessary. Now morality is the only lawfulness of actions that can be derived entirely a priori from principles. Metaphysics of morals is therefore properly pure morals, in which no anthropology (no empirical condition) is laid down as a basis.

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Metaphysics of speculative reason is what is customarily called metaphysics in the narrower sense. Yet since pure moral doctrine also belongs to the distinctive stem of human, specifically philosophical, cognition from pure reason, we shall retain that name for it, although we set it aside here as not belonging to our present purpose.

It is of the utmost importance to isolate cognitions differing from others in kind and origin, and carefully prevent their flowing into a mixture with others with which they are commonly combined in use. What chemists do in separating materials, what mathematicians do in their pure theory of magnitudes, is still more incumbent on the philosopher, so that he can securely determine the contribution a particular kind of cognition makes to the understanding's roaming use, its own value and influence. Hence human reason, ever since it has thought, or rather reflected, has never been able to dispense with a metaphysics, yet has never been able to exhibit it sufficiently purified of everything foreign. The idea of such a science is as old as speculative human reason—and what reason does not speculate, whether scholastically or popularly?

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Yet we must admit that the distinction between the two elements of our cognition, one wholly within our power a priori, the other obtainable only a posteriori from experience, remained very indistinct even among professional thinkers. It could therefore never yield a determination of the boundaries of a particular kind of cognition, and thus not the genuine idea of a science that has occupied human reason so long and so intensely. Saying that metaphysics is the science of the first principles of human cognition marked out not an entirely distinctive kind but only a rank in universality, which therefore could not distinguish it recognizably from the empirical. For among empirical principles too, some are more general and thus higher than others. In the series of such a subordination (since one does not distinguish what is cognized entirely a priori from what is cognized only a posteriori), where should one make the cut separating the first part and highest members from the last and subordinate ones? What would one say if chronology could mark the epochs of the world only by dividing them into the first centuries and those following? Does the fifth centu-

ry, the tenth, and so on also belong to the first? one would ask. In the same way I ask: does the concept of the extended belong to metaphysics? You answer yes! But also that of body?

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Yes! And that of fluid body? You hesitate, for if this continues, everything will belong to metaphysics. This shows that the mere degree of subordination (the particular under the universal) cannot determine the boundaries of a science; in our case it is rather the complete heterogeneity and difference of origin. But another factor obscuring the fundamental idea of metaphysics was that, as cognition a priori, it shows a certain homogeneity with mathematics. Their origin a priori indeed makes them related; yet the manner of cognition from concepts in the former, compared with judging merely through construction of concepts a priori in the latter—the difference between philosophical and mathematical cognition—shows so decisive a heterogeneity that people always, as it were, felt it but could never formulate clear criteria for it. Thus, because philosophers themselves failed to develop the idea of their sciences, their work could have no determinate end and no secure guide. With so arbitrarily made a design, ignorant of the path they should take and always disputing among themselves about the discoveries each claimed to have made on his own path, they brought their science into contempt first among others and finally even among themselves.

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All pure cognition a priori thus constitutes a distinctive unity by virtue of the particular cognitive faculty in which alone it can have its seat; metaphysics is the philosophy meant to exhibit that cognition in this systematic unity. Its speculative part, which has especially appropriated this name—what we call metaphysics of nature, considering everything insofar as it is (not what ought to be) from concepts a priori—is divided as follows.

Metaphysics so called in the narrower sense consists of transcendental philosophy and the physiology of pure reason. The former considers only understanding and reason themselves in a system of all concepts and principles relating to objects in general, without assuming objects that are given (Ontologia). The latter considers nature, that is, the sum of given objects (whether they be given

to the senses or, if one wishes, to another kind of intuition), and is thus physiology (although only rationalis). Now reason's use in this rational consideration of nature is either physical or hyperphysical, or better, either immanent or transcendent. The former concerns nature insofar as its cognition can be applied in experience (in concreto); the latter concerns a connection of objects of experience that exceeds all experience.

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This transcendent physiology therefore has as its object either an inner or an outer connection, both going beyond possible experience. The former is the physiology of nature as a whole, transcendental cognition of the world; the latter concerns the coherence of the whole of nature with a being above nature, transcendental cognition of God.

Immanent physiology, by contrast, considers nature as the sum of all objects of the senses, thus as it is given to us, but only according to conditions a priori under which it can be given to us at all. Its objects are of only two kinds. 1. Those of the outer senses, whose sum is corporeal nature. 2. The object of inner sense, the soul, and, according to its fundamental concepts in general, thinking nature. The metaphysics of corporeal nature is called physics, but since it is to contain only the principles of its cognition a priori, rational physics. The metaphysics of thinking nature is called psychology, and for the reason just given only rational cognition of it is to be understood here.

Accordingly, the entire system of metaphysics consists of four main parts: 1. Ontology. 2. Rational physiology. 3. Rational cosmology. 4. Rational theology.

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The second part, the doctrine of nature of pure reason, contains two divisions, the physica rationalis* and psychologia rationalis.

* Do not suppose that by this I mean what is commonly called physica generalis, which is more mathematics than philosophy of nature. Metaphysics of nature separates itself entirely from mathematics and has far fewer insights to offer that extend cognition than mathematics. Yet it is very important for the critique of pure cognition of the understanding as applied to nature in general. Without such a critique, even mathematicians, adhering to certain ordinary yet

in fact metaphysical concepts, have unwittingly burdened the doctrine of nature with hypotheses that disappear under a critique of these principles, without in the least impairing the use of mathematics in this field (which is wholly indispensable).

The original idea of a philosophy of pure reason itself prescribes this division. It is therefore architectonic, conforming to its essential ends, not merely technical, arranged according to contingently perceived kinships and, as it were, at random. For that very reason it is also unchangeable and legislative. Yet some points here raise reservations and might weaken conviction of its lawfulness.

First, how can I expect cognition a priori, and thus metaphysics, of objects insofar as they are given to our senses, and thus a posteriori? How is it possible to cognize the nature of things according to principles a priori and arrive at a rational physiology?

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The answer is that we take from experience no more than is needed to give us an object, in one case of outer sense, in the other of inner sense. The former occurs through the mere concept of matter (impenetrable lifeless extension); the latter through the concept of a thinking being (in the empirical inner representation: "I think"). Beyond this, in the entire metaphysics of these objects we would have to refrain completely from all empirical principles that might add any further experience to the concept in order to judge something about these objects from it.

Second, where does this leave empirical psychology, which has always maintained its place in metaphysics and from which in our time such great things have been expected for illuminating metaphysics, after hope was abandoned of accomplishing anything useful a priori? I answer: it belongs where the proper (empirical) doctrine of nature must be placed, on the side of applied philosophy, for which pure philosophy contains the principles a priori. Pure philosophy must therefore indeed be combined with applied philosophy, but not mixed with it. Empirical psychology must thus be banished entirely from metaphysics and is already entirely excluded by its very idea.

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Nevertheless, according to scholastic custom we must still allow it a small place there (though only as an episode), for reasons of economy. It is not yet rich enough to constitute a subject of study on its own, yet is too important to be cast out altogether or attached elsewhere, where it would probably find still less kinship than in metaphysics. It is thus merely a foreigner taken in for a time, allowed to stay until it can move into its own dwelling in a comprehensive anthropology (the counterpart of the empirical doctrine of nature).

This, then, is the general idea of metaphysics. Initially more was demanded of it than could fairly be required, and people delighted for a time in pleasant expectations; finally, finding themselves deceived in their hopes, they brought it into general contempt. The entire course of our critique will have sufficiently convinced us that, although metaphysics cannot be the foundation of religion, it must always remain its bulwark. Human reason, already dialectical through the direction of its nature, could never dispense with a science that restrains it and, through scientific and fully evident self-cognition, prevents the devastation that a lawless speculative reason would otherwise inevitably wreak in morals as well as religion.

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We can therefore be certain that, however aloof or dismissive those may act who know how to judge a science not by its nature but only by its contingent effects, they will always return to it as to a beloved from whom they have become estranged. For since essential ends are at issue here, reason must work restlessly either toward thorough insight or toward the destruction of good insights already possessed.

Metaphysics of both nature and morals, and especially the critique of reason venturing on its own wings, which precedes as a preliminary exercise (propaedeutically), thus alone properly constitute what we can call philosophy in the genuine sense. Philosophy relates everything to wisdom, but by the path of science, the only path which, once opened, never becomes overgrown and permits no straying. Mathematics, natural science, even empirical knowledge of the human being, have great value as means, mostly for contingent ends, but

ultimately for necessary and essential ends of humanity. They serve the latter, however, only through the mediation of rational cognition from mere concepts, which, whatever name we give it, is properly nothing but metaphysics.
For this very reason, metaphysics is also the completion of all cultivation of human reason.
[B 879]
It is indispensable even if we set aside its influence as a science on certain determinate ends. For it considers reason according to its elements and highest maxims, which must themselves underlie the possibility of some sciences and the use of all. That as mere speculation it serves more to ward off errors than to extend cognition does not diminish its value. Rather, it gives it dignity and authority through the office of censor, which secures the general order and concord, indeed the welfare, of the scientific commonwealth, and prevents its bold and fruitful labors from departing from the principal end, universal happiness.
[B 880]
Transcendental Doctrine of Method Chapter Four The History of Pure Reason
This title stands here only to mark a place remaining in the system that must be filled in the future. I content myself with casting, from a merely transcendental standpoint, that of the nature of pure reason, a fleeting glance over the whole of its previous labors, which admittedly present buildings to my eye, but only in ruins.
It is remarkable enough, although naturally it could not have happened otherwise, that in philosophy's childhood human beings began where we would now prefer to end: by studying first the cognition of God and the hope, or even the constitution, of another world. Whatever crude religious concepts may have been introduced by ancient customs surviving from the uncultivated state of peoples, these did not prevent the more enlightened from devoting themselves to free inquiry into this object. It was easily understood that there could be no more thorough and reliable way of pleasing the invisible power that rules the world, so as to be happy at least in another world, than good conduct.
[B 881]

Theology and morals were therefore the two incentives, or better, reference points, for all the abstract rational inquiries to which people have since devoted themselves. Yet it was properly the former that gradually drew merely speculative reason into the undertaking that subsequently became so famous under the name of metaphysics.

I shall not now distinguish the times at which this or that change in metaphysics occurred, but present only a brief outline of the differences in the idea that occasioned the principal revolutions. I find three respects in which the most notable changes on this stage of conflict have been brought about.

1 With regard to the object of all our rational cognitions, some were merely philosophers of sense, others merely philosophers of intellect. Epicurus can be called the foremost philosopher of sensibility, Plato of the intellectual. This difference between schools, subtle though it is, had already begun in the earliest times and long continued uninterrupted. Those of the first school asserted that reality is found only in objects of the senses, everything else being imagination. [B 882]

Those of the second said, by contrast, that the senses contain nothing but illusion, and only the understanding cognizes what is true. The former did not thereby deny reality to concepts of the understanding, but for them it was only logical, while for the others it was mystical. The former admitted intellectual concepts but assumed only sensible objects. The latter required true objects to be merely intelligible and asserted an intuition through the pure understanding, unaccompanied by any senses, which in their opinion only confused it.

2 With regard to the origin of pure rational cognitions: whether they are derived from experience or have their source in reason independently of it. Aristotle can be regarded as the head of the empiricists, Plato of the noologists. Locke, who in more recent times followed the former, and Leibniz, who followed the latter (though at a sufficient distance from the latter's mystical system), have nevertheless not yet been able to settle this dispute. At least Epicurus, for his part, proceeded much more consistently according to his system of sense (for his inferences never went beyond the boundary of experience), than Aristotle

and Locke (but especially the latter). Locke, having derived all concepts and principles from experience, goes so far in their use that he asserts God's existence and the soul's immortality can be proved as evidently as any mathematical theorem.

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(Yet both objects lie entirely outside the boundaries of possible experience.)

3 With regard to method. If something is to be called a method, it must be a procedure according to principles. Now the method currently prevailing in this branch of the investigation of nature can be divided into naturalistic and scientific. The naturalist of pure reason makes it his principle that common reason without science (which he calls sound reason) can accomplish more regarding the most sublime questions constituting metaphysics' task than speculation can. He thus asserts that the moon's size and distance can be determined more securely by eye than through mathematical detours. This is mere misology elevated into principles; and, most absurd of all, neglect of every artful means is praised as a method of its own for extending cognition. For as for naturalists from lack of further insight, nothing can rightly be held against them. They follow common reason without boasting of their ignorance as a method supposedly containing the secret of drawing truth from Democritus's deep well. Quod sapio, satis est mihi; non ego curo, esse quod Arcesilas aerumnosique Solones, Pers. is their motto, with which they can live contentedly.

[B 884]

They can live praiseworthily with it, too, without troubling themselves about science or disrupting its business.

As for those who follow a scientific method, they have the choice here of proceeding either dogmatically or skeptically, but in every case the obligation to proceed systematically. If I name the celebrated Wolf for the former and David Hume for the latter, I can leave the rest unnamed for my present purpose. The critical path alone remains open. If the reader has had the kindness and patience to travel it in my company, he may now judge whether, should he care to contribute his part toward making this footpath a highway, what many cen-

turies could not accomplish might not yet be attained before the present one ends: to bring human reason to complete satisfaction in what has always, but until now fruitlessly, occupied its thirst for knowledge.