

LaRouche's Concept of the Significance of Art for Science, and Science for Art

This is an edited transcript of Bruce Director's address to the Schiller Institute conference in Morristown, N.J., on Feb. 16, 2019. Mr. Director is a long-time associate of Lyndon LaRouche and is currently Secretary-Treasurer of the U.S. Schiller Institute.

It is fitting to give a presentation about science on a panel dedicated to art, because the source of both, and the subject to which they are ultimately directed, is the same: the creative powers of the human mind. Human progress has been, is, and always will be dependent on the irreversible increase in the power of human creativity, and thus there must be art in science and science in art, if Mankind is going to survive and progress. When these two, science and art, become separated, mankind faces the kinds of difficulties that we face today. When they are united, you have the unlimited potential for development.

No one can guide us better in this respect than Lyndon LaRouche. He delved more deeply into the



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nature of creativity—he called it, “creativity per se”—than anyone ever did before. He proved and elaborated how human creativity is the ultimate sum and substance of society, as reflected in physical economic progress and man’s increasing mastery over nature. Mankind is demonstrably capable of creating new forms of physical existence and social organization that reflect the result in an increased power of human creativity. This power reflects the fundamental ontological characteristic of the universe as a whole, which is manifest in all its domains—life, non-life, and cognitive processes.

LaRouche showed us, this is expressed in the development of his concept of physical economy—or, human economy, as distinct from the financial, behaviorist, mechanistic concepts of economy; but rather real human economy, which is the only real economy—and he rightly called this the “king of all sciences.” Here, for LaRouche, human creativity is the source of eco-

conomic progress, and it's measured in the increase of potential relative population density, and also the output of all economic process. He once drew a very beautiful chart of the machine-tool principle, in which the input was the power of creativity, and the output was a higher power of creativity, and that sums up *real* economics. He developed this subject in such detail, it would be impossible to even attempt to give you an in-depth picture in such a short presentation.

Creativity Per Se

But I want to focus on one concept which will be relevant to the subject of this panel, and that is this question of potential. It's not the population density, or the relative population density that LaRouche focussed on as an economics parameter, but the *potential* relative population density—not what is, but what can be. As LaRouche showed, the increase in potential relative population density occurs through an increase in the power of human creativity, which is in turn reflected in an increased power of human creativity and a greater population density.

I am using the terms “power” and “potential” interchangeably, because they both are derived from the Greek word *dynamis*, which Plato discusses in his *Meno* dialogue and other places, as what is the central focus of human intellectual investigation. That is, it's an immaterial power, which actually produces and creates and is, the significant subject of all investigation of physical effects. The great physicist Max Planck told us that after studying matter for his entire life, he came to the realization that matter doesn't exist. That what exists is the power to create matter, and that this is what science must turn its efforts toward investigating.

We interact with this power, this creative power, by experiencing its effects, and we can measure those effects, and investigate this power. But we can also investigate it directly through experiencing creativity ourselves. And that brings us to the subject of art. Nicholas of Cusa called the investigation of this power, the “Summit of Vision.”

Another aspect of this power, which brings science and art together, was touched on by Megan Beets in great detail, and even by Mr. Binney in the earlier panel. That is the question of emotion. You cannot separate science from emotion. Show me an unemotional scientist, and I will show you a dead soul. Tell a scientist that Newton is a fraud, you will get a lot of emotional reaction. [laughter]

A dispassionate, logical scientist may be a comput-

ing machine, but is not a scientist. Hence the foolishness of so-called “artificial intelligence,” which as Mr. William Binney showed us, is neither artificial nor intelligent.

This characteristic of creativity, which we experience in human creativity, and know its demonstrable effects through the increase in potential relative population density as expressed in real economics, is not simply a human characteristic. It is an ontological characteristic of the universe itself. And this is where we get to the nub of what the frontier of science has to be and what is absolutely the most important subject for scientific investigation. And why we have to have a massive investment in development in space technologies, fusion power, and all the kinds of scientific and technological investigations that LaRouche has advocated.

In other words, to put it in a way which might cause an emotional reaction from some scientists, the Second Law of Thermodynamics is not a universal law. The entropy of the universe is not increasing. It's not tending towards heat death. In fact, the characteristics of the universe are exactly the opposite. If one looks at *anywhere* in the universe, whether it's physical processes, living processes—we heard a statement from Lyn earlier talking about evolution—it's always tending towards higher states of organization in existence, higher development, higher principles, higher organization of physical processes, of solar systems, of galaxies, of planets, of new forms of material. And of course, in the hands of man, this even accelerates further.

As LaRouche wrote in a 1986 [memo](#), Lyn described it this way:

The physicist urgently requires that the methods proper to the physical sciences be experienced as the essential feature of some aspect of classical art. Once the student of physics, for example, has discovered that the principles of Beethoven's method of composition are in correspondence with nothing less than the principles of a Riemann Surface, the student must sense the richness and universality of those principles. This sort of experience is indispensable to making professional work in physical science sensed as an occupation of the whole person. It is indispensable to true rigor in the physical sciences, to the effect that all that is relevant to the existence of mankind, and of mankind's development must be brought to bear on the practice of the physical sciences.



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John Sigerson conducting Beethoven's Choral Fantasy.

The Unity of Art and Science

So if we see art and science both as the servants of creativity, then we can begin to arrive at a true standard for both. Art serves to explore and express human creativity, itself, while science seeks the same as reflected in the physical universe as a whole. Philosophy, as Lyn practiced it, deals with both.

All art requires the creation of a means of expression suitable to expressing creativity, whether it is the principles of *bel canto*-based well-tempered polyphony, the creation of new forms of language through poetry, or principles of perspective, design, light and so forth in the plastic arts. The mere fact that man can bend such non-human features of the physical universe to express creativity, itself, in my view is a demonstration of LaRouche's principle that creativity is the everywhere pervasive characteristic of the universe.

This is, of course, a very deep subject, and would require a tremendous amount of effort to demonstrate in rigorous detail, but I don't have to do that today, because in a few minutes you will see it demonstrated. You will be hearing a wonderful composition by Beethoven, the *Choral Fantasy* for piano; orchestra of strings, winds, and percussion; vocal soloist and chorus—the entire panoply of the musical domain. Each of these elements in the musical domain is constrained by their own physical characteristics, and in the case of the singers, biophysical characteristics. LaRouche spoke about this in great detail, and commissioned the production of several music manuals, and wrote about this in detail, some of which you can read in the last few issues of *Executive Intelligence Review*—some of LaRouche's 1986 memos have been published by there, in which he discusses this in scientific, rigorous detail.

The sounds, as he emphasized, that you're going

to be hearing are not created by physical characteristics. These are the result of the creative powers, and in this case, the collaborative creative powers of all the musicians who are participating in this performance, with Beethoven himself—a re-creation of creativity itself.

This kind of process, this kind of actual, real physical process cannot be captured by any mathematical expression, or algorithmic expression, or any digital process. It is a uniquely human characteristic.

You will hear in this piece the opening chords of the piano, stating potential—power. And then you will hear the piano develop that power, and then restate it with a higher power. And then, this will be further developed by other parts of the orchestra and soloists, going from the different sections of the strings, to the winds, to the vocalists, and so on. Listen carefully, as you hear this development.

And then it will culminate with the final couplet:

*Wenn sich Lieb und Kraft vermählen,
lohnt den Menschen Göttergunst*

When love and power are married
God's grace is bestowed on mankind

And you'll hear in the performance, the word "*Kraft*," repeated three times, each with greater power, and this is the "power" I spoke of earlier, the power of creativity *per se*.

What you will be hearing is not only a great work of art. You will be hearing a statement of a scientific truth, a statement about the real nature of mankind. And when science accepts this, we can have unlimited progress.

Thank you.