



Micromegas

VOLTAIRE

Plain English Translation

MOUSEIA



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Translated by Michael Berardi

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THIS EDITION

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TRANSLATOR

Michael Berardi

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Chapter I



A resident of a planet in the Sirius system travels to Saturn.

On one of the planets orbiting the star called Sirius, there lived a very intelligent young man. I had the honor of meeting him on his last visit to our little anthill. His name was Micromegas, a name that suits all great people very well. He was eight leagues tall. By eight leagues I mean twenty-four thousand geometric paces, each five feet long.

Some mathematicians, who are always useful to the public, will immediately pick up their pens. Mr. Micromegas, from the Sirius region, measures twenty-four thousand paces from head to foot, or one hundred and twenty thousand French royal feet. We citizens of Earth are scarcely five feet tall, and our globe is nine thousand leagues around. They will therefore calculate that the globe which produced him must have a circumference exactly twenty-one million six hundred thousand times greater than our little Earth's. Nothing could be simpler or more normal in nature. The territories of some German or Italian rulers, which you can walk around in half an hour, compared with the empires of Turkey, Muscovy, or China, give only a very faint idea of the enormous differences nature has put between all beings.

Since His Excellency is as tall as I have said, all our sculptors and painters will readily agree that his waist could measure fifty thousand French royal feet around. That makes a very attractive set of proportions. His nose is a third of his handsome face, and his handsome face is a seventh of the height of his hand-

some body. We must therefore admit that the Sirian's nose measures six thousand three hundred and thirty-three French royal feet and a fraction. That is what we set out to prove.

As for his mind, it is one of the best educated we know. He knows a great many things and has invented a few. He was not yet two hundred and fifty and was studying, as was customary, at his planet's most famous college when he worked out more than fifty of Euclid's propositions by his own reasoning. That is eighteen more than Blaise Pascal. According to his sister, Pascal worked out thirty-two for fun, then went on to become a rather ordinary mathematician and a very bad metaphysician. At about four hundred and fifty, when he was growing out of childhood, Micromegas dissected many of the tiny insects that measure less than a hundred feet across and escape ordinary microscopes. He wrote a very interesting book about them, but it got him into trouble. His country's mufti, an extremely fussy and ignorant man, found statements in the book that were suspicious, offensive to religious ears, rash, heretical, and suggestive of heresy. He pursued the author vigorously. The issue was whether the substantial form of the fleas on Sirius was of the same nature as that of snails. Micromegas defended himself intelligently and won the women over to his side. The trial lasted two hundred and twenty years. In the end, the mufti had the book condemned by legal scholars who had not read it, and the author was ordered to stay away from court for eight hundred years.

Being banished from a court full of nothing but petty quarrels and small-minded behavior did not upset him very much. He wrote a very funny song against the mufti, who took little notice of it, and began traveling from planet to planet to complete the education of his *mind and heart*, as people say. Anyone who travels only in a post chaise or a carriage will no doubt be surprised by the transportation up there. On our little heap of mud, we cannot imagine anything beyond our own habits. Our traveler had an excellent knowledge of the laws of gravity and all the forces of attraction and repulsion. He used them so well that, with a sunbeam one moment and a convenient comet the next, he and his companions went from globe to globe as a bird flits from branch to branch. He crossed the Milky Way in a short time. I must admit that

among its scattered stars he never saw the beautiful highest heaven that the distinguished Reverend Derham boasts of seeing at the end of his telescope. I am not suggesting that Mr. Derham saw incorrectly—God forbid! But Micromegas was there in person, he is a good observer, and I do not want to contradict anyone. After a good deal of traveling, Micromegas reached Saturn. Used as he was to new sights, he could not at first see that small globe and its small inhabitants without giving the superior smile that sometimes escapes even the wisest people. After all, Saturn is barely nine hundred times bigger than Earth, and its citizens are dwarfs only about a thousand fathoms tall. At first he and his companions made a little fun of them, much as an Italian musician laughs at Lulli's music when he comes to France. But the Sirian was sensible. He soon understood that a thinking being need not be ridiculous just because it stands only six thousand feet tall. After astonishing the Saturnians, he got to know them. He became close friends with the secretary of Saturn's academy, a very intelligent man. Admittedly, the secretary had invented nothing, but he gave a very good account of other people's inventions and was fairly good at writing short poems and making long calculations. For the reader's enjoyment, I will describe an unusual conversation that Micromegas had with Mr. Secretary one day.

Chapter II



The man from Sirius talks with the man from Saturn.

His Excellency lay down, and the secretary came up close to his face. “We have to admit that nature has an extraordinary variety,” Micromegas said. “Yes,” the Saturnian said, “nature is like a flower bed whose flowers...” “Oh, leave your flower bed alone!” the other said. “It is,” the secretary continued, “like a gathering of blondes and brunettes whose clothes...” “What do your brunettes have to do with me?” the other asked. “Then it is like a gallery of paintings whose lines...” “No!” the traveler said. “Once again, nature is like nature. Why look for comparisons?” “To please you,” the secretary answered. “I don’t want to be pleased,” the traveler replied. “I want to learn. Start by telling me how many senses the people on your globe have.” “We have seventy-two,” the academician said, “and every day we complain that there are so few. Our imagination goes beyond our needs. We feel too limited with our seventy-two senses, our ring, and our five moons. Despite all our curiosity and the fairly large number of passions that come from our seventy-two senses, we have plenty of time to be bored.” “I can easily believe it,” Micromegas said. “On our globe we have nearly a thousand senses, yet we still have some vague desire, some restless feeling, constantly reminding us how insignificant we are and how much more perfect other beings are. I’ve traveled a little. I’ve seen mortals far below us and others far above us. But I’ve never seen any who didn’t have more desires than real needs, and more needs than satisfaction. Perhaps one day I’ll reach a country

where nothing is missing. So far, though, nobody has given me any reliable news of that country.” The Saturnian and the Sirian then exhausted themselves in guesses. After a great deal of very clever and very uncertain reasoning, however, they had to return to facts. “How long do you live?” the Sirian asked. “Oh, a very short time,” the little man from Saturn replied. “It’s exactly the same with us,” said the Sirian. “We always complain that it is too short. It must be a universal law of nature.” “Sadly,” said the Saturnian, “we live for only five hundred great revolutions around the sun.” (By our way of counting, that is about fifteen thousand years.) “You see, it’s almost like dying at the moment we’re born. Our existence is a point, our lifespan a moment, our globe an atom. We’ve barely begun to learn a little when death arrives, before we’ve gained experience. I don’t dare make any plans myself. I feel like a drop of water in an enormous ocean. Especially in front of you, I’m ashamed of the ridiculous figure I cut in this world.”

Micromegas answered, “If you weren’t a philosopher, I’d be afraid of upsetting you by telling you that our lives are seven hundred times longer than yours. But you know very well that when we have to give our bodies back to the elements and bring nature to life again in another form—what we call dying—then, when that moment of transformation arrives, living for an eternity or living for one day comes to exactly the same thing. I’ve visited countries where people live a thousand times longer than we do at home, and I found them complaining too. Still, everywhere there are sensible people who accept their situation and thank the Author of nature. He has filled this universe with enormous variety and a kind of wonderful consistency. For example, all thinking beings are different, yet deep down they all share the gifts of thought and desire. Matter takes up space everywhere, but it has different properties on each globe. How many of these different properties do you count in your matter?” “If you mean the properties without which we believe this globe couldn’t continue as it is,” the Saturnian said, “we count three hundred. These include extension in space, the inability of two bodies to occupy the same space, movement, gravity, divisibility, and the rest.” “Apparently,” the traveler replied, “that small number is enough for the Creator’s plans for your little home. I admire

his wisdom in everything. Everywhere I see differences, but everywhere I also see things in proportion. Your globe is small, and so are its inhabitants. You have few sensations, and your matter has few properties. All of this is Providence's work. What color is your sun when examined carefully?" "A very yellowish white," said the Saturnian. "When we split one of its rays, we find seven colors in it." "Our sun is reddish," the Sirian said, "and we have thirty-nine basic colors. Of all the suns I've approached, no two are alike, just as no face among you is exactly like any other."

After several questions of this kind, he asked how many essentially different substances people counted on Saturn. He learned that they counted only about thirty: God, space, matter, beings that take up space and feel, beings that take up space and feel and think, thinking beings that take up no space, beings that can occupy the same space as others, beings that cannot, and the rest. In the Sirian's world they counted three hundred, and on his travels he had discovered three thousand more. This astonished the philosopher from Saturn enormously. Finally, after sharing a little of what they knew and a great deal of what they did not know, and after reasoning for one revolution around the sun, they decided to take a short philosophical journey together.

Chapter III



The two residents of Sirius and Saturn travel together.

Our two philosophers were ready to set out into Saturn's atmosphere, with a very nice supply of mathematical instruments, when the Saturnian's lover heard the news and came in tears to protest. She was a pretty little brunette, only six hundred and sixty fathoms tall, whose many charms made up for her small size. "Oh, you cruel man!" she cried. "I resisted you for fifteen hundred years. At last I was beginning to give in, and I've barely spent a hundred years in your arms, yet you're leaving me to travel with a giant from another world! Go on! You're interested in nothing but finding things out. You've never felt love. If you were a true Saturnian, you'd be faithful. Where are you rushing off to? What do you want? Our five moons wander less than you do, and our ring changes less. That's it: I'll never love anyone again." The philosopher embraced her and cried with her, philosopher though he was. After fainting, the lady went off to find comfort with a local dandy.

Meanwhile our two curious travelers set out. First they jumped onto the ring, which they found fairly flat, just as a distinguished resident of our little globe had correctly guessed. From there they easily went from moon to moon. A comet was passing very close to the last one. They leaped onto it with their servants and instruments. After traveling about a hundred and fifty million leagues, they came to Jupiter's satellites. They went onto Jupiter itself and stayed there for a year. During that time they learned some wonderful secrets

that would now be in print if the gentlemen of the Inquisition had not found some of the statements a little hard to take. But I have read the manuscript in the library of the distinguished archbishop of ——. He let me see his books with a generosity and kindness that cannot be praised enough. In return, I promise him a long entry in the next edition of *Moréri*. Above all, I will not forget his children, who give such great hope of continuing their distinguished father's family line.

But let us return to our travelers. On leaving Jupiter, they crossed about a hundred million leagues of space and passed close to Mars. As everyone knows, that planet is five times smaller than our little globe. They saw two moons attending it that our astronomers had missed. I know very well that Father Castel will write against the existence of these two moons, and will even be quite amusing about it. But I put my trust in people who reason by analogy. Those good philosophers know how difficult it would be for Mars, so far from the sun, to manage with fewer than two moons. In any case, our travelers found it so small that they were afraid they would find nowhere to sleep. They went on their way like two travelers who turn their noses up at a bad village inn and push on to the next town. But the Sirian and his companion soon regretted it. They traveled for a long time and found nothing. At last they noticed a faint light: it was Earth. To people coming from Jupiter, it looked pitiful. Still, afraid of regretting their decision a second time, they chose to land. They moved onto the comet's tail, found the northern lights ready and waiting, got into them, and reached Earth on the northern shore of the Baltic Sea on July fifth, seventeen thirty-seven, according to the new calendar.

Chapter IV



What happens to them on Earth.

After resting for a while, they ate two mountains for breakfast, nicely prepared by their servants. Then they wanted to explore the little country where they had landed. They first went from north to south. An ordinary step for the Sirian and his servants measured about thirty thousand French royal feet. The dwarf from Saturn, who stood only a thousand fathoms tall, followed far behind, panting. He had to take about twelve steps for every stride the other took. Imagine, if such comparisons are allowed, a very tiny lapdog following a captain of the king of Prussia's guards.

Since these foreigners move quite fast, they went around the globe in thirty-six hours. The sun—or rather Earth—admittedly makes a similar trip in a day. But we must remember that turning on your axis is much easier than walking on your feet. So they returned to their starting point after seeing the puddle, almost invisible to them, called *the Mediterranean*, and the other little pond that surrounds the molehill under the name of *the great Ocean*. It had never come higher than halfway up the dwarf's lower leg, while the other had barely wet his heel. On their way out and back they did everything they could, looking above and below, to find out whether this globe was inhabited. They bent down, lay down, and felt around everywhere. But their eyes and hands were not

suited to the tiny beings crawling here. They did not get the slightest sensation that could make them suspect that we, and our fellow inhabitants of this globe, have the honor of existing.

The dwarf sometimes reached conclusions a little too quickly. He decided straight away that there was nobody on Earth. His first reason was that he had seen nobody. Micromegas politely pointed out that this was rather poor reasoning. "Your little eyes can't see certain stars of the fiftieth magnitude that I can see very clearly," he said. "Do you conclude that those stars don't exist?" "But I felt around carefully," said the dwarf. "But you didn't sense things properly," the other answered. "But this globe is so badly built," the dwarf said. "It's so irregular, and its shape looks so ridiculous to me! Everything here seems chaotic. Look at those little streams, not one running straight; those ponds that aren't round, square, oval, or any regular shape; all those tiny sharp grains sticking out of the globe that have scraped my feet!" (He meant the mountains.) "And notice the shape of the whole globe: how flat it is at the poles, how awkwardly it goes around the sun, so that the polar climates are necessarily uncultivated. Really, I think there's nobody here because it seems to me that sensible people wouldn't want to live here." "Well," said Micromegas, "perhaps the people living here aren't sensible either. Still, there is some reason to think that this wasn't made for nothing. You say everything looks irregular here because everything on Saturn and Jupiter is laid out with a ruler. Well, perhaps that's the very reason there is a little confusion here. Didn't I tell you that on my travels I've always noticed variety?" The Saturnian answered all these arguments. The dispute would never have ended if Micromegas had not fortunately become so animated as he talked that he broke the string of his diamond necklace. The diamonds fell. They were pretty little gems of rather different sizes. The biggest weighed four hundred pounds and the smallest fifty. The dwarf picked some up. Bringing them close to his eyes, he realized that the way they were cut made them excellent microscopes. So he took a little microscope a hundred and sixty feet across and held it to his eye. Micromegas chose one measuring two thousand five hundred feet. They were excellent, but at first they saw nothing through them. They had to adjust them. At last the resident of Saturn saw

something almost invisible moving below the surface of the Baltic Sea. It was a whale. He very skillfully picked it up with his little finger, set it on his thumb-nail, and showed it to the Sirian. For the second time, the Sirian laughed at the extreme smallness of our globe's inhabitants. Convinced now that our world was inhabited, the Saturnian quickly imagined that it held nothing but whales. Being very fond of reasoning, he wanted to work out where such a tiny atom came from, what made it move, and whether it had ideas, a will, and freedom. Micromegas was at a loss. He examined the animal very patiently, and his conclusion was that there was no way to believe a soul lived in it. The two travelers were therefore leaning toward the view that there was no intelligence in our home when, through the microscope, they noticed something as large as a whale floating on the Baltic. As everyone knows, a flock of philosophers was then returning from the polar circle, where they had made observations nobody had previously thought of making. The newspapers said their ship ran aground on the coast of Bothnia and that they barely escaped. But in this world we never know what really goes on behind the scenes. I will tell you honestly how it happened, adding nothing of my own. For a historian, that is no small effort.

Chapter V



The two travelers experiment and reason.

Micromegas very gently reached toward the place where the object appeared. He moved two fingers forward, drew them back for fear of making a mistake, then opened and closed them. Very skillfully he picked up the ship carrying these gentlemen and again put it on his nail, taking care not to squeeze it too hard and crush it. “Here’s an animal very different from the first,” the dwarf from Saturn said. The Sirian put the supposed animal in the palm of his hand. The passengers and crew had thought a hurricane was carrying them away, and now believed they were on some kind of rock. They all began moving about. The sailors took barrels of wine, threw them onto Micromegas’s hand, and jumped down after them. The mathematicians took their quadrants, their sectors, and two Lapland girls, and climbed down onto the Sirian’s fingers. They made such a fuss that at last he felt something moving and tickling his fingers. It was an iron-tipped stick being driven a foot into his index finger. From this pricking, he judged that something had come out of the little animal he was holding. At first he suspected nothing more. The microscope could barely make out a whale or a ship; it could do nothing with beings as invisible as humans. I don’t mean to offend anyone’s vanity here, but I must ask self-important people to join me in a small observation. If we take human height as about five feet, we make no greater impression on Earth than an animal about one six-hundred-thousandth of an inch tall would make on a ball ten feet

around. Imagine a being that could hold Earth in its hand and whose organs were in the same proportions as ours. There may well be many such beings. Now please imagine what they would think of those battles that win the victor a village, only for him to lose it later.

I have no doubt that if a captain of tall grenadiers ever reads this work, he will raise his soldiers' caps by at least two whole feet. But I warn him that, whatever he does, he and his men will never be anything but infinitely small.

What extraordinary skill our philosopher from Sirius needed to see the atoms I have just described! When Leeuwenhoek and Hartsoeker first saw, or thought they saw, the seed from which we are formed, their discovery was nowhere near as astonishing. How delighted Micromegas was to watch these tiny machines moving, examine all their maneuvers, and follow everything they did! How he cried out! How happily he put one of his microscopes into his traveling companion's hands! "I can see them!" they both said at once. "Don't you see them carrying loads, bending down, standing up again?" As they spoke, their hands shook with the pleasure of seeing such new objects and the fear of losing them. The Saturnian went from extreme doubt to extreme willingness to believe. He thought he could see them working at reproduction. "Ah!" he said. "I've caught nature in the act." But appearances had misled him, as happens all too often whether we use a microscope or not.

Chapter VI



What happened when they met humans.

Micromegas was a much better observer than his dwarf. He clearly saw that the atoms were talking to one another and pointed this out to his companion. Ashamed of his mistake about reproduction, the companion refused to believe that creatures like these could exchange ideas. He had a gift for languages, just as the Sirian did. He could not hear our atoms talking, so he assumed they did not talk. Besides, how could these invisible beings have vocal organs, and what would they have to say? To speak, you have to think, more or less. But if they thought, they would have something equivalent to a soul. Giving this species the equivalent of a soul seemed absurd to him. “But,” said the Sirian, “just now you believed they were making love. Do you believe you can make love without thinking and saying something, or at least making yourself understood? And do you suppose it’s harder to produce an argument than a child? Both seem great mysteries to me.” “I no longer dare believe or deny anything,” the dwarf said. “I have no opinion left. We must try to examine these insects. We’ll reason afterward.” “Very well said,” Micromegas replied. He immediately took out a pair of scissors, cut his nails, and used a clipping from his thumbnail to make a sort of large speaking trumpet, shaped like an enormous funnel. He put its tube in his ear. The funnel’s rim surrounded the ship and all its crew. Even the weakest voice entered the nail’s circular fibers. Thanks to his ingenuity, the philosopher from up above could hear perfectly the buzzing of our insects

down below. Within a few hours he could distinguish words and finally understand French. The dwarf did the same, though with more difficulty. The travelers grew more astonished every moment. They could hear mites talking quite sensibly. This trick of nature seemed impossible to explain. You can imagine how impatient the Sirian and his dwarf were to start a conversation with the atoms. The dwarf feared that his thunderous voice, and especially Micromegas's, would deafen the mites without being understood. They had to reduce its force. They put what were like little toothpicks in their mouths, with the very fine tips reaching down near the ship. The Sirian held the dwarf on his knees and the ship and crew on a nail. He lowered his head and spoke quietly. At last, with all these precautions and many others, he began his speech:

“Invisible insects, whom the Creator's hand has chosen to bring to life in the depths of the infinitely small, I thank him for agreeing to reveal to me secrets that seemed impossible to discover. At my court they might not consider you worth looking at. But I look down on nobody, and I offer you my protection.”

If anyone was ever astonished, it was the people who heard these words. They could not work out where they came from. The ship's chaplain recited prayers of exorcism, the sailors swore, and the philosophers on board developed theories. But whatever theories they developed, they could never guess who was talking to them. The dwarf from Saturn, whose voice was softer than Micromegas's, then briefly explained what kinds of beings they were dealing with. He described the journey from Saturn and told them about Mr. Micromegas. After expressing pity for their small size, he asked whether they had always been in this miserable state so close to nonexistence, what they were doing on a globe that seemed to belong to whales, whether they were happy, whether they reproduced, whether they had a soul, and a hundred other questions of this kind.

One of the group's reasoners, bolder than the others and offended that anyone should doubt his soul, examined the speaker through sights mounted on a quadrant. He took up two positions, then at the third he said, “So, sir, because you measure a thousand fathoms from head to foot, you believe you're a...” “A

thousand fathoms!” cried the dwarf. “Good heavens! How can he know my height? A thousand fathoms! He’s not an inch wrong. What! This atom has measured me! He’s a mathematician. He knows my size, while I, who can only see him through a microscope, still don’t know his!” “Yes, I’ve measured you,” the physicist said, “and I can measure your big companion too.” They accepted the offer. His Excellency lay down at full length, since if he had stood, his head would have been too far above the clouds. Our philosophers planted a large tree in a part of him that Doctor Swift would name, but that I will take care not to call by name, out of my great respect for ladies. Then, using a series of linked triangles, they concluded that what they saw really was a young man a hundred and twenty thousand French royal feet tall.

Micromegas then said, “I see more clearly than ever that we must judge nothing by its apparent size. O God, who have given intelligence to beings that look so insignificant, the infinitely small costs you as little effort as the infinitely large. If there can be beings smaller than these, they may have minds greater than those of the magnificent animals I’ve seen in the heavens, whose foot alone would cover the globe I’ve landed on.”

One of the philosophers replied that he could safely believe there really were intelligent beings much smaller than humans. He told him, not all Virgil’s fabulous stories about bees, but what Swammerdam had discovered and Réaumur had dissected. Finally, he explained that some animals stood in relation to bees as bees did to humans, as the Sirian himself did to those enormous animals he had mentioned, and as those enormous animals did to other beings beside whom they looked like mere atoms. Gradually the conversation grew interesting, and Micromegas spoke as follows:

Chapter VII



A conversation with humans.

“Intelligent atoms, in whom the Eternal Being has chosen to display his skill and power, you must surely enjoy very pure pleasures on your globe. You have so little matter and seem almost entirely mind. You must spend your lives loving and thinking. That is the true life of minds. I’ve never seen real happiness anywhere, but surely it is here.” At this speech all the philosophers shook their heads. One, more open than the others, honestly admitted that apart from a small number of inhabitants who received very little respect, all the rest were a collection of fools, wicked people, and unhappy people. “We have more than enough matter to do a great deal of harm, if harm comes from matter,” he said, “and too much intelligence, if harm comes from intelligence. Do you know, for instance, that as I speak to you a hundred thousand fools of our species wearing hats are killing a hundred thousand other animals wearing turbans, or being slaughtered by them? And that this has been the way of doing things almost everywhere on Earth since time began?” The Sirian shuddered and asked what could cause these horrible quarrels between such puny animals. “It’s about a heap of mud as big as your heel,” the philosopher said. “Not that any of the millions of men getting their throats cut claims even a straw on that heap of mud. The only question is whether it will belong to a certain man called *Sultan* or another called, I don’t know why, *Caesar*. Neither has ever seen or will ever

see the little corner of land in question. And almost none of these animals cutting one another's throats has ever seen the animal he is getting himself killed for."

"Oh, you miserable creatures!" the Sirian cried indignantly. "Can anyone imagine such insane fury? I feel like taking three steps and crushing this whole anthill of ridiculous murderers with three kicks." "Don't trouble yourself," they answered. "They do enough to destroy themselves. You should know that after ten years not one hundredth of these wretches is ever left. Even if they never drew a sword, hunger, exhaustion, or excessive indulgence would carry off almost all of them. Besides, they aren't the ones who should be punished. It's those stay-at-home barbarians who, sitting in their offices digesting a meal, order a million men to be massacred and then have solemn thanks offered to God for it." The traveler felt pity for the little human race, in which he was finding such astonishing contradictions. "Since you're among the small number of wise people," he told these gentlemen, "and apparently don't kill anyone for money, please tell me what you do." "We dissect flies," the philosopher said. "We measure lines and put numbers together. We agree on two or three things we understand and argue over two or three thousand we don't." The Sirian and Saturnian immediately wanted to question these thinking atoms to find out what they agreed on. "What distance do you calculate," the Saturnian asked, "from the Dog Star to the great star in Gemini?" They all answered at once, "Thirty-two and a half degrees." "What distance do you calculate from here to the moon?" "Sixty Earth radii, in round numbers." "How much does your air weigh?" He thought he would catch them out. But they all said that air weighs about nine hundred times less than an equal volume of the lightest water, and nineteen thousand times less than ducat gold. Astonished by their answers, the little dwarf from Saturn was tempted to take for sorcerers the very people he had refused a soul a quarter of an hour earlier.

Finally Micromegas said, "Since you know so much about what is outside you, you must know even more about what is inside. Tell me what your soul is and how you form your ideas." The philosophers all spoke at once, as before, but they all had different opinions. The oldest quoted Aristotle. Another men-

tioned Descartes, another Malebranche, another Leibniz, and another Locke. An old follower of Aristotle said loudly and confidently, "The soul is an entelechy and a reason through which it has the power to be what it is. Aristotle expressly states this on page 633 of the Louvre edition." He quoted the passage. "I don't understand Greek very well," the giant said. "Neither do I," said the philosophical mite. "Then why," the Sirian asked, "are you quoting a certain Aristotle in Greek?" "Because," the scholar replied, "we must quote what we don't understand at all in the language we understand least."

The follower of Descartes spoke up. "The soul is a pure spirit that received all metaphysical ideas in its mother's womb. When it comes out, it has to go to school and learn all over again what it knew so well and will no longer know." "Then it wasn't worth the trouble," the eight-league animal answered, "for your soul to be so learned in your mother's womb, only to be so ignorant when you had a beard on your chin. But what do you mean by spirit?" "What a question to ask me!" the reasoner said. "I have no idea. People say it isn't matter." "But do you at least know what matter is?" "Very well," the man answered. "For example, this stone is gray. It has a particular shape and three dimensions. It has weight and can be divided." "Well," the Sirian said, "can you tell me what this thing is that seems to you divisible, heavy, and gray? You see some properties, but do you know what the thing itself is?" "No," the other said. "Then you don't know what matter is."

Mr. Micromegas then turned to another wise man whom he was holding on his thumb and asked what his soul was and what it did. "Nothing at all," said this follower of Malebranche. "God does everything for me. I see everything in him and do everything in him. He's the one who does everything, without my having anything to do with it." "You might as well not exist," the wise man from Sirius replied. "And you, my friend," he said to a follower of Leibniz standing nearby, "what is your soul?" "It's a clock hand showing the hours while my body chimes," the follower of Leibniz answered. "Or, if you prefer, it's the soul that chimes while my body shows the time. Or my soul is the mirror of the universe and my body is the mirror's frame. All of that is clear."

A little supporter of Locke stood close by. When they finally spoke to him, he said, “I don’t know how I think. But I know I’ve never thought except in response to my senses. I don’t doubt that there are intelligent beings without matter. But I very much doubt that it’s impossible for God to give matter the ability to think. I respect the eternal power. It’s not for me to limit it. I assert nothing. I’m content to believe that more things are possible than people think.”

The animal from Sirius smiled. He did not find this man the least wise of them. The dwarf from Saturn would have embraced Locke’s follower if their sizes had not been so different. Unfortunately, a tiny animal in a square cap was there. He interrupted all the other philosophical animalcules and said he knew the whole secret: it was all in the *Summa of Saint Thomas*. He looked the two residents of the heavens up and down and insisted that their persons, their worlds, their suns, their stars—everything—had been made solely for humans. At this, our two travelers fell against each other, choking with the unending laughter that Homer says belongs to the gods. Their shoulders and bellies shook back and forth. In these convulsions, the ship on the Sirian’s nail fell into a pocket in the Saturnian’s breeches. The two good fellows searched for it for a long time. At last they found the crew and put everything neatly back in order. The Sirian picked up the little mites again and spoke to them very kindly, although deep down he was a little annoyed to find that the infinitely small had an almost infinitely large pride. He promised to make them a fine philosophy book, written very small for their use. In it, he said, they would see the ultimate explanation of things. He did give them this volume before leaving. It was taken to the Academy of Sciences in Paris. But when the old secretary opened it, he saw only a book of blank pages. “Ah!” he said. “I rather suspected as much.”