

LaRouche Challenges Youth: Make a Revolution in Science

Here are Lyndon LaRouche's opening remarks to a LaRouche Youth Movement cadre school held in Purcellville, Virginia, in which LYM chapters in Los Angeles, Oakland, Seattle, and Hackensack, N.J., in the U.S.; Montreal; Paris, Lyon, and Rennes, France; Stockholm, and Melbourne, Australia participated by conference call. Two hours of discussion followed. The complete audio archive is available at <http://wlym.com/tiki/tiki-index.php>

Well, I did something the other day, you may have noticed. You may have noticed and I shall do a little appropriate *nachtsich* now, over the issue.

The crucial thing, which has several implications. First of all, those who've been down in "The Basement"—The Basement is the stairway to Heaven. You get to meet the most interesting cats down there. The meals are tremendous! And the conditions are absolutely wonderful, because it forces you to rely upon your imagination. Therefore, it forces you to think.

Now, the key thing is to be understood, and actually you probably noticed, that what's happening in The Basement, since particularly Kepler I, has radiated throughout the organization as those who read this material or discussed it, or it's been discussed, circulates more and more throughout the organization. And you find that what's being developed in the organization, especially among the youth in particular—some guys are hard of hearing, you know, when they get past the age of 40 and old age sets in—that there is actually a different culture developing in the leadership of this generation within the organization, a culture which is intrinsically superior to that of the general culture of the earlier generations.

The earlier generation, especially the Baby-Boomer generation, is problematic. It has no inclination towards science, as a generation—none. It has an inclination toward gambling, and mathematics as an art of gambling. But it does not have a sense of physical science, of reality—it has no interest in it.

Because, to them, the Boomers in particular, the restrictions of scientific thinking are just against their ethics. It's restrictive. "I would like to make up my own mind. I don't want *science* telling me how the universe works. I want to make up my own mind, my own opinion, my own little opinion. My circles, we may not agree with this stuff." And therefore, they are hostile, as we saw this in '68, especially hostile to science, hostile to any form of Classical art, which they consider an encroachment upon the right to freedom: The freedom *not to think*.

So, what you observed probably the day before yesterday [LaRouche's June 21 international webcast], is, the problem for the audience in general was a certain, "this science stuff." It's a problem. And yet, we saw that the connection between the politics and the science as I presented it day before yesterday, is essential.

Approaching the Stars from Below

Now, take this one example, which is probably the best example now, because most people have been exposed to this work from The Basement, working your way from the bottom up, approaching the stars from below, is this idea of gravitation, the principle of gravitation which is exemplary of the fundamental principle of all competent science: That you have a principle in which the apparent infinitesimal is the most powerful force in the universe. That gravitation is expressed in the form of an infinitesimal interval of action. And that is why I laid it out the other day again, just briefly though: that the pathway of the Earth through its orbit, and that of other planets, is not determined by the image of some orbit: The orbit does not determine the pathway of the planet; the pathway of the planet determines the orbit. And this comes up now for those who are wrestling now with the Gauss determination, in which the motive is crucial. It is not the orbit that determines the pathway, which is what was the mistake of all



EIRNS/Stuart Lewis

Lyndon LaRouche addressed the LaRouche Youth Movement on four continents June 23: “We’ve come to a time in the history of the world, the history of the United States in particular, that the existential question, the essential existential question, is the immediate question before humanity.”

observers, but for Gauss, in that period. But, rather, it is the pathway as such, which determines the orbit. And that’s how Gauss was able to solve that problem. Which you will learn, properly, from the right group of people, when they finish their work, in the coming weeks and months.

And, this is true of everything: an *infinitesimal*! The most powerful thing in the world is an infinitesimal. The most powerful thing in the universe, is an infinitesimal! Or comparable things, which are also infinitesimals.

So, science is essentially—competent science—is the study of infinitesimals. Also, art! All competent art, is also based on the concept of the infinitesimal, not on the basis of naïve sense-certainty. And this is where the problem lies. And this is where, in the LYM, in the seepage of the effects of this work in The Basement, and related things, a culture is building up within the generation now, or within the core of the generation, a culture is building up which is beginning to think almost instinctively in terms of the infinitesimal, as the most powerful force in the universe; as opposed to the thinking about sense-certainty as the origin of truth. What you learn from science, the fundamental thing you learn from science from the beginning, of competent science, is that what you see, is not what is; what you hear, is not what is; what you smell, above all, is not what is.

So therefore, the distinction is, is also the same distinction of the concept of immortality: There’s no animal which is ca-

pable of thinking, in scientific terms—none. Because the human mind functions in this domain of the infinitesimal. No animal knows a universal physical principle! They know a habit. They know a conditioned habit. They know how to build on combinations of habits, by reacting, by combining habits, new habits and old habits, always operating on the basis of *sense-certainty*, as the map which they use to guide themselves in life.

When the animal dies, the animal’s dead. The animal kingdom does not change, in terms of its behavior, as a result of those animals which have died. They simply adapt to their animal nature, or the nature of animals within their domain. Human beings willfully change the behavior of the human species as a whole, with respect to the universe. Human beings willfully change the behavior of mankind, in such a way that mankind increases mankind’s power to exist in the universe, and control it. No animal can do this.

Now, this is the central question of all human knowledge; it’s this essential *existential* question, which most people in the older generation have no sense of. And even people who are scientifically trained and would be competent, in the sense of plumbers being competent at plumbing, they’re competent at science, in those terms, and are able to think in those terms of practice. But on the fundamental question of what is a physical principle, a universal physical principle, there are very few people alive today, who are considered specialists in

the domain of physical science, who have any comprehension of the principle I stated in discussing the question of the orbit around the Sun by the Earth, during that conference, my presentation Thursday—none! Therefore, they're not competent in science. Because they're incapable of grasping the most powerful thing in the universe, which is expressed as the smallest thing in the universe: the infinitesimal, the smallest existing thing in the universe.

The Infinitesimal vs. Sense-Certainty

And the concept, of course, of the infinitesimal, as I think, many of you have either gone through it directly, or indirectly: of what the significance of the infinitesimal is, in respect to the Solar orbit of the Earth in the Solar system: Is that, no matter how much you divide the orbit into smaller and smaller intervals, the orbit is always going through a change in direction. And it's this constant change in direction, which persists no matter how small you attempt to go, which is actually the force, the motive which is determining the orbit.

So therefore, you draw an ellipse—[dumb voice] “that's the orbit!” It is not the orbit! That is the footprint of the orbit, not the orbit. Like a woman marries a guy's footprints. Not a very fertile idea.

It is not the footprints that are reality; it's that which *produces* the footprints, that is reality. It is the motive which produces the orbit, which is the reality of the orbit: *It is the principle that governs that motion, which determines the orbit.* And when you try to catch the orbit in your hand, it gets smaller and smaller and smaller, and you call it infinitesimal, because no matter how small you try to make it, it's always changing. Just think about this simple thing about the Keplerian orbit: To understand what it does: It's the principle of constant change. And every other kind of orbit. And in physical science in respect to every principle, it's always the same.

So, science is the study of infinitesimals; it's the study of that which controls behavior in the universe, in the smallest imaginable degree. The constant change in direction, the constant change in velocity—constant. So, there is no point at which the division becomes meaningless. And this is, of course, what Cusa discovered, in refuting the fallacies of Archimedes on the conception of the quadrature of the circle. There is no significant mathematical quadrature which can adduce a principle from a trajectory of a principled form of physical action.

Therefore, *this change*, this change in the way of thinking, this change to what has been known throughout the history of European civilization since ancient Greece; this principle of change is the essence of scientific knowledge, as the *essence* of the question of truth, as well as scientific knowledge. And that's what I concentrated on, in a small part, on Thursday, but



“Competent science is the study of infinitesimals. Also, art! All competent art, is also based on the concept of the infinitesimal, not on the basis of naïve sense-certainty,” said LaRouche. Wilhelm Furtwängler, conducting “between the notes.”

that's what's most crucial. And that's the characteristic which must distinguish the leadership of your generation, from the failed leadership of the preceding generation. This understanding of the infinitesimal.

It comes up; for example, it came up beautifully in the Kepler II project, where the question of harmonics was the confrontation. And I saw a lot of wrestling with good fun among the people who were going through that phase on the question of harmonics, as we began to talk about the relationship among the planetary orbits, and the relationship of those from the Sun. Suddenly, it's apparent. And then you look back at history, and it was *always* apparent in European civilization. From its Pythagorean, and related roots, it was always obvious: That the senses do not determine—do not *lead* you to an *understanding* of the causal features of the reality within which you're living.

For example: In formal mathematics, what is usually taught is corruption, how to be stupid. And this is sometimes called Euclidean geometry. You're told, [stuffy] “We must begin with certain self-evident principles!” “We must have—

definitions! We must have axioms, axiomatic assumptions. And we have postulates,” to clean up the mess afterwards. “Only then! Only then, dare we presume to say we know something.”

Now, the point is, in the first instance, the first approximation of this is vision. We have *sense-certainty*: “What I can see!” What I can see. Then you have a different sense: What I can hear. And we have another sense: What I can touch. And how I can smell, which has interesting connotations.

So therefore, people start with what they consider *a priori*: what is common knowledge; what is generally acceptable common knowledge. Sight? Sound? Touch, and smell.

So therefore, you say, “It is self-evident!” What does it mean, “self-evident”? It means, it is evident to this particular sense to which we are referring. It’s evident to the habit of seeing; it’s called vision; the habit of hearing, which is called harmonics and sound. The experience of touch, and the experience of smell. Each of these becomes then a self-evident definition of experience, and we’re trying to “interpret” experience. So we start by respecting the experience itself. What is experience? Sense-perception!

Now, how the hell do you know anything from sense-perception? What kind of a fraud is it you’re trying to perpetrate by saying that sense-perception tells you something? What is sense-perception? It’s simply a reaction of the body as a whole, to certain things that impinge upon it from outside. The impinging is detected by sense-perception organs, which are nothing but living, biochemical organisms, and these things are translated to the human brain, and they’re interpreted by the brain. So therefore, the existence of the human being and human knowledge seems to be determined by the completely internal, to the living organism, and it reacts to things which touch upon it from outside. But how does it know, that that which touches it, which causes a sense-perception—how does it know that that represents anything true?

Now, in what’s called Euclidean geometry, which is a complete hoax anyway, you’re taught to look at everything from what? From the standpoint of the assumption of a linear universe of sense-perception: Straight line interception of the universe with the sense organs and mind of the individual. That’s fine, okay. That’s called Euclidean geometry, which is a fraud. Because, these are sense organs, like any other instrument, even like an electromechanical instrument in electronics: The instrument doesn’t “know” the universe around it. The instrument is a method of *response* to the universe around it. And when you design instrumentality, you better not assume that the universe is what the instrument thinks it is. Because, then you’ll result in a disaster. You have to know what the universe is, *despite* the fault in communications given to you by any one kind of sense-perception.

How Do We Know the Universe?

Now, that gives you a hint: How can the human mind actually know the universe? Well, it can know the universe by



“In formal mathematics, what is usually taught is corruption, how to be stupid. And this is sometimes called Euclidean geometry.” Shown here: Euclid, working on his definitions, axioms, and postulates.

changing its own circumstances of existence, by acting on the universe. Now, how do we know what the universe is? Well, we start with sense-perception. But what do we do? We don’t rely upon sight, or sound, or touch, or smell. We rely upon *none of these, as individual senses*; or even a simple combination of them. We rely upon a practical understanding of the *falsity* of what any of these senses show us to be.

Now, the easiest way to do that, is to look at the relationship between sound, and sight. You have to smell the universe, not just look at it. And that’s exactly what Kepler does! Exactly what he does, especially when it comes to what we call—here, among us cognoscenti—“Kepler II.” We do not rely upon sight, or sound, or smell, or touch: We rely upon that which is true, which is none of those. We rely upon the paradoxes, the contradictions between the view of the world suggested to us by any one sense, and the primary experience is that of the relationship of sight to sound.

Now therefore, the reaction you get, and the first reaction you get, even from so-called trained scientists of the type we used to have around back in the 1970s and early 1980s, those who were associated with the Fusion Energy Foundation; the fight we had was on this issue. And the biggest explosion that ever occurred in the Fusion Energy Foundation on any issue, is when I raised the question of Kepler, because the question of Kepler’s organization of the Solar system. And that produced howling and squealing. It was amazing—like a banshee convention suddenly broke out around the table.

What is the significance of this Kepler II? What is the difference between what Kepler accomplished in the first instance, in determining the relationship of Mars, Earth, and Sun, as opposed to determining the relationship of the Solar system to the Sun; and the relationship among the components and elements of the Solar system to the Sun. As then, it’s complicated by the introduction of this question of asteroids, which force you to go to another step of correcting assumptions.



Johannes Kepler (1571-1630). "Look at the relationship between sound, and sight. You have to smell the universe, not just look at it. And that's exactly what Kepler does!"

What it demonstrates is, that *harmonics*, as we think of harmonics in terms of Bach's well-tempered system, and that kind of counterpoint, is actually determining in the relationship of the planetary orbits, their definition, and the relationship among these orbits with respect to the Sun. So therefore, you have to combine sight and sound, in respect to their most contradictory aspects! No longer can you take a Cartesian view, or quasi-Cartesian view, and measure the relationships, the observed relationship among Solar bodies! You will never understand how the Solar system is organized! As our young geniuses of Kepler II discovered for themselves. It's when you realize that harmonics, in the sense of the musical harmonics of Bach's well-tempered system, and the approximation of this, only when you see the Composer of the universe—not just the Creator, the Composer: the Super-Bach—who has ordered a universe such that it does not correspond in its behavior either to deduction from sight or from hearing, but only from looking at the contradiction between the two, and finding a lawful meaning in that contradiction. And then, being able to practice, in the universe, to introduce changes in the behavior within the universe, by applying that discovered principle, as a law, as a guiding law to act upon the universe.

So, you do not know truth by sense-certainty. You know truth by sense-*uncertainty*! What you feel, is never true.

Then, you have to find out, somewhere in the contradictions of one sense to the other, what the universe is and what the principles are. *Then, prove*, that those principles you have *thus* discovered, are actually the more efficient means, of controlling the behavior of the phenomena to which you are attaching the powers of sense-perception.

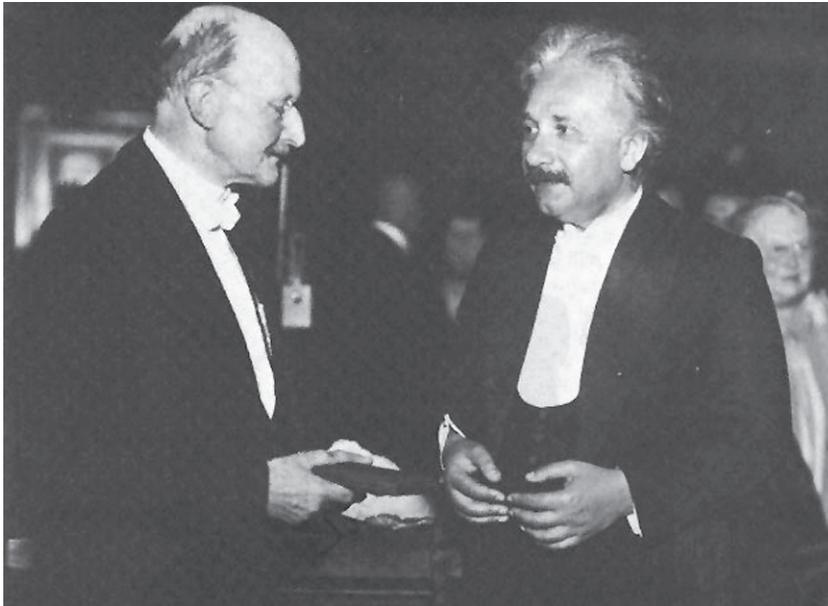
The same thing is true in instrumentation. When we develop instruments, like electromagnetic instruments, to explore the atomic domain, we are developing instruments, which are designed as extensions of the concept of sense-perception. So, mankind invents new sense-perception instruments and applies these to the atomic or subatomic domain. And thus, by applying these instruments, we create *new* sensory experiences. Derivative sense experiences.

In this area, we arrive, again, into contradictions! For example, the greatest case in the 20th Century was that of Max Planck. Max Planck, in dealing with his paradox, which became the Planck quantum principle; it was not quantum mechanics. And the idiots try to reduce it to quantum mechanics, and they screamed and they howled about that. But what he discovered, was a *contradiction* in the use of extended forms of sense-perception to explore the universe, and found in certain domains, there were characteristics for which he proposed new views of what universal physical laws are.

So therefore, what you saw, what we touched upon on Thursday, in dealing with this question of gravitation, was the fact, that you think you *see* the orbit of the Sun; you think you can *measure* it. You try to eliminate the small differentiations, and say, "We can *generalize* this experience. We can find a principle which generalizes it from the standpoint of vision." But then, when you look at the planet as a whole, and you look at the inferred history of the Solar system, of coming from a solitary fast-spinning Sun, into a system of planets, now suddenly you're faced with: this no longer corresponds to reality. And that's why we divided the thing as Kepler did, between the Kepler I and Kepler II: That you look at one stand, you're looking at the relationship of the Earth, with respect to Mars and the Sun. You have a substitute for sense-perception. You discover there's an irony in that. And you work on that.

Now you think you've become the world's greatest genius. Then you go into the question of the relationship of the ordering of the planetary system with respect to the Sun, the planetary system as a whole, including the relationship *among* the planets. And suddenly, your sense-perceptual image breaks down. Now, you have a new experience, a new way of looking at the universe. And it is going on and on. And this is true in all experience.

For example: Let's take the most fundamental one. People say, "Well, there's the universe." They think of it as an extended BLA-A-H-H. Just out there. We're all swimming in it. It's a swimming domain of sense-perception. And then you discover that you can not derive the behavior of living processes,



Max Planck (left), with his good friend and collaborator, Albert Einstein: Planck discovered “a contradiction in the use of extended forms of sense-perception to explore the universe, and found in certain domains, there were characteristics for which he proposed new views of what universal physical laws are.”

their characteristic behavior, from non-living ones! Can't be done. And this was explored by a number of people, but most notably from Pasteur, who posed the problem as a question—not as an answer, but as a question—into what followed: the recognition that life is a principle in the universe, which is not contained within assumptions derived from non-living processes. Life is not an evolutionary product of non-life. Because the behavior of processes in the universe, including chemical processes, atomic processes, in living processes, behave differently than in non-living processes.

The Principle of Life

Now, it even gets more interesting. Because, if you look at the history of the Earth, from what can be inferred as its origin as a Solar object, you find an Earth which is, apparently, completely inorganic, non-living. But then, you have the emergence of living processes, fairly early in the game, which tends to suggest to you that the principle of life was there all along—you just didn't see it, you just didn't discover it. But then, you look at the history of the planet from the standpoint of archeology, and from the standpoint of physics in general, and you find that the products of living processes, *and* living processes as such, are occupying a constantly larger ration of the total mass of the Earth!

For example: The atmosphere is a creation of living processes. The atmosphere is not, shall we say, a natural non-living process. Doesn't exist. The atmosphere is created by the action of life itself as a principle upon the Earth. The oceans, similarly, are products of that: water, in its fossil form.

Now, we look at the planet as a whole; we take the average

mass of the planet, planet Earth. Ignore the fact that we're getting new material dumped on from the Sun all the time. We're the great trashcan for the Sun in our vicinity. Anything it finds in our vicinity, “there's a trashcan; it's called Earth—dump it there.” And that's what sort of happens to us. Now, you find that this principle of life, is not only something you can not adduce from non-living processes, but *life* is taking over a larger and larger percentile of the total mass of the Earth.

Then you come to the matter of human behavior. [Silly:] “Well, man is an animal.” Engels called himself an ape—and he probably was. Or, at least he was working hard to turn himself into one. But you find out that human behavior—and you look at the standpoint of ecology, simple animal ecology—human behavior does not correspond to animal ecology. Human populations do not conform lawfully, as lawful processes, to animal ecology: Because the animal ecology has a range of behavior, depending upon its

environment and the interaction among different species. *But!* The increase of the potential relative population density of the human species goes far beyond anything that any animal could ever accomplish—any animal or combination of animal species could accomplish.

So, life itself, as defined by animal species and similar kinds of things, is not the determinant of Earth; not the determinant of the Biosphere. That the great changes—look, if we were great apes, which some of our Baby Boomers tend to be, when they monkey around with man's future, we would have a fixed potential relative population density, just like any animal, any species of animal; variable under conditions and so forth, but nonetheless, it's not within our control, it's in the control of the biology of the system. And the relationship among species changes, the conditions of life change, and the species' population is controlled that way.

But with human beings, no. With human beings, who have the physical capabilities generally, which we associate with the higher apes, and all the other qualities of a higher ape, somehow human beings are not limited, to aping one another (unlike some Baby Boomers who specialize in that). Human beings have a willfully increased potential population density. Whereas the potential population of the gorilla, the mountain gorilla for example, or the forest gorilla, has a relatively fixed population density. And the chimpanzees, too. Humanity—this is in the order of millions in potential population. And the conditions for this population potential go back at least 2 million years, in terms of our knowledge of the conditions of this planet during the last 2 million-year-long series of ice ages, glaciations. Therefore, mankind, reaching beyond a popula-



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How did the human species achieve a population today of 6.5 billion people? “The principle of mentation, the principle of creative discovery, changed mankind’s character and behavior.” This “process of change is what we would call ‘intellectual.’” Shown here, LYM scientists Peter Martinson and Tarrajna Dorsey working with a Kepler model, in The Basement.

tion of millions, or even tens of millions, or hundreds of millions, which by then, far exceeds anything that a higher ape could do—suddenly, now today, we have 6 1/2 billion people, or more than that, on this planet.

How’d we get there? The principle of mentation, the principle of creative discovery, changed mankind’s character and behavior. But these changes in mankind’s character or behavior, are not changes *upon* mankind; they’re changes *within* mankind. And the process of change is what we would call “intellectual”: the discovery of the equivalent of universal physical principles, or things that approximate universal physical principles.

And all of these things, that I’ve just described, the series of conditions, all correspond to two things: First of all, they take the form, expressed as universal lawfulness, as infinitesimals, just like the orbit of the Sun: In each infinitesimal instant, what is happening to the infinitesimal is what is determining the orbit in the large. And it’s true in everything else. So mankind, by the power of will, which no animal has—is able to change the universe. And it does it, in terms of the infinitesimal. And it does it, by rejecting the idea of self-evident evidence. You recognize that the evidence of the senses is false, misleading, and that you must find an experimental approach involving *contradictions* in behavior *among* the senses, with respect to some subject matter, to discover a *principle*, and then operate and test that principle in practice, which is the practice of competent modern science. *And this is ex-*

actly what is forbidden, viciously forbidden, in higher and other education in schools and universities today. This approach is forbidden.

Now, some people escape and get beyond that prohibition, but in the recent generation, very few did. I saw it. I was there, I experienced it—one of my advantages is, and my disadvantage, is to see what’s happened to the human race, during the course of my adult lifetime. We’ve degenerated. And we’ve degenerated on just this issue that I raised the day before yesterday: the issue of the infinitesimal, as typified by the fact that the Sun’s orbit can not be determined empirically just by looking at the elliptical orbit. You have to discover a paradox in that. And you don’t understand what you’ve discovered, with respect to the Sun’s orbit, until you look at the planetary system. And you come into this question of *harmonics*, as in the sense of Bach, becomes the standard by which you must measure action within the Solar system. And the typical giveaway, is the scientist who says: “This whole idea of harmonics, Bachian har-

monics, as being a reflection of the *physical organization* of the Solar system, of the universe, is bunk. We can’t have that. It’s not scientific. It’s not simply mechanistic, it’s not Cartesian, it’s not Newtonian.” Where, precisely, it is that contradiction between harmonics and vision and the experimental approach to that difference, which defines efficient human knowledge.

And therefore, you see a key to that, a key to every problem we face in society today: We’re operating in a society which says, “What experience teaches us...” Experience has not taught people a goddamn thing! They keep making worse mistakes all the time, and they prefer their mistakes to their successes! Now, that’s a lousy experimental method! If your experiment fails, that’s what you love. If it succeeds, you hate it.

So therefore, what you’re dealing with from the inside, as when you get into what we’re doing, as working at history from the foundations of truth—which are always found in The Basement; they’re not brought into The Basement, they’re discovered in The Basement, by those who go there. And they’re not discovered by those who refuse to go there, or won’t stay there.

So, this thing, which you find our young people were doing, in this series, as we were doing earlier in a certain looser way, with going at the Pythagoreans, and going at the question of the paradoxes posed by Gauss’s attack on the reductionists of the 18th Century: We started from there, to pose the gen-

Johann Sebastian Bach. “The Composer of the universe—not just the Creator, the Composer: the Super-Bach—has ordered a universe such that it does not correspond in its behavior either to deduction from sight or from hearing, but only from looking at the contradiction between the two, and finding a lawful meaning in that contradiction.”



eral nature of science, by referencing the Pythagoreans and their outcome. Then we go into the actual work, of defining modern science from the standpoint of what Classical ancient science, Platonic science, had given us. And there’s a big gap, between 200 B.C., which is the time the Romans began to take over the Mediterranean region, where a degeneration started, a real degeneration, into the beginning of the Renaissance, the 15th Century. So, this period of 17 centuries approximately, in mankind’s history—of European history, in particular—is a period of perpetual degeneration. Oh, some good things were done, but the general course of history was one of degeneration.

Nicholas of Cusa: Modern European Science

Modern European science, as begun with the Renaissance of the 15th Century, created modern science. It was created on certain foundations which are defined by Nicholas of Cusa, principally. And from the followers of Cusa came modern science, and the kind of questions I’ve just put forward. The *increase in population, the increase in population density, the improvement in the quality of existence, the improvement in the condition of knowledge of mankind, since the Renaissance, as a result of the Renaissance, has been the greatest in all human existence*; the highest rate. And it is *this accomplishment* of mankind, of modern European civilization, which these bastards have tried to destroy. And the place they went at it, was the question of ideas, and the issue of irrationalism of all forms, but empiricism most notably, as I referred to that the day before yesterday: That the empiricist view is the view which is the experimental view of statistics and so forth, as it’s taught in schools today and universities today, and practiced in society, today, is a form of insanity which is destroying the human race. And that was intentionally so.

Because, the issue is this. The issue is the nature of mankind. The difference between man and the beast. The followers of the Delphi Cult of Apollo, and similar kinds of institutions, insisted that there is no lawful difference between man and a beast. Now this was a pragmatic decision in part, made by those who wanted to turn the majority of human beings into mere human cattle, who are not allowed to invent things. For example, the prohibition of man’s knowledge of the use of fire, the Promethean issue, is the characteristic feature of European civilization’s degeneracy, throughout its entire history. Reducing man to the likeness to the animal, denying mankind’s ability to discover universal principles, or to change man’s behavior, fundamentally, through the knowledge of and application of universal physical principles.

Like the opposition to nuclear fission, which came out as a characteristic of the Baby-Boomer generation. The Baby-Boomer generation are the people who came with this anti-nuclear idea. It didn’t come from the question of nuclear weapons, it came from the Baby Boomers. And you look at the Baby Boomers today, there are no scientists among them! Or, only with a few individual exceptions. There’re no scientists. They don’t think scientifically. They *hate* science.

You want to see this? Go back to 1968, and look at the streets of the universities, especially the leading universities, and the streets of society in 1968, in Europe and in the United States. Look at it! What did you see? Absolute mass insanity; *Dionysiac insanity*. They called itself the left, but it was actually the far right—it was the fascists. The Baby-Boomer generation is predominantly a *fascist* generation, which reacted like fascists, against the blue-collar population, against the farmers, against the industrial workers, industrial operatives, against science. They operated on the basis of “feeling,” arbitrariness. They were trained in existentialism, the existentialism of that famous Nazi, Martin Heidegger, or his Jewish friends, Hannah Arendt and so forth. They taught a doctrine which was indoctrinated into the post-war population, the *educated* population, or the educated strata of the population: Those born between 1945 and 1958 in particular.

So if you were born in that interval, and you come from the white-collar-oriented background, you are degenerated: You are a degenerate expression, culturally, of the human species. Because you have now *rejected* the principle upon which human existence depends. You have acted in support of the cult of Dionysius, which is a part of the Delphi cult, which is expressed by the Olympian Zeus of *Prometheus Bound*: anti-Promethean.

So, what you had is division between the white-collar ideology of the university youth, from the white-collar generation, against the blue-collar generation, farmers, and industrial operatives, and scientists and so forth.

So, you had a *viciously fascist, anti-scientific mood*, beginning to emerge and controlling the behavior of the United States. This destroyed the Democratic Party as a force, the division between white-collar and blue-collar destroyed the



USGA



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With the generation born between 1945 and 1958: “You had a viciously fascist, anti-scientific mood, beginning to emerge and controlling the behavior of the United States. This destroyed the Democratic Party as a force, the division between white-collar and blue-collar destroyed the Democratic Party!” Left: white-collar office workers, circa 1960; right: a Ford plant in Mahwah, N.J., shut down in 1980.

Democratic Party! And it ceased to be a party of the people, and became an emerging conflict form, in which the so-called upper class, the idiots, the Baby Boomers, dominated the party ranks as a whole.

So, now you have the lower 80% of the U.S. population from that generation, is completely different in its cultural outlook, from that of the upper 20%, especially the upper 3%. The upper 3% and upper 20% of family-income brackets, of that generation, the generation born between 1945 and 1958, is absolutely different, than the parts of the population, born even during the same period.

Now, the way the thing works, it doesn’t work on the basis of each individual as a strict type: It works on the question of group dynamics, in which the characteristics of behavior, that is, when you take an individual aside from the group, they will behave in one way; you put them in the context of the group, the same group on the same question, they will behave differently. When they’re under the influence of the group association, they behave differently than when they behave as individual human beings, where they’re free to think on their own. You see the guy you talk to, outside the classroom, you’re just discussing something, and fine. The minute your reference becomes the university classroom, then you find out, it’s a completely different logic, and he will deny or reject everything he agreed to off campus. This is group dynamics!

And the characteristic of the Baby Boomer is he’s a liar. He’s not a liar because he thinks he’s lying. He thinks he’s being true to his class. He will say, “Well, what is true, after all? One man’s opinion and another man’s opinion. What’s the difference? We all have our opinions, don’t we? We differ in opinions—what do we do? *We get along.* And we accept the instruction given to us by those who have greater power than

we do. We kiss ass.” It’s called dynamics. Group dynamics. Sometimes, it’s called “grope dynamics.”

So, this defines for you the kind of problem we face. That your generation faces; that you and I face: We have a degeneration, an older degeneration—not mine, thank God!—but which was caused to degenerate by coming under the domination of a group within society, which in turn was dominated by this culture, this existentialist culture: which does not believe in a rigorously defined truth, but believes “you have to understand my feelings. You have to understand the feelings of the people I associate with. You have to respond to those feelings. There is no truth. Yes, there is truth, of a certain type—but first of all you have to respond to these feelings!” And you have the “feeling generation”: it’s called the Baby-Boomer generation, they feel everything—especially their neighbors.

So therefore, truth ceases to exist, and in a sense, smell tends to take over.

Baby Boomers: No Commitment to Truth

Now, therefore, you see the conflict. Here you are, you’re in a generation: This whole society’s falling apart. This society is doomed, it’s finished. You see it decaying before your eyes, disintegrating. It’s ruled by a generation which has no commitment to an idea of truth, which is hostile to the idea of science, as you see with the spread of this cult of Global Warming; exhibition of the fact that the whole culture that believes in this stuff, they’re all degenerates! They’re all mental cases, and morals cases, too. They want to kill the human race. “We don’t like this, we don’t like carbon dioxide.” What do you mean you don’t like it? You’re expelling it all the time. And it’s not a very significant factor in the environment, actually, by itself. It’s significant when plants eat it. Plants *love* it. They grab it! “Crunch! Crunch!!”

You want to reduce the carbon dioxide? Increase it. That's how to reduce it. Because, if you increase the carbon dioxide, and you have water and other things around, as well, then the plants will proliferate to get this stuff they like to eat! Because it now comes in richer concentrations, and the plants are ecstatic about that! "Awwrrrw! Rwwrrr!!" And what do they do? They make more plants. And what do they do? They cause a transpiration of moisture in the system, otherwise which doesn't occur. Moisture doesn't just "happen" to the Earth. Moisture is transpired: It's consumed by plant life and it's spit out by plant life. So, it spits out.

So, now you have nicer air, because you add a little more carbon dioxide, and you allowed things to grow. You increased your water transport throughout the system, eliminated deserts and things of that sort, and you made it nicer, and the plants grew! And the world became greener, and greener, and greener! I don't know why these guys call themselves "greenies": They're against green! Call them brownies! Half-baked ones, at that.

Therefore, we as human beings have the intrinsic ability to organize this planet, by understanding how the planet works; how culture works, how the human anatomy works. You want to organize the planet, not just have it in a wild state. We have people in wild states all the time. But by doing that, we actually transform the planet willfully. And by transforming the planet, by growing more trees, by managing the water systems, by managing the atmosphere, and the things that we do, through science and technology, applying these things and producing more things, instead of "blahh"—then we increase the power of mankind to exist, and improve the conditions of life.

Now, that has been destroyed, more or less effectively, by the Baby-Boomer generation's influence. Don't try to dissect the Baby Boomer, you may not like what you find. Take the Baby Boomer as a phenomenon within a social process: The Baby Boomer, as you know the Baby Boomer, is controlled by a social process. It's what others think of them that controls them, especially what they think of powerful influences, which control them. That's what controls them. So therefore, you have group dynamics, which is determined by what the controlling belief is of the group. And the individual in the group, who may have a contrary opinion as an individual, will submit to group behavior, group domination, group control. And that's why you have this behavior of the Baby Boomer. And most of you know it. Most of you are acquainted with



Charma Comer

"By transforming the planet, by growing more trees, by managing the water systems, by managing the atmosphere, and the things that we do, through science and technology, applying these things and producing more things, we increase the power of mankind to exist, and improve the conditions of life." Here, a sprinkler irrigation system in Idaho.

Baby Boomers. Matter of fact, you were raised in households where Baby Boomers were allowed to exist. Matter of fact, they ran these households.

And therefore you know, what the problem of the Baby Boomer is, often by knowing your own parents' demoralization. And how you reacted to peer group responses in the neighborhoods in which you grew up, especially in the neighborhoods which were approved of by your parents. So group behavior controls you, and you were trying to find your meaning in life, within the special domain of this group behavior.

Now, some of you represent those who realize there's something wrong with this whole racket. And that what your parents believed was insane. You don't say it that way, sometimes you do, especially when you're angry at them: "Mother! You're insane!" "Mother, you're crazy!" "Mother, you should marry a toad, you deserve it." You know, things like—kindly. Kindly family reactions of daughter to mother!

So, you know it. But you also know something else, those of you assembled here in particular: You know that *this is insane*. You know the world has to change, to get away from this. Therefore, your concern, if you're not going to go insane, is to define what the change must be. And you begin to find satisfaction, as I've seen you do this, when you get into the idea of discovering something outside Baby-Boomer ideology. Which is called "truth." It's otherwise known as "scientific principle." It's otherwise known as the same issue, the existential issue, which I posed in summary form, on Thursday, in the presentation there.

The Essential Existential Question

Because we've come to a time in the history of the world, the history of the United States in particular, that the existential question, the essential existential question, is the immediate question before humanity: This society, in its present form—though people say, "I gotta save for my future; I gotta save for my retirement." "You're not going to make it, buddy! *Don't worry about it! Spend now!* Retirement will never come. You won't get that far—not the way things are going now!"

They say, "No, no, no! We're saving for our retirement."

Hah! Retirement from what? To what?

So therefore, you have a sense that there is no future, in the society the way it's operating. And all the evidence of experience proves that. For example: In Western and Central Europe, there's not a single nation that has a government. There are things they call "governments." For example, take the case of Germany: Germany is probably the most approximately governed nation of Western and Central Europe. For example, it's opposition in Germany, today, over the objection of the rest of Europe, its objection to this system of globalization, with hedge funds, for example. The only nation in Western and Central Europe which is resisting the hedge funds systematically, as a matter of law, of the national will of the government, is Germany. No other government is actually seriously resisting it: that's a matter of fact, right now. Every other government is not.

Most governments of that type are going along with a potential war with Russia, and other nations—China and India; especially Russia and China. They're going in that direction. Most of Western Europe—there's not a competent government in any of them. You see, in the case of Germany, you take the contrast between what Germany's position was under the recent Schröder government, and what it has become under the successor to the Schröder government—a government which has gone from potential to impotence; a government which has gone from an orientation toward bringing European nations together in cooperation around things like power, distribution of power, and generation of power, into the directly opposite things. You have a government, which, although the Green Party is disintegrating, it's disintegrating because the principle of the Green Party has taken over most of Europe, in the form of the global warming hoax, and similar kinds of things. So you don't need Greens any more. You don't need degenerates, when the whole population is becoming degenerate, when the whole system is becoming degenerate.

You see in the United States, you see the *absolute impotence* of the Democratic Party! The Democratic Party had a victory in the midterm election, a victory which *we* played a crucial part in making possible. And I personally was involved in doing that, by our defense of Social Security: I stimulated the organization of the defense of Social Security—I, personally. And the leadership of the Democratic Party accepted my leadership, on that issue. And mobilized. They defended the

Social Security system, and vigorously, in 2005, during which time I was treated as a hero. Even though it was reluctantly, but nonetheless, I was treated as a hero. But then, at the same time, when I warned that we're going to lose the auto industry, and we're going to lose our national independence, they did *absolutely nothing!* to defend this capability—this capability, which is lodged within the auto industry, not just the auto industry itself.

They did *less* than nothing! They accepted the hedge fund raid against the nation. They accepted the continuation of this illegal, immoral war in Southwest Asia, and its spread. They allowed an inhuman ape, Cheney, to dominate the United States, to dominate its politics. The Democratic Party, which once it got into power, proceeded to *betray everyone who voted for it!* under the present leadership.

What're you looking at? You're looking at a Baby-Boomer phenomenon, in Europe, and the United States, and elsewhere: the Baby-Boomer ideology.

What is the Baby-Boomer ideology associated with? It's associated with the group in society, which is the upper 3% of family-income brackets. These are the multi-billionaires: the guy who flunks the management, and gets out with a golden parachute with a billion dollars or something, that's paid for at the expense of the rest of humanity. You find a decreasing level of income of the population; you find a decreasing level of productivity in every region of the United States, of physical productivity; a decadence which is impossible. We find that more money is being printed than anyone can count, which means that the whole system is bankrupt: The entire world system, including the United States itself, is hopelessly bankrupt. And somebody's saying, "What about my money?" Hah! Your money! Toilet paper is more useful than your money. And we know how to use it. Save the cost of toilet paper. (Except it's electronic in form, and that's a very unpleasant thing to use.)

Sight and Hearing: The Paradoxical Conjunction

So, it comes back to this existential question, which I posed on Thursday: The existential question is, what is the nature of mankind? What is human nature? What is the function of the human being, the principal character of the function of the human being in the universe?

Well, that's what we're doing in *The Basement*: is applying the exploration of the discovery of physical principles, on which the universe's management depends by human beings. And conjoining that together with music, in the sense of the Bach choral tradition. And combining the two together, to bring the senses of sight, and senses of hearing, into conjunction, into paradoxical conjunction. And it's as the person going through the music work, who's coming from the scientific work into the music work in the same period, coming and finding out that you can not sing effectively, in the way you would think, if you governed a musical performance by visual



EIRNS/Brian McAndrews

Combining the discovery of universal physical principles—real science—and music, in the sense of the Bach choral tradition, “to bring the senses of sight, and senses of hearing, into conjunction, into paradoxical conjunction.” In this photo, the men’s section of the LYM chorus performs a Bach motet.

standards, mathematic standards. Doesn’t function. And it is by seeing this contradiction, and experiencing this contradiction, that you are aided, in getting free of sense-certainty, the notion that what you see and what you hear, and above all what you smell, is the reality of your existence; and in seeing that there’s something else outside this apparent reality, which is distinctively human: the human ability to rise above the limit of the senses, to recognize in the *contradictions* among the senses, and through experience, to recognize that the human mind has an engagement with the real running of the universe.

And thus, you get a human being, who is characteristically immortal. Because the part of the human being that dies, which must die, is the biological part of the human being. It passes on. But the impact and the role of the human being does not vanish with the death of that individual. The individual is the purveyor and conveyor and generator of discoveries of universal physical principles, and of *ideas related to those discoveries*, which shape and reshape society, so the society is organized in a new way, as a result of the role of such individuals in society; and such individuals in society, who reorganize society! To get it to abandon its insanities, to come, not to sense-certainty, but to a certainty about the nature of the universe, and a certainty about the role of man in the universe, a sense of the Noösphere: Such individuals are immortal, because the discoveries they contribute, whether fundamental discoveries or related things, become *embedded in the culture*, as the contribution of individuals. Try to trace out any contribution in art, or science, and so forth—try to trace it out, and you find always, the

individual’s role is unavoidable, can not be excluded!

And thus, the individual is immortal in that respect. Because they may die, but what dies is the animal within the person. The person, if they are valuable, if they are contributing, lives on. We know this in the sense of great scientists and others, great artists and others, whose influence radiates across generations! We know this most immediately in terms of three or four generations of experience, because we live in the middle of experiencing simultaneously, representatives of four successive generations. That’s the nature of our society. We can recognize the differences that occurred in the development of the society over the span of these successive generations.

We can go from that, to looking at history more broadly. We can look at various branches of human culture, across the waters, across borders. We can look back further, into earlier generations, centuries

before. We can trace the development of these ideas on which society develops, which exist within us as part of our accessible experience. And we see that it is the selection of that which is precious, in that process of development, which must go forward and must live. And it’s in *that* part of our life, in our determination to express *that*—into a future which exists beyond our death: *That*, is the meaning of human life.

And what I raised Thursday, by using the example of the orbit of the discovery of gravitation by Kepler, as an example of the role of the infinitesimal: It is this conception of the infinitesimal, as applied more broadly, and the notion of principles of organization of society, as based on understanding of these infinitesimals, that is where the hopeful future of mankind lies.

And the problem that you have, in your generation: You are young adults, where an older adult generation has failed, existentially. There may be individuals in the older generation who have not failed, but the generation as a whole, especially the white-collar generation has failed. They’ve failed catastrophically.

Your job, because you are receptive to these ideas of principle, to the notion of the individual as immortal, an immortal personality, despite the death of the mortal body, is *your* destiny, and your responsibility to guide the changes which must occur in society, if society itself is to survive. And therefore, your generation has a unique historical role, in the existence of mankind as a whole.

And to understand this in yourself, and to see your identity as so situated, is my mission for you.

Thank you.