Curiosity, and the Triumph of the Noëtic Principle

Lyndon LaRouche was joined by LaRouchePAC Basement Team researchers Peter Martinson and Benjamin Deniston, for the Aug. 8 LPAC Weekly Report (http://larouchepac.com/). Here is an edited transcript of their discussion.

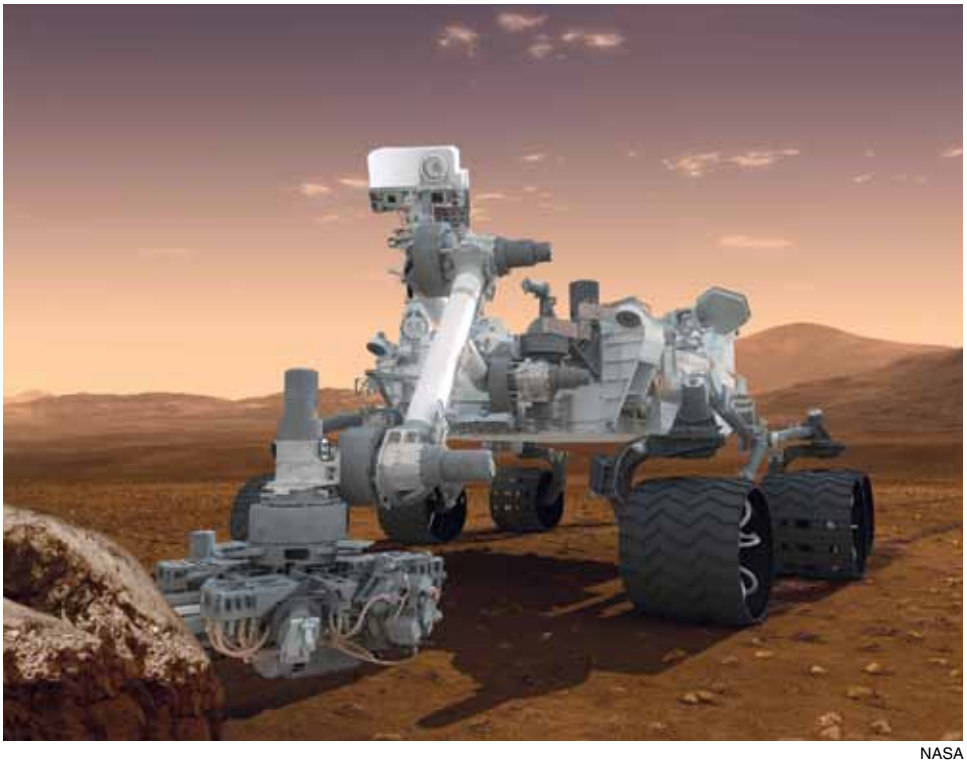
Lyndon LaRouche: Good morning. I think we'll just start right here with you [to Martinson].

Peter Martinson: Okay. Well, this past week we had probably the most fantastic development in the Solar System with the landing of the Mars science laboratory. It's a pretty large rover which has landed on Mars, called Curiosity. But this is one of the most magnificent things that has happened in quite a while in our Solar System.

It's an amazing rover: The observations it's going to make are absolutely fantastic. We have some ideas, but we don't know exactly what it's going to find. More of its importance resides in the mind of man, and what man is, because man is not a being of the senses. We have the physical stuff of our flesh and so forth; we have senses; we can look around and we can see things; we can feel things and so forth. We can develop new sense perceptions in order to sense more—like scales in order to weigh things, or telescopes, and things like that.

But it is in none of those senses that the true stuff of man resides. Man is outside the senses and uses those senses in order to juxtapose them, to find what is really happening in the universe. But, what is generating those senses? Where are the processes that we don't see with our senses, that are causing those sense perceptions to happen?

Now, the lander on Mars—the best way to look at it is that it's a miraculous sense organ that we've created. It's one of several that we now have



NASA

The successful landing of NASA's Curiosity rover on Mars poses the question, "Where does noëtic intelligence," as presently known to be associated only with mankind on Earth, "come into play in terms of the planets, the planetary system, in terms particularly of life?"

exploring our Solar System. We have several on Mars itself, but the study of our space environment by new sense organs that are sent out into the Solar System is relatively recent. We started sending objects out into space in the late 1950s, early '60s; and we started landing objects on other heavenly bodies in the 1960s, with the Apollo [Moon] program. And we started landing robotic probes on other planets in the '70s, starting with the Viking landers on Mars.

Now, we have a growing infrastructure in space, of sense apparatuses, specifically around Mars, where we have three satellites orbiting. One is European—it's the Mars Express, which takes very detailed images of the ground. There is the Mars Odyssey orbiter, which is the oldest we have orbiting Mars, and is the primary relayer of data from Curiosity. And we have the Mars Reconnaissance orbiter, which showed up on Mars in 2006, and also is acting now as a relay for the rovers that are on the ground to communicate with controllers on Earth.

The Mars exploration rover, Opportunity, is still functioning after almost a decade; and now, the Mars Curiosity rover. So, these five systems, which are on and around Mars, form an array of sense perception at that planet.

Now, just on the Curiosity rover itself. This is the largest thing we've ever landed on another planet. This thing is as large as a one-ton car, essentially. It's about as big as a Volkswagen Beetle. It's very large, very maneuverable, and it has a huge array of instruments. It has almost a full laboratory set-up for the chemist, and a full laboratory set-up for the geologist, onboard, including all the gear it needs to drill samples out of the rock, dump it into the little laboratory containers, and do the experiment.

Just some of the things that it has: It's got a variety of cameras. It has a head—it's called the mast—and on the head are two cameras which give stereo vision at about the height of an human being; very high-resolution cameras. On the mast, there is another thing called the chemcam. It can shoot a laser about 7 meters, hit a rock, vaporize a little square millimeter of the rock, and then another camera will look at the gas that's emitted from that rock, and analyze the spectral composition of the material of the rock. If there are things that the rover can't get to, it can blast a little smoke cloud out of the rock, and see what the rock is made of.

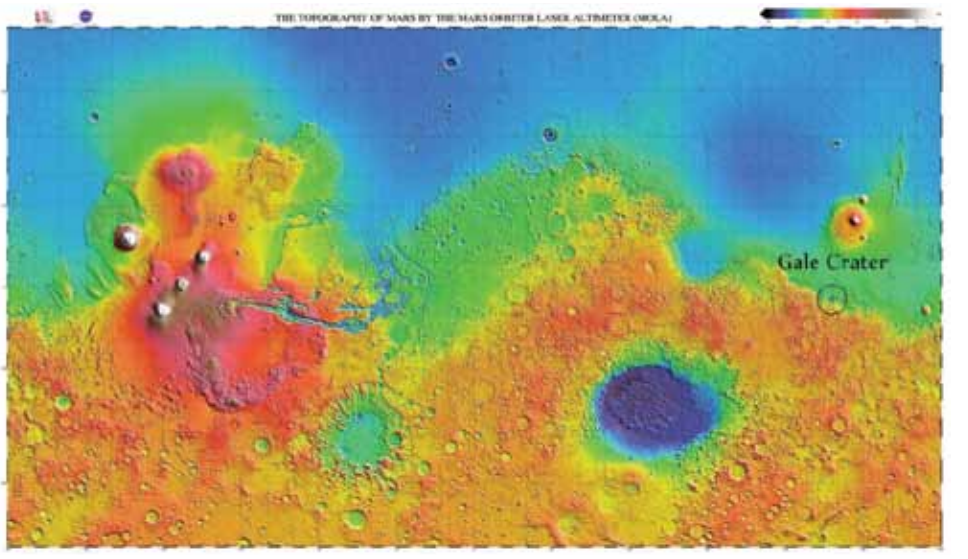
It has an object called the alpha particle x-ray spectrometer which you put against the rock. It shoots alpha particles at the rock, and gets it to emit x-rays which can give you a very detailed chemical composition of that rock. It has the ability to drill out or file off part of the rock, and then put it into two different types of containers which can do scientific experiments. And one of them has the ability to vaporize the rock inside this container, do chemical and mineral analyses, and an analysis of organics, to see if there are the organic molecules necessary to life.

Another one is just a pure mineral analysis, to find out what the crystal structure is of the rocks, and what

the rocks are made of. There's also the little meteorology thing, where you can get the temperature, pressure, things like that.

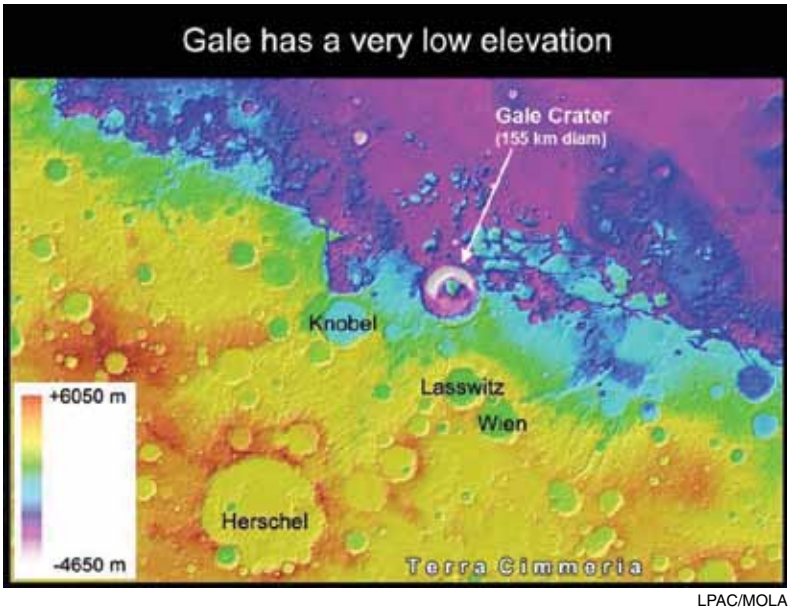
One of the most important experiments they have is the Radiation Assessment Detector, which is designed to measure the different types of radiation that would be dangerous to human beings on the surface of Mars, whether the radiation is coming from the ground, the Sun, or the galaxy at large. This thing can measure the rates of radiation, to see what types of shielding people would need when we eventually go to this other planet.

FIGURE 1
Mars' Gale Crater



LPAC/MOLA

FIGURE 2



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The Gale Crater

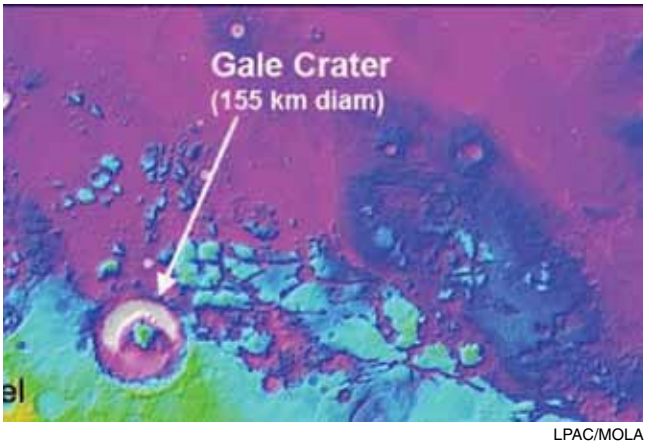
Now, the place that it landed is, I think, one of the most miraculous places on Mars, and it's one of four spots that were investigated (**Figure 1**). The Gale Crater is absolutely awesome! If you look at a map of Mars, done by, I think this is the Mars Odyssey, it's a topographical map of Mars, where blue is its elevation. Blue is very low, relative to the average height of land forms on Mars. Orange and the red is very high, and white is really, really high. You can see that the northern hemisphere is very low; they call it the northern lowlands. The southern hemisphere of Mars is very high; they call it the southern highlands.

One interesting discrepancy that they found is that the southern highlands are very cratered, so they call them the southern cratered highlands, where the northern hemisphere is very, very smooth. There are very few craters, and those few that exist, are very young.

So, there is a dichotomy—the northern hemisphere is very low and smooth, and the southern hemisphere is very high, and rough. And there are some other features—there's this area which is very, very heavily uplifted, volcanoes; the largest volcano in the Solar System is there. And then the largest craters are in the southern hemisphere's Hellas Basin, a huge crater.

Now Gale Crater, which is where the Curiosity rover landed, is right at the boundary of this dichotomy of heights. It's right about here (**Figure 2**). North of Gale Crater is very, very low elevation. South of Gale Crater is very high elevation. In the satellite analysis we have of this crater, it's very, very old. It goes back, probably 4

FIGURE 3



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billion years, to the time when they think there was still running water on Mars. There is evidence that the crater itself, after it was made, was covered over and buried for a long period of time, so there was no evidence of the crater actually on the ground. And over that buried crater, flowed rivers of water. And that after a time, the water apparently dried up. One hypothesis is that vast amounts of water disappeared early on in the history of Mars.

After that happened, they think that the crater was excavated by winds; that over billions of years, the crater was excavated. All the looser sediments which were laid down by the water were carried away, digging it very, very deep (**Figure 3**). It's one of the deepest places on Mars; it goes down about 4 km in depth, and it left a central peak, which is called an Aeolus Mons, or Mount Sharp. It's a 5-km-tall mountain inside this crater, which is made of the sediments that had been laid down that weren't carried away by whatever the winds were that excavated the crater.

The plan for Curiosity is to travel up a good distance on that mountain, because that mountain is going to preserve sedimentary layers which represent the history of Mars. By looking at sediment, you can get what the composition of the atmosphere was at various times in the history of the planet. You can tell if there was water; you can tell if there was no water.

All of the fossils that we find on the Earth are in sedimentary layers, sediment that was laid down by water. So if there are fossils on Mars, we would probably find them in this thing that the Mars Curiosity rover is going to go travel up. So, the point is, that this is an awesome place for geological and chemical analysis of the planet, and it will act as, they hope, a Rosetta Stone for the entire planet.

Now, for our purposes, the reason we think it's awesome, is in the sense of planetary defense. And I know, Ben, that you're going to go through some of the aspects, specifically the asteroid defense, but as we laid out in the Planetary Defense report, understanding the defense of man in the Solar System, requires a detailed knowledge of what the history of the Solar System is, so we can understand what great threats will face man, and what were the threats that wiped out creatures in the past. Because there are very clear extinction events on Earth, which appear to have a periodicity, where the period is so long that we can't find any process, any domestic local process on the Earth, that can cause these large timespans between extinction events. We expect that they are at least solar events, but more likely galactic scale processes.

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LPAC's Peter Martinson detailed the amazing capabilities of the Curiosity rover, and some of the tasks it will perform on Mars: "This is one of the most magnificant things that has happened in quite a while in our Solar System."

Now, the problem that we've faced so far, is that the investigation of the record of the Earth or the Solar System, is confined to the Earth. We've studied many of the sediments of the Earth, and a lot of the detail from the Earth, but we need to go out and study the rest of the planets, because they're all records of changes of the Solar System as a whole. We need to locate what processes are invariant, relative to what planet you're on, versus which processes are specific to the planet, in order to begin to unravel what are the larger processes that we need to be aware of for defense.

But what defense really means is, the sustained survival and propagation and increased power of man, through the Solar System and the rest of the galaxy. So,

that's what this represents: this represents a first step towards understanding that larger history, which is most likely a galactic scale history. And that is the domain of man.

Defense of the Planet

Benjamin Deniston: I think it's useful to compare mankind to other forms of animal life, and what we have is a very clear record that an animal species does not have a forever existence on this planet. We have a record of species that are gone, one after the other. So, if we step back and look at the human species, and ask the question from this standpoint, from this cosmic, galactic perspective: What will it take to ensure that mankind continues to exist on this planet, in this Solar System?

I think it's useful to step back and draw out, is that what makes mankind mankind, and not just some other animal species, is that we're not biologically determined; mankind is not a biological species. We have a biology; but what defines us is not the biology. What defines us is typified by what NASA just did in successfully landing this instrument on Mars. And the point is, that that has to be the self-conscious conception of mankind, if we're going to deal with these threats.

And I want to discuss the question of asteroids, in defense of the planet, because, from what we already know, from the history of life: Where do these craters come from? Craters are dramatic evidence that you don't just have pristine, unchanging conditions in the Solar System. You have intense effects, collisions, impacts from objects from the Solar System. What we can know in principle is that if mankind is going to continue to exist for a prolonged period, we are going to have to not only expand the power of the mind of man, to have this extended sensory capability; we're going to have to change the Solar System.

That's the asteroid defense issue: We're going to have to change the Solar System. Because we know that these asteroids, comets—they are going to impact at a certain point. They're going to hit the Earth at a certain point. You can debate when, and what the different threats are, but we know that to guarantee the continued existence of mankind means that mankind has to become a creature that not only has a sensory capability to sense and understand the Solar System, but to change it, to change the orbits of these different bodies.

In the 1908 Tunguska event, according to most scientific estimates, a 30-50 meter diameter asteroid exploded in the atmosphere over Siberia. This photo, taken in 1927, gives a sense of the damage that was done.

So, two things I want to present, and to highlight what we're looking at. First of all, you have a scale of objects you're dealing with. Let's take two examples. One example is, you have an impact crater on Earth, which they've dated to around 65 million years ago. It's hard to get across the scale and the power of these things, but this was a 10-km-wide object that hit the Earth at somewhere in the range of 20,000 miles per hour. The speeds are just incredible; the energy released is just incredible. You're talking about something moving so fast, that when it hits the Earth, going from 20,000 miles per hour to zero in a few miles timescale. It heats the whole thing up, so it just literally explodes.

And it has global planetary effects. This object created tsunamis that covered entire continents, ash clouds that then engulfed the entire Earth. It takes a little time to get your mind around the scale of these things. These things do happen. These larger ones—it's good to know that they're much less frequent; *much less frequent*. It's every 50 million, 100 million years, is what NASA estimates. But that's on one extreme—these very large objects—but then that goes all the way down to very small objects, which can still have very dramatic effects.

The Tunguska Event

And just one example of this is useful to illustrate the other end of the extreme: the case of the Tunguska event in Siberia. In 1908, there was this massive explosion in the sky over Siberia. It was an unpopulated area, so there

was some difficulty in figuring out exactly what had happened. But the most agreed-upon idea is that it was probably an asteroid, somewhere in the range of 30-50 meters in diameter. It's much smaller—compared to 10 kilometers; that's the size of Mt. Everest.

Now, we're talking about something about the size of a bus, or a whale, a dramatically smaller object. But this thing still came in at again, you're talking about 20, 30,000 miles per hour—dramatic speeds. They think it exploded in the atmosphere; that it was slowed down by the Earth's atmosphere, and heated up so quickly that it exploded. Then, it sent a blast wave down and leveled an area somewhere in the range of 800 square miles.

Now, to put this in perspective: If you compare what if this were to happen over Washington, D.C.? This completely encircles Washington (**Figure 4**), and goes into the immediate surrounding area. It would cover nearly the entire greater Los Angeles area (**Figure 5**). Similarly, with New York (**Figure 6**), and the Bay Area (**Figure 7**). Now granted, the chances of getting a direct hit on a major metropolitan area are probably very, very small. But this is the smaller end of the types of objects that we know are out there and do impact, and have impacted frequently. And, as you can see here, they can cause potentially very dramatic results. They would level cities, a metropolitan area. So it can cause potentially very dramatic local or regional-scale effects.

Now, this chart (**Figure 8**) represents some of the analysis by NASA, by JPL; you see that they have calculated and estimated a pretty clear relationship between the size of the object, and how frequently they expect that size object to impact. So again, you have these two objects: Tunguska, marked in the middle upper left; and on the lower right, the first one I dis-

FIGURE 4
Washington, D.C. Metro Area

LPAC/EIR

FIGURE 5
Greater Los Angeles

LPAC/EIR

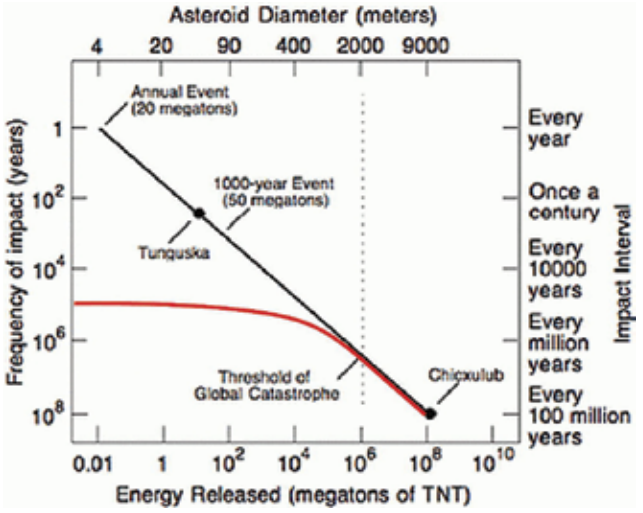
FIGURE 6
New York City Metro Area

LPAC/EIR

FIGURE 7
San Francisco Bay Area

LPAC/EIR

FIGURE 8
Asteroid Impact Frequency



NASA/JPL

cussed, the 10-kilometer-wide object. As you can see, on the bottom scale, you see the energy released in TNT equivalents. You get a scale of the energy released from these impacts. And then, on the top, that is coordinated directly with the size of the objects.

On the far left, you have a 4-meter-across object, and the biggest you get is about a 9-km-wide object, so you can get a scale of the range of the different sizes that we know are out there, that we have to deal with. And the horizontal axis looks at the frequency. So, as I said, when you get to the size of, say, a huge 8-km-wide object—Mt. Everest is about 9 km high, so imagine Mt. Everest falling from the sky. It's a pretty remarkable thing to get your mind around. But something on that scale happens maybe every 100 million years.

But then you go to, say, the Tunguska size event, objects of maybe 30-50 meters across, that can have dramatic local effects—those happen maybe once every 200 years or so—much more frequently. As they get smaller, they become even more frequent. There was a presentation by a NASA official discussing Air Force satellites that monitor the entire atmosphere, because if some nation is launching a missile, they want to know that. What they pick up are a lot of meteorites and asteroids coming into the atmosphere, and they'll get objects that are smaller, 10 meters wide, or so.

When that comes into the atmosphere, even the smaller ones, they tend to burn up much higher [in the atmosphere], they don't necessarily have an effect that propagates all the way down. A 10-meter object can still release the kind of energy that is similar to the bomb dropped on Hiroshima. So you're talking about a small nuclear weapon exploding in the upper atmosphere. Sometimes people will hear them or feel them; you get news reports every now and then of people hearing an explosion, table shaking, etc., the size of a small nuclear weapon—not necessarily a Tunguska, but the equivalent of a small nuclear weapon exploding in the upper atmosphere, from asteroids coming in. This happens about thirty times a year. So, this is not an unheard of event; this is what it means to live on Earth; it's part of living in the Solar System.

Because of the dedicated effort of a few people, we've got a dedicated observation system. JPL has a system where they're focused on tracking as many of these things as they can. They have automated telescopes that just scan the sky repeatedly, and record everything they see, compare it with the existing database, and see if there is anything new. Anything new it identifies, it tries to isolate it, and to identify its orbit, approximate its orbit.

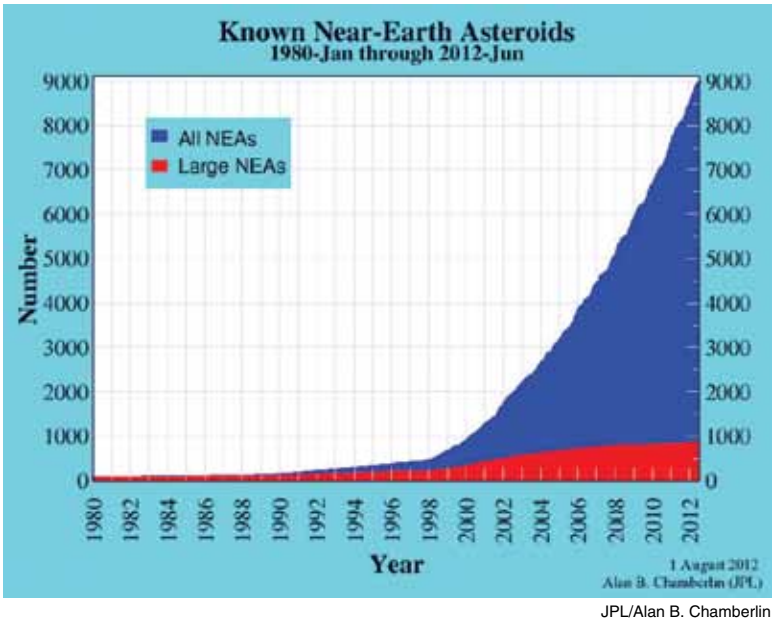
LPAC

LPAC'S Ben Deniston presented the urgency of developing a planetary defense against asteroids and comets that could impact Earth, with catastrophic effects. The question, he said, is "Do we act?"

So, we have fully automated systems now—we need a lot more, but they're developing these things that will scan the entire sky and track thousands and thousands of these objects. So the point is, if we were to see an object that was going to hit the Earth, these observation systems would be absolutely crucial, because to have any type of serious effort to stop it from intersecting the Earth, you want to intersect it 10 years before its expected impact. With these systems, they'll extrapolate 100 years into the future. There are degrees of error; they're not sure *exactly* where it will be 100 years from now, but they try to get forecasts in the range of 50, 60, 100 years in the future.

Remember this estimation for Tunguska-sized objects; that's about 1 in 200 years. But if you're looking at objects, where you're not able to determine precisely enough where it's going to be in 20 years, we're going to be faced with the situation, as we continue to track more and more of these objects, for every one Tunguska-sized event that might hit us, we might see 50 potential smaller impacts. We might see 50 objects that each have a 1 in 30, or 1 in 70, or 1 in 100 chance of hitting the Earth. Now, if you waited for each of those to play out, by the time you would know 100% whether it's going to hit or not, it's too late.

FIGURE 9



JPL/Alan B. Chamberlin

Do We Act?

So, we're right now on the cusp of when this question is going to start coming up for government. We're going to start to get, potentially, every few years, a new case of a 100-meter size object, a 1 in 75 chance of a hit in 15 years; do we act now? Maybe a couple of years later, you get another object, 90 meters across. If that came in, it could damage an area the size of a medium-sized country, a very significant regional effect, and maybe there's a 1 in 120 chance that it'll hit in 25 years. Do we act?

So the point is, as we continue to observe more and more, and track more and more of these bodies, especially the smaller ones (**Figure 9**), we have a better sense of where a lot of the bigger ones are. But a lot of the smaller ones, we are now beginning to, more and more, track. And the estimates of the experts working in this field are that we're getting to the point that this question is going to come up in a very serious way, and it's going to come to governments, saying, "We know. Do we act? There's a chance for this event; there's this chance for this other event. Do we act? Do we act?"

We're on a cusp with our growing sensory capability, of needing to address this question in a very serious way. There is a 2007 study that was done by a group at the University of Southampton, a study simulating thousands of random impacts, all over the planet. If there were thousands of impacts, what would be the effect of each impact? And they looked at which nations would be most affected. And the nations that had the highest death counts were largely in Asia, because one of the big dangers, is these things impacting the ocean, and generating a massive tsunami.

Remember what happened in Indonesia in 2004. More than 200,000 people died. It's hard to get your mind around that scale of an event. It's incredibly dramatic. These can have the same kind of effect if they hit in the ocean. The United States is also very vulnerable because we have two coasts, and we're also densely populated on both coasts. So, we're vulnerable from impacts in the Atlantic and in the Pacific.

So, at the top of the list, in terms of both life lost and economic impact, China is number one, and the U.S. is number two, in terms of nations vulnerable to small-to-medium-scale impacts.

To tie it back to the point of the victory of the Mars landing, this is the question for mankind as whole: Are we going to recognize our destiny as a non-biological species? What we know from the history of life, is that for any single species, there is no guarantee that it is going to continue to exist for any indefinite period of time. What we know is that if we are going to ensure that mankind continues to exist, not only are we going to have to expand the powers of mind to observe and sense the entire Solar System, and to sense the galaxy and our galactic environment, we're going to have to change it.

That's what the Mars victory represents; the NASA victory on Mars, in the face of fascists like Obama, who hate science and want to depopulate the planet and reduce our scientific capability. This is what the future has to be

for our nation and international relations if we're actually going to take this future of humanity seriously.

Mankind's Noëtic Characteristic

LaRouche: There's one thing which goes in a somewhat different direction, but is relevant to the same business, and I would like to emphasize that. I thought it would be more important at this time to have this presented, and then we can go back and treat some of the other things. I'll just indicate one of them which is extremely important.

Mankind: Well, we look at the biological history of man on the planet, and we find we have a phenomenon called man, which is unique, which has what we call noëtic characteristics. And no other known species has those characteristics.

Now we're dealing with this Mars development. We're actually getting into the nature of the universe. Therefore, the question is, where does noëtic intelligence come into play in terms of the planets, the planetary system, in terms particularly of *life*? Is it possible, since this universe is organized as a universe, that the noëtic capabilities which we associate with the human mind, could have been generated on Earth by itself? Not possible; because this is absolutely qualitative. And there is very little attention paid to this; and when you talk about the survival of human beings, you have to look at the survival of Earth. Now, does the Earth have a survival potential for human beings? Maybe not.

But does that mean that a superior characteristic of action, which is *human*, and intellect—most people don't know what a human intellect is, because they don't cultivate one. But the creative powers of the human mind are unique; and they belong on the scale of, shall we say, evolution. In other words, if you look at the human life in terms of the biological origins of human life, you have a phenomenon that occurs which is unique, and you can not derive this from something below. But it exists, and it exists in the system.

And therefore, the assumption is, then, that the quality of creativity, or human creativity, exists in the universe; it's not just something that has occurred on Earth. Because it's a higher order of things; it's not simply a higher degree of evolutional-biological systems. It has an actually noëtic characteristic which exists, which is the most efficient mechanism we know of. It's known to exist on Earth in the human population; it's known to have a history of existing on Earth also. And so, it's a very recent history, in terms of the history of the planet.

So, the question then comes back to another question: If this potential, this quality exists not only on Earth, in this rare species called man, what about the universe? Because this is a power which is greater than anything we know: that is, human noëtic powers are a more effective force in history than anything else. Can you say that if we exterminate human beings—is that going to shut off the universe, shut off something in the universe, or not? And therefore, we have to look at these things in this way. This is really one of our challenges.

And it goes against the idea that human intelligence is what most people think it is. It actually is a force in the universe of which we have no duplicate, in terms of our knowledge; but we do have the knowledge of the evolution of man, as man becoming man, with this noëtic capability. So we have to say, in a sense, that the noëtic capability of man was generated also on Earth, but it's a universal principle.

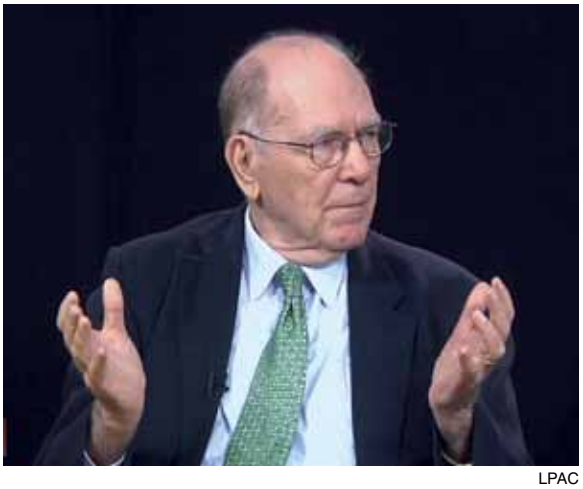
And this is what we really have to think about, because we don't really presently understand man himself, in these terms. We understand the phenomenon, we react to it, but there are very few people, living people—scientists and so forth, on this planet—who take this into account. They will admit that the noëtic factor exists, but they do not try to understand it.

And obviously, what the existence of this implies, is that the whole universal system of our galaxy and so forth, is permeated by this principle. Because it evolved, to our knowledge, on Earth, but it is a characteristic which intrinsically, has not been generated in any other way, except from life, the evolution of life which goes through a qualitative change, which is the noëtic state.

And I would say, just briefly, to sum this up, that we must *think* about this noëtic state. It's important to us today, because we're dealing with human psychology, and most theory of human psychology, to my knowledge, is nonsense. It's an explanation; it's not a discovery, it's not a principle. And in this process, we have to include this. It's much less urgent immediately, in terms of time of action, than what we've been discussing on the table today, but we still have to think in those directions, because the creative powers, the noëtic powers of the human mind, are absolutely unique. They come from someplace, and the universe certainly did not suddenly create something entirely new, spontaneously, or we should not have an origin.

So the question of the origin of the noëtic capabilities of mankind: How are they expressed in terms of the galactic process, or the Solar System process? So, this is

something, a gesture toward modesty about what we *do* know, which is extremely important to consider. Because our concern is, my concern is, that so many human beings today are functionally stupid! Even so-called educated beings, are functionally stupid, because they do not understand the idea of a noëtic principle, and that's something that is very important to us.



LPAC

"The noëtic characteristics of mankind, the human mind, are absolutely unique," LaRouche said. But, the entire universal system—our galaxy and beyond, is permeated by the noëtic principle.

And we're probably going to find it in looking at what we're doing on Mars right now. Because the question is, Mars seems to have had a potential of having some form of life, of living processes and similar things, and even noëtic processes, which don't dare exist anymore, perhaps. And therefore, this is what we have to concern ourselves with. We are concerned in the long term, of course, with the perpetuation of the species man in the universe; that's the long-term conception. This is what we've got to look at. And this is part of it. It's not this immediate thing we're looking at now, but it's something we have to take care of.

Deniston: That's been explicitly attacked, too. And the history of the oligarchical principle was to attack explicitly this conception of the noëtic factor as you're discussing it; a principle of the universe.

LaRouche: It's also the question of the notion of time. We have a mechanistic conception of time, and we have indications that that is not the case. So, somewhere in the process, we have to keep this going, which I shall do.

A Miraculous Antenna

Martinson: A while back, you developed the image of man as something like an antenna that resonates with an existing principle of creation in the universe, but that, in order for such a miraculous antenna to be developed, you had to have the unfolding of the history of life to such a form that was appropriate for resonating with whatever that other phase-space is. I would say, something like Mars.

If it comes out that either there never was life on Mars, or there had been life, but it just couldn't take hold, then we may be looking at a similar phenomenon, where the geology and the chemistry of the planet, which perhaps was predisposed towards developing something that resonates with the principle of life, was unable to carry itself forward for some reason. Where on the Earth, that resonance was able to come into existence.

LaRouche: It comes through the Solar System, the parallel of the Solar System. The same thing.

So these conceptions have to be dealt with, and the problem is that they seem strange, but only because they're strange to people who haven't thought about them much. But they are important.

The noëtic characteristics of mankind, the human mind, are absolutely unique. And that's what I base myself on, as the issue. That's the key issue. That's the key thing you've got to look at constantly: the noëtic powers of mankind. And unique. And you find people out there, and you find most of the human population, has no conception, that is, no experience, of a conscious awareness of a noëtic principle. Most people don't.

And of course, the oligarchical principle is—we have two factors: You had the systemic suppression of noëtic capabilities of the human mind, which is done socially. That's the oligarchical principle.

But there's another side to it, which is not that particular thing. The question is, the noëtic principle must exist in the universe. It's a higher order. It emerges on Earth at a certain point, but it's a principle of the universe. And who knows where it must emerge, and how it functions.

That's the big question: to understand this. And you find that we live in a society, where most of the evil of society is that there's only a small percentile of our total population which actually has an active noëtic capability. Most people, in that sense, are ignorant. Sometimes they're smart, but they're ignorant on the actual idea of creativity. It's a completely different experience.

But it's something which is to be kept in mind.

Martinson: There's two aspects there. One, we have to pretty much crush the oligarchical principle, which is represented right now by Obama, and a bunch of other crooks. We need to crush that because it actively attacks the creative abilities of man. But the other aspect of it is that the way you inspire creativity in people, is, you throw them into a situation where they're confronted with contradictory juxtapositions of sensory input. You want to put them in a situation where they say, "Oh, my God, this doesn't make sense with this anymore." And they're forced to come up with creative solutions, which describe what's causing what they're perceiving.

So, from that standpoint, that's the importance of the Curiosity landing, but it's also the importance of the necessity to get man off the surface of the Earth, and into a space-faring culture.

The Significance of Bach

LaRouche: That's where the significance of Bach comes up. And you get the reflections, of course, later, with Furtwängler. But that's where it comes up. It's this awareness of the noëtic process.

And you can't locate it physically. The noëtic process, so expressed, is not locatable in a simple way. It's a shadow. It's a shadow which cannot be denied. It's a shadow which has an effect. But we have no ontological real understanding of it. We know it, we know it's true, we can demonstrate it—some of us, anyway. We can understand it to some degree. We know that it works. But it's just something that comes up on the front end of evolution, when you get to the highest level so far, in terms of biological evolution, this thing pops out, and some of these people who pop out of this process, actually have noëtic possibilities.

Very few do. Bach is a case who did. It's very obvious. And he's on record with his music; it's indelible.

But this is where we have to really go. We need a moral force within humanity, which understands that *this* is what's most important, and *this* must be promoted, and defended—against oligarchs and similar kinds of fools.

So we have a fairly good agenda for the coming weeks. And this is extremely important.

It also is important to get people out of the mud, intellectual mud, people who live in the intellectual mud. Their lives are miserable and petty. Their concerns are petty, about how I feel, and so forth. They have no sense of the role of mankind, or being part of mankind, with a role in the universe. Anyway, that's where we stand.

And this is very useful, what we've done today, I think, in terms of discussing this, because it lays a platform, it provides a platform from which we can take these other questions into mind.

Deniston: And I think there's a full unity to all of the aspects discussed. If you're talking about, as you're saying, mankind; if you want to talk about the planetary defense; you want to talk about the defense of mankind? It comes ultimately to this, what you're saying.

LaRouche: Exactly.

Deniston: How do you actually improve man's understanding of man, and man's ability to access that unique capability? And how to do that on a mass social scale, and develop a culture that does that? If you don't achieve that, you're not going to have any real sustained development of mankind.

LaRouche: If you don't think about that, you really are not fully human. It's only when you begin to think about these kinds of questions, that you acquire a sense, a *senseful* feeling of what human is. And most people who are human beings have not yet understood what human means. They don't know the experience of being human.

Deniston: They've been robbed of it.

LaRouche: Yeah, sure. That's what the oligarchical system does. That's what the Obama system does. That's why you have to keep it in mind. You have to say, "Who am I and what am I?" What species am I? What's your loyalty? What's the meaning of your existence? To what purpose do you exist? And what are you devoted to? It can't be for just physical things and the sense-perceptual things. What are you devoted to?

And when you think about the protection of human life, as a unique species in this myriad universe we live in, do we have to defend the principle of human life? Not just as life, but as the noëtic powers of the human mind. Because you cannot separate life, in the process as a whole, from the noëtic process of the human mind. And if you don't defend the noëtic process, by fighting the oligarchy, for example, you're not defending mankind. And the defense of Earth.

Looking at the Universe from Mars

And one of the implications of this landing on Mars, is that we've actually come to the point that we are looking at the universe from the standpoint of the Mars perspective. Instead of looking up to the sky to some

rocks up there, *you're now looking down at Earth, from Mars.* And that's what you're going to be doing. That's what happened with this thing.

For the first time, you have a dedicated systemic approach, on Mars, to your mind, as you have the experience of this case—what's happened now—this new colonization on Mars, so to speak. You now have put man, if he continues doing this, where man on Mars, or man's mind being echoed from Mars—you're now looking down from Mars orbit, down towards the Earth, and outward. It's a fundamental change. And that's what the change is, where mankind really becomes himself.

The minute you see that mankind's mind can envelop the area within the Mars orbit around the Sun, then you've made the change. And people who are operating from Earth, like these fellows who did this job, are going to be the human minds resonant in the Mars orbit, who are, from that standpoint, looking down at Earth. And when we try to make policy on Earth, henceforth, with this achievement, we have to look down at Earth; we have to have the human mind projected into that orbit, as was done by this feat.

In other words, we actually brought the use of the human mind, as an active responsive principle, like a robot which is trained to reflect human beings, now looking back at Earth, with concern for the defense of Earth. So now, we are looking at the defense of Earth from our parapet on Mars. We're defending Earth, from Mars. And that's the change.

And that poses the other questions: of what is man? What I've always thought, is that the next generation, the next 20, 25 years, within that generation, we should have actually achieved thermonuclear fusion, one week to Mars from the Moon, that sort of thing. So when you get to that point, you're thinking in those terms. You're already beginning, with your mind—which I'm sure this event is doing to many people—you're now thinking we are protecting Earth from Mars.

We're now protecting Earth, from Mars. That's the defense. And this is a fundamental change, and something like a Satan is trying to prevent that from coming into human knowledge.

Deniston: Well, looking at defense, the God of War is good to have on our side, right?

LaRouche: Oh, that's nice. "Mars, you're going to cut it out!"

Deniston: Kepler said he captured Mars, but now, we've really got it.

LaRouche: We've got him shackled.

No, the resonance of this, you can see, I've even been thinking of this in terms of another generation. Within another generation we would have sufficient control over the whole area of Earth, that we would now begin to think of ourselves, not as Martians, but really thinking of Mars as the outskirts of the location of people on Earth, the human place. So people who are working to defend Earth, on Mars—their identity is located, ironically, on Mars, where they're the defending forces, but the defending forces are not necessarily living on Mars; they're living mentally on Mars, as we see in the case of this installation that has just been made.

You have people who are not on Mars, but who are working from Earth, to act, from Mars, on the condition of Earth. And that's your defense of Earth concept.

This change is what's needed, this change in thinking. Because selfishness tends to come from people looking at their tummy, or something; it doesn't come from the sense of mankind, defense of mankind by mankind. That change in sense of identity, is what's crucial here.

It pleases me much.