

# 13

## A self-conscious scientific method

In light of what we have just said about self-consciousness's role in this process, several points should be made respecting the nature of an adequate, i.e., rigorous, scientific knowledge.

First of all, it should be apparent that it is on the third of the three levels indicated, that creative reason is consciously located as both subject and object of consciousness.

The first level being the notions of causality associated with experience, as a causal notion of experience, as opposed to, simply, a perceptual one (which we deal with as somewhat below the dignity of the term consciousness). This includes the consciousness of the existence of *self*, as an actor in the causal sequence. All of that lies on the lowest level of self-consciousness.

The second level of consciousness is better called the simple Socratic consciousness, in the sense that we are aware



*Benjamin Franklin's crucial experiment on the nature of electricity, with the Leiden jar. "What we do, properly, is to design experiments to bring forth, predictably, the anomalous kind of event, with respect to existing mathematical physics, to demonstrate that this predictability is accomplished, by allowing a different axiom or hypothesis, for example, than exists in the generally accepted mathematical physics."*

that a deductive or formal reasoning (or linear reasoning, which is the same thing as deductive reasoning), is always governed by one of a possible set of axioms and postulates, such that these axioms and postulates taken as a set, anticipate every theorem which might be attached to a lattice based uniquely upon that set.

This relationship is called the *hereditary principle*, and no theorem respecting experience, that is, no notion of causality, including the relationship of self within the causal process of simple consciousness, can be reached except as in terms of expressions of theorems consistent with, in the simplest case, a specific set of axioms and postulates, or with a specific theorem of that set.

Thus, the second level: The notion of an array that we can go from one set of axioms and postulates, to another set of axioms and postulates, and that the theorems generated by, say, set *A*, are never consistent with any of *B*, and so forth. But, we are aware there is a connection between *A* and *B*; we are aware of a kind of mathematical discontinuity, separating one set absolutely from the other in terms of being mutually inconsistent.

This enabled us to see the third layer in the ascending rank of consciousness. In this, we are focused, not on a successive layer of mathematical sets; but, we are, rather, concentrated on the process by which possible such sets may be ordered to represent an ordered series: an enumerable series, in terms of a generating principle, such that the sets proceed from relatively lower or higher order, when the measurement of lower to higher is the increase of the per capita reproductive potential of the human species.

It is on that third level that we locate the action, which constitutes creative reason as an object and subject of conscious thought. In general, except as we imply a fourth level, which is the consciousness of this, such as the notion of universality, this is the nature of possible conscious human thought.

The question arises: To what degree is this subjective? That is, to what degree does the thinking, as in scientific knowledge, defined so, in terms of these three levels, by human beings, constitute a true science? An interesting proposition. *To what degree would a different species, presumably with a comparable intelligence, think quite differently?*

In general, we would have to say, with respect to the third level, not necessarily the first level: "They could think no differently: Otherwise, they would not be equal." The human species has an indefinite potential for increasing its equivalent of its reproductive power. That does not always mean that this increases the total number of persons; but it means that the equivalent of the power to increase the total number of persons is always there. It may be converted into some other expression; but it is there. So reproductive *power* refers, not to the reproduction of the *number* of persons of the human species, although that is implied; but, rather to the condition of the species as a whole, with respect to the

universe as a whole. Both productive power and reproductive power are subsumed notions of this *power*.

But in terms of the creative principle, if we can postulate, or hypothesize, different species, which have intelligence comparable to the human species, but might have all kinds of other differences; they might differ, in respect to the first level of consciousness, but they could not differ, essentially, with respect to what we have indicated as the third level of consciousness.

So much for that preliminary observation.

Now let us see what we are really saying.

First of all, the general condition we are referencing, as outlined in *In Defense of Common Sense*, indicates that simple empirical knowledge is not knowledge, nor is it scientific knowledge. That does not mean that simple empirical knowledge is irrelevant; it means it is not scientific knowledge; it is merely a device which plays a part in the development of scientific knowledge.

The interesting part, which goes back to the change/no-change proposition, is: The most important thing about empirical knowledge is the extent to which it is or is not, in Kant's terms, possibly anticipated as synthetic *a priori* knowledge.

For example, anything outside an accepted theorem-lattice which could be predicted by a mathematical physics without experiment, would be analogous to something synthetic *a priori* in a Kantian system. Then, what would be of interest to us in a such a mathematical physics, for example? In all cases, from a scientific standpoint, we would only be interested in determining, given any array of events, or individual events, which of these arrays or individual events, conformed, predictably, to synthetic *a priori* extrapolations from a given set of axioms and postulates; and which did not.

The only thing of very much interest to us, would be the situation in which some of the events did not correspond: were, in those terms, anomalous.

So, *the variable rate of occurrence of anomalous events, with respect to all events*, including the non-anomalous, is the kind of event in which the well-advised scientist is interested primarily.

So, in that respect, empirical experiment plays an essential part in scientific knowledge; but it is not the substance, directly the subject or substance of scientific knowledge.

What we do, properly, in design of experiments, is to design experiments to bring forth, predictably, the anomalous kind of event, with respect to existing mathematical physics, to demonstrate that this predictability is accomplished, by allowing a different axiom or hypothesis, for example, than exists in the generally accepted mathematical physics. The occurrence of that which is absolutely anomalous, with respect to currently accepted mathematical physics, but which is allowed by a different hypothesis, constitutes what we call, sometimes, a *crucial experiment*. And, thus, science is based, essentially, on a Socratic doctrine of

hypothesis, or at least that is the proper representation of scientific activity, whether some scientists recognize it or not.

This brings us directly into the main subject matter of *In Defense of Common Sense*. Science is concerned, in terms of reference modeled upon the idea of crucial experiments, to discover the discontinuities, which compel us to overturn axiom and theorem-lattice *A*, in favor of axiom and theorem-lattice *B*, and so forth and so on.

Thus, we are forced to level three in consciousness. Rather than just saying that we have to change from *A* to *B* in some undetermined fashion, we say what we are concerned about fundamentally is that which is crucial-experimentally right, which confirms an ordering principle which will enable us to say, with crucial experimental authority, that *B* is greater than *A*, and *C* is greater than *B*, and so forth and so on. The concept of that ordering principle, as itself the only axiomatic of mathematical physics, would be mathematical physics on level of consciousness three, the third level of consciousness. An awareness of that may be seen as analogous to a fourth level, which is the kind of thinking we are reflecting, or Cusa is reflecting, and so forth, in dealing with these kinds of matters that we are addressing now.

Thus, we come to the next point.

So, the human mind is incapable of scientific thought, or actually classical artistic creative thought, *except* in these terms of reference.

Our definition of an object, the ontological features of axiomatics of our knowledge, are all referenced to this level three of consciousness, as we have defined it, immediately here, or just loosely described it here. Therefore, first of all, this is the only apparatus by which we could have scientific knowledge of our universe. Only from this Socratic standpoint is a rigorous mathematical physics possible, for example.

The question is, then: "Is this merely a projection? a stereographic projection, so to speak, from one geometry into the geometry of the brain; the geometry of the other, to the geometry of the brain? If we have a different geometry of the brain, would a different perceiver, having that different kind of geometry of the brain, get a different stereographic projection of reality than we do?"

Not really. Not in terms of third level of consciousness; he couldn't. Because the crucial experimental approach associated with level of consciousness three, is crucial-experimental with respect to the real universe. So, in terms of the ordering principle, it is only on level three of consciousness, that the ordering principle of the mind, and the ordering principle of the physical universe, come into agreement. And there, the agreement is not merely the stereographic correspondence; there, the agreement is actually an essential identity, so that any other species of creature, which is intelligent, in the sense of the human species being intelligent, would, in terms of this third level of consciousness, have a mind

exactly like that of our best scientists, our best musicians, and so forth.

Furthermore, that being the case, that implies that our mind, in these terms of reference (not in terms of simple perception), is a representation of the lawful ordering of the universe. That the laws of the mind, when seen in this frame of reference, are essentially the laws of the universe. Not perfected laws of the universe, but imperfected laws of the universe. But the laws of the mind, insofar as they govern our mental processes, on the third level of consciousness, *are* the laws of the universe. Even though what happens on our third level of consciousness in terms of particulars, and its derivatives, may not be perfect, yet the principle which governs that progress in the mind, is a perfect principle.

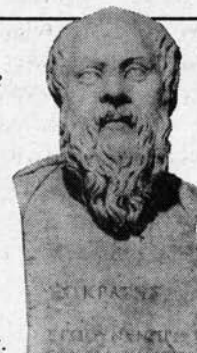
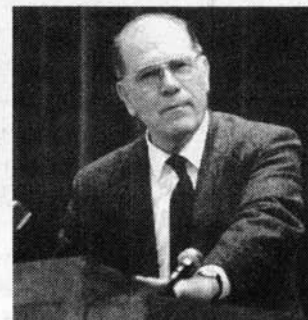
Similarly, in the universe. The principle which governs the development of the universe, the negentropic development of the universe, is a perfect principle. And these two perfect principles are in agreement. And that agreement pertains to the notion of *imago viva Dei*. That is the best of all possible worlds.

*'From the prison in which the politician's career expires, the influence of the statesman is raised toward the summits of his life's providential course. Since Solon, the Socratic method has become the mark of the great Western statesman. Without the reemergence of that leadership, our imperiled civilization will not survive this century's waning years.'*

—Lyndon H. LaRouche, Jr.

## IN DEFENSE OF COMMON SENSE

by Lyndon H. LaRouche, Jr.



Available for \$5 from:  
Ben Franklin Booksellers  
27 S. King St.  
Leesburg, Va. 22075  
Telephone (703) 777-3661

Postage & Shipping  
U.S. Mail: \$1.50 + \$.50  
each additional book.

UPS: \$3 + \$1 each  
additional book.