

Poetry must begin to supersede in physics.

Computations in coming together

EDITOR'S NOTE

It is most appropriate that we lead off the second year of Fusion's publication with some of the best fusion news in recent years and with this theoretical article by Lyndon H. LaRouche, Jr.

The recent Princeton breakthrough and the impressive lineup of fusion breakthroughs expected in the next weeks have made us even more aware of the major task of Fusion magazine: educating scientists and potential scientists to make full use of their creative abilities for generating an increasing rate of discovery. How to do this is the question LaRouche addresses.

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Fusion welcomes comments on science and epistemology from other public figures.

THE COMING, QUALITATIVE ADVANCE in outlook upon physics will begin to occur soon, and will be aptly described as the emerging hegemony of the principles of the Neoplatonic science of poetry within the so-called physical sciences. We shall begin to accomplish what the followers of the cult of Apollo and of Francis Bacon have always been terrified we Platonics-Neoplatonics might succeed in accomplishing. Poetry will rule science.

For purposes of reference, I select two features of the recent year's published work by Dr. Steven Bardwell. First, I refer to Bardwell's formulation of the way in which plasma phenomena such as solitons divide inorganic physics into two distinct, multiply connected subdomains.* These domains are causally linked in the practice of experimental plasma physics and are otherwise mutually efficient. However they are respectively so ordered that the mathematical determinism of the lower domain does not accompany causality in the emergence of the higher domain. Second, I refer to the recently published treatment of the many-body problem.** Whether or not Bardwell was thinking of this implication as he wrote, the approach to the use of phase space he employs is a proper borrowing of little-understood principles of the Neoplatonic science of poetry.

I now turn the reader's attention to several writings of the past 12 months interval in which I have treated the proper distinctions among the domains of knowledge corresponding presently to "inorganic physics," "organic physics," and "reason"—which I have denoted, respectively, by the transfinite denotations "n," "n+1," and "n+2."† I also refer to two of my recent writings in which I have treated Edgar Allan Poe's conception of poetry and Neoplatonic method.‡ I propose to outline now the direct connection among Neoplatonic poetry (for example, Dante and Petrarch), the double-fugal method of contrapuntal development exhibited by Beethoven, and the proper application of poetry to the so-called physical sciences. I shall make this connection by focusing on the relevant aspects of the preconscious processes of the

The reader must emphasize what I have outlined previously concerning the most accessible empirical features of the preconscious processes. I have emphasized, first, the point in the process of recollection in which memory has not yet seized upon the name of the thing being recalled, but has that thought nonetheless "on the tip of my tongue." It is the form of preconscious thought so empirically accessed that is the easiest first step in study of preconscious processes—the most accessible aspect of preconscious psychology.

At this level, we study the way in which preconscious conceptions act as transfinites, such that they are associated implicitly with alternative communicable predicates, each predicate appropriate to the conjunction of the preconscious thought with either another preconscious thought or a definite circumstance of practice. The operation known as deduction depends entirely upon the way in which preconscious transfinites are linked to their associated arrays of communicable predicates. The second, next-higher order of inquiry into the preconscious focuses upon the condition of problem-solving in which a person has a correct solution, original to his or her experience, "on the tip of my tongue." This latter is a preconscious act of insight, as formally distinct from a preconscious act of recognition (memory).

This aspect of knowledge is essentially very ancient and is recorded in medieval studies of the "arts of memory." One can make no proper sense of Giordano Bruno's work on the "arts of memory" unless this content and purpose of the matter is the point of reference for study.

In first approximation, preconscious thought is unutterable, as distinct from the utterable, conscious predicates of conscious thought. One can identify a nameless preconscious thought in communication only indirectly, by listing sufficient of its diverse, logically unconnected, conscious predicates to suggest to the mind of a reader or listener that only the preconscious conception corresponding to that logically ambiguous array of conscious predicates is intended.

That principle is the essence of poetry. Poetry is not

* See Bardwell's series of three articles, "Frontiers of Science in Plasma Physics," *FEF Newsletter*, Vol. I, no. 6 (June 1976); "The History of the Theory and Observation of Ordered Phenomena in Magnetized Plasma," *FEF Newsletter*, Vol. II, no. 2 (September 1976); and "The Implications of Nonlinearity," *FEF Newsletter*, Vol. II, no. 2 (March 1977).

** "Solving the Three-Body Problem," by Steven Bardwell, *Fusion*, Vol. I, no. 8 (June 1978).

† See, especially, "The Secrets Known Only to the Inner Elites," *The Campaigner*, Vol. 11, nos. 3-4 (May-June 1978). For an early treatment of these transfinite denotations, particularly as they relate to music and poetry, see "The Science of Music," *New Solidarity*, Jan. 20, 1978 and Jan. 24, 1978.

‡ "The Clinical Significance of Poe's Critics," *New Solidarity*, May 23, 1978 (Part 1) and May 25, 1978 (Part 2). See also "Poe's Conception of Poetry," *The Campaigner*, Vol. 11, no. 6 (September 1978).

†† I could also include an account of the notion of the consubstantiality of the Trinity as put forward by Plotinus et al., but that would be perhaps a bit much of a strain for most readers at this point in the

Mind

properly symbology, or any sort of ambiguity that uses one literal form of expression to indicate merely another literal form of expression. The ambiguity intrinsic to true poetry identifies the function of poetry as that of definitely indicating the preconscious conception that corresponds to such a logically inexplicable array of communicable terms. Edgar Allan Poe is explicit, and correctly so, in explicating the method of composition of "The Raven" according to such poetic principles. *There is no "Lenore" in fact—just as an existent "Beatrice" or "Laura" have no significance for the actual content of the poetry of Dante or Petrarch.* These are predicates, combined with other predicates, *configured poetically* to reach past ordinary consciousness to a definite preconscious conception in the mind of the audience.

The same Neoplatonic principle of poetry is expressed in a concentrated way by the principles of music running through Al-Farabi, John Bull, Bach, and Beethoven. First, the notes in themselves are of no literal significance. Rather, linear configurations of notes correspond to preconscious musical ideas. The contrapuntal development of these configurations produces altered musical (preconscious) ideas, which are essentially in a preconscious process relationship to preceding musical ideas. The listener knows that he has reached a musical idea corresponding to Beethoven's intent if the stretto or strettolike elements of the composition as presented conform, as an array of predicates, to the preconscious musical idea the audience is intended to reach through experiencing the composition as a whole.

Then, using that agreement in musical conception as a reference point, the audience's mind runs through the entire composition once more, now from the vantage point of "understanding" the stretto preconsciously. The musical composition is not, however, the stretto, not merely a way of getting to the stretto as a musical-idea resolution. The stretto-idea serves as a crucial keystone for assimilating the process of development represented by the composition as a whole—as a preconscious musical idea.

It is for that reason that the late Wilhelm Furtwangler was a relatively great conductor, and Herbert von Karajan bereft of actual musical thinking in his mode of conducting. Furtwangler conducted by reading "between the notes," by performing the composition according to the musical (preconscious) ideas in a process of development. Karajan has aimed at "Prussian" reading of the literal score. Furtwangler's conducting of Beethoven is "alive"; Karajan's conducting presents us with the canonically arranged corpse of Beethoven. The late Arturo Toscanini,

although not as unpoetic as Karajan, nonetheless erred in the same general direction as Karajan by comparison with Furtwangler. In Karajan's conducting, there is no poetry, and hence no music.

We have stated that *in the first approximation* preconscious conceptions are not of the form of utterable, communicable, conscious conceptions. This does not imply that they are not capable of *being made conscious* in the second approximation. By giving a name to an abstract (preconscious, transfinite) conception, the name of the conception becomes utterable. It is merely necessary that the persons who agree upon that name make such an agreement under conditions in which the corresponding preconscious conception is known to be present as an empirical object of reference in the mind of each. After that, the named preconscious conception is called forth by its name. It is now *abstract conscious* thought, of the sort employable for mental operations of deduction.

For example, the universal "brother." Brother is not an intrinsic quality of a person as an individual person. From the standpoint of mere deduction, there is no existent reality corresponding to the transfinite conception (abstraction) "brother." Rather, "brother" is a transfinite that defines all its specific predicates ("that is my brother," "that is his brother") in a well-ordered way. From the standpoint of rules of deduction, deduction (deductive consciousness) does not know the existence of "brother" as an actuality, but knows only the procedures under whose governance a specific person is or is not a predicate of the abstract notion "brother." There is also a higher abstraction for the name "brother." The quality of relationship preconsciously associated with "brother" in its first-order usage can be meaningfully extended (named) to persons not "brothers," such that one can include "John's sister" under the ethical relationship of "brotherhood."^{*}

In the given illustration, the significance of the abstract notion "brother" rises in order of notion by *metaphorical* steps, each of which is transfinite with respect to the lower-order notion. Thus, "brotherhood" is a higher-order notion than "brother," and so forth. Hence, contrary to a philistine tradition, the sort of punning enjoyed by William Shakespeare pertains to the highest form of humor, not the lowest. A pun is good or bad as it does or does not depend upon a metaphorical connection. If the former, it reflects the highest intellectual order of humor; if otherwise, it reflects sophisticated banality.

Metaphor is the predominant practice by which we select appropriate names for preconscious notions brought into the domain of abstract consciousness. The employment of phase-space notions in Bardwell's treatment of the many-body problem is a form of such uses of metaphor, as

^{*} Radical feminists and others might object foolishly to that latter extension of the notion of "brother." Yet, few sensible women wish to be treated as "sisters" in the way many cultures define the state of women. Rather, they demand the status of "brothers." To demand a "sisterhood" among women means, in most prevailing cultures, to institutionalize the inferior ethical status of women in those cultures.

is the use of phase-space notions as a means for dealing with so-called imaginary and complex numbers.*

The activity of science is both the constant production of new preconscious conceptions and the naming of these newly created abstractions in such a way that deductive forms of analysis and ordering of predicated experimental and related practice can incorporate these new notions to the effect of establishing logical consistency within the body of scientific practice so transformed. In this crucial, determining aspect of scientific work, we are confronted with two principal sorts of problems. The first class of problems is that of educating the scientist (and prospective scientist) to be able to marshal his creative-mental potentialities to effect a high rate of fruitful discovery. The second class of problems is defined by the inability of the deductive systems of thought to incorporate fully the essential features of a valid preconscious (that is, scientific) conception.

With respect to the first class of problems, the principles of Neoplatonic poetry are the exemplar of the developed means for making the person willfully conscious of his or her preconscious creative processes. Training in the arts of memory, along the lines modeled by Giordano Bruno, is the background for this. Poetry of the type associated with Dante and Petrarch, and Poe's "The Raven"—is the practice of the combined, willful preconscious powers of memory and insight. A scientific education based on these principles is the key to fostering a higher ratio of fruitful creativity among potential scientists.

With respect to the second class of problems, the difficulty is axiomatic. No deductive system can adequately represent the kinds of notions that, for example, lie beyond Bardwell's outline of the causality and determinism problem in plasma physics, or in his approach to the many-body problem. Looking at both illustrative cases from the vantage point we are advancing here, the "genetic" connection among the preconscious conceptions behind both cases ought to be clear. To go directly to a point to be explicated, the preconscious ordering of scientific conceptions does correspond to the underlying lawful ordering of events in the universe, whereas the deductive reflection of those conceptions, such as axiomatic mathematical methods, does not. The limits of mathematical physics, as we presently define it, is not a matter of the limits of refinement of human experimental knowledge of physical processes. The limit for deductively ordered knowledge is the "region" of physical process-reality in which the axiomatic mathematical (deductive) ordering of process-conceptions loses practicable correspondence with the real process under investigation.

For example, the Copenhagen doctrine respecting so-called uncertainty. The problem of "uncertainty" does not exist with respect to experimental physics, but only with respect to mathematical physics practice as heretofore axiomatically defined. What Niels Bohr and others did, in fact, was not to announce a discovery, but to shriek like Dionysian maenads against the thrusts provided by Erwin Schroedinger, de Broglie, et al. By accepting the para-

doxical evidence respecting the electron, and so forth as "particles"—"wavicles"—Schroedinger and de Broglie arranged the existing evidence and direction of further hypothesis and experiment in the course suitable to future progress in overcoming the inability of any axiomatic deductive system to deal with crucial phenomena at "the edges" of multiply connected domains. While the work of Dr. Winston Bostick, et al., respecting a nonparadoxical model of the electron is thus far only a useful working hypothesis,** it does illustrate the importance of the direction taken by Schroedinger and de Broglie in enabling future scientific progress. Bardwell's overview of that same matter points in the direction of such solutions.

This is precisely the methodological problem I confronted constantly in political economy (and other spheres), and the point acknowledged in at least a negative fashion in Rosa Luxemburg's ridiculing—in her *Anti-Kritik and Accumulation of Capital*—of the notion of extended reproduction outlined in the concluding chapter of Karl Marx's *Capital*, Volume II.† By 1952, I already had the germ of the solution to the entire problem, but required the aid of Cantor to appreciate the implications of Riemann's work before being able to make the preconscious notion of a solution efficiently conscious.

As I have indicated in other locations, political economy is the highest form of scientific knowledge—on condition that political economy is defined as I have defined it.‡ I summarize that proof here since it bears directly on the authority of our progress for the so-called physical sciences.

Political Economy and Preconscious

The very nature of the quality of isolated experiments, as the "null hypothesis" prescribes, prevents us from attaching the value of certainty to any sort of statistical results from ordinary isolated experiments. Only experiments that, by their nature, test the laws of the universe in a crucial (unique) way provide positive knowledge. Where statistical methods of design of experiments succeed in isolated experiments, this is because the design of the experiment is governed by general principles adduced from crucial experiments. Does the isolated case perform in a manner consistent with those principles of causal relationships as determined through crucial experiments? Is the consistency of scientific knowledge as a whole maintained in each aspect of practice?

On such grounds no existing body of scientific knowledge, in the sense associated ordinarily with textbook knowledge, has any secure authority in itself. Indeed, in the final analysis, all such knowledge is intrinsically fictitious (inadequate) at best. Any existing body of accredited textbook sort of knowledge is a reflection of existing knowledge of general principles as defined in terms of existing and prior modes of general social practice, of existing and preexisting technologies of social practice in general. As the successive overthrows to date of authoritative, particular scientific knowledge in the past have shown, all deductive forms of knowledge prevailing

at any point in history—including the present time—are at best conditionally true, in the sense of being conditionally efficient. They will be broadly superseded in their authority-as-knowledge by advances in practice.

Textbook knowledge of successful experimentation is not a sound authority for determining truth. Either one concludes from this that truth is unknowable, as Immanuel Kant and the British empiricists concluded in different, antagonistic ways, or one must find a higher, more durable premise for truth, outside the domain of textbook forms of scientific knowledge. What is proven by history—by combined paleontological, archaeological and literary history—is that our species has secularly increased its power over the lawful ordering of the universe through the progress it has effected in social practice under the guidance of scientific and subsumed technological advances.

No existing body of textbook sorts of scientific knowledge adequately proves truth, nor the truthfulness of the creative processes of the human mind. However, the progress of civilization from lower to higher orders of technologies implicitly does prove the truth sought. The truth lies not in the particular (communicable, deductive) knowledge man achieves at any point in history. The truth lies uniquely in those creative-mental processes through which successive advances in scientific knowledge are ordered. We measure what is and what is not an advance by the crucial experiment of human existence, by the manifest increases in the rising thermodynamic negentropy of useful productive and per capita powers of human individuals.

Political economy defined in such thermodynamical terms, according to such negentropic criteria, defines the crucial experiment of human existence in the manner uniquely required to determine what is truth and what is falsehood in the policies and methods of developing human knowledge.

On the level of inorganic physics knowledge, as presently accredited generally, the level of the "n" domain, as we have defined the transfinite denotations "n," "n + 1," and "n + 2," the proof of scientific progress is a persistently rising reducing power of the per capita individual of an expanding population. This quality is peculiar to the "n + 1" domain of existing knowledge, to the domain of organic physics. However, as no species other than man is able to willfully increase the characteristic negentropy of its species-reproductive behavior, the ordering of such negentropic self-development of the human species defines the process as situated in the "n + 2" domain, the domain of reason.

However, the fact that this measure of scientific progress does have parameters in the domains of inorganic and organic physics attests to the efficiency of reason with respect to the two lower domains. In the lowest domain of physics knowledge, we perceive scientific progress in terms of the parameters of increasing "reducing power" per capita of an expanded population, as negentropy most crudely conceived. In the domain of organic physics, we see scientific progress as man's willful mastery of the

evolutionary process otherwise characteristic of the self-development of the biosphere as a whole. It is necessary to see reason for itself.

Once we have discerned that the course of manifest scientific progress is accomplished through rigorous principles of syntheses of new hypotheses, those principles of hypothesis which order successive advances in scientific knowledge (and levels of technology) in particular are thus demonstrated to be approximately in correspondence with man's increasing willful mastery of the lawful ordering of the universe.

Thus, it ought to be clear, no logical-deductive form of science can be in direct correspondence with the lawful ordering of the universe. The contrary assumption is *fictitious*, inadequate. The only aspect of human behavior that can be proven to be in correspondence to the lawful ordering of the universe is the processes that account for man's increasing willful mastery of the universe, for successive revolutions to that effect in logical-deductive forms of scientific knowledge. Hence, only those developed (educated) processes of preconscious synthesis of fruitful hypothesis, especially crucial hypothesis, are the aspect of mental life (and knowledge) that is in correspondence with the lawful ordering of the universe. This process of agreement—preconscious agreement—is classically termed *perfection*, or also the process of securing *atonement* with reason.

Reason is not logical knowledge as we ordinarily define logic. Reason is the rigorous processes of scientific preconscious thinking that order successive and successful arrays of logical scientific knowledge. The former is *reason*, the latter is *mere understanding*.

The principled breakthrough in scientific knowledge to be accomplished is to free man from enslavement to mere understanding by making preconscious processes the willful object of conscious knowledge, by giving the name to an abstraction that is preconsciousness of scientifically efficient preconscious thought. The feasibility and necessity of this breakthrough is ancient knowledge. This is the notion of the *hypothesis of the hypothesis* known to Plato from his Ionian and related predecessors. This is the "hidden knowledge" of the Platonics and Neoplatonics.

Thus, the adequate political-economic theory which views the progress of political economies from this vantage point is the formal expression of the highest form of

* For related reasons, it is a pedagogical monstrosity to teach differential calculus as a prerequisite to instruction in the integral calculus. The reason for this commonplace blunder is clear from history, just as that same history shows us why this choice of pedagogy is wrong, and relatively destructive of the creative-mental powers of the student.

** "Toward Understanding the Nature of Fusion Energy," *Fusion*, Vol. 1, nos. 8-7 (May 1978).

† The first English translation of Rosa Luxemburg's *Anti-Critik* was published in *The Campaigner*, Part 1 in Vol. 5, no. 1 (January-February 1972) and Part 2 in Vol. 5, no. 3 (May-June 1972). A subsequent elaboration of these points by Lyndon LaRouche appeared under the title "in Defense of Rosa Luxemburg," in *The Campaigner*, Vol. 6, no. 2 (Spring 1973).

‡ Unpublished dissertation for the second session of the Academy of Humanist Studies, Wiesbaden, West Germany, 1978.

scientific knowledge, under whose guidance physics knowledge, for example, is properly assessed and advanced. That, of course, always has been the "secret source" of potency of the National Caucus of Labor Committees and is the essential potency of the U.S. Labor Party. What we are engaged in accomplishing now, in this newly opening phase of our work, is to make that connection fully conscious to the membership, and through the comprehension of this by the membership to a broader population.

The Role of Neurosis

For reasons we shall merely identify here, the block against mastering the preconscious in modern culture is not so much any difficulty inherent to the subject of inquiry itself. The willful control of the preconscious processes determining predicated forms of conscious thought and practice cannot be effected unless the individual's sense of personal identity is what G. W. F. Hegel and others define as a *world-historical* identity. It is only as one views oneself as acting to contribute to the development of the negentropy of the human species existence as a whole that the mind can organize itself to define problems and their solutions in those terms of reference. To the extent that the individual clings to a hedonist, particularist, or individualist sense of competitive self-interest vis-a-vis other human beings, the world-historical outlook is unattainable except as a logical approximation.



Francisco Goya's etching, "The Sleep of Reason Produces Monsters," shows remarkable insight into what LaRouche calls "noisy" preconscious processes. The original caption reads: "Imagination abandoned by reason produces impossible monsters; united with her, she is the mother of the arts and the source of their wonders."

Nor can one be half a world-historical person and half an alienated hedonist. In that latter condition, as we have noted, a certain logical-deductive parody of a world-historical analytical outlook can be assembled, but not a pre-conscious world-historical outlook.

The particularism, the hedonistic outlook we have indicated is the general expression of the psychopathology termed neurosis. All incapacities of cultured persons of modern society for creative work are of a neurotic origin. The "noisy" preconscious processes, thus made *irrational* preconscious processes as a whole, preclude the sort of coherent, sustained-concentration focus indispensable to creative synthesis of fruitful new preconscious conceptions.

For the same reason, indoctrination of youth in the so-called pluralist outlook ensures a destruction of their potentialities for coherent thought and for creative work. The effort to equate William James's foolish concoction of the notion of "pluralism" with "freedom" is pure absurdity. Freedom does involve a certain kind of diversity of outlook. Freedom is essentially, in the first moment, the synthesis of new conceptions, overturning previous or prevailing judgments, on the condition that these new, "deviant" conceptions either are correct or are fruitful to the purpose of furthering the development of knowledge for practice.

Freedom, in its second moment, is a matter of the latitude given to individuals and groups to realize their "deviant" discoveries through public controversy, dissemination of these conceptions, and otherwise, through appropriate channels of social practice. Freedom is not *irrationalism*; it is essentially the process of making discoveries that correct the errors and inadequacies of previously prevailing knowledge and practice. It is, therefore, politically, the social processes needed to nurture the kinds of experimentation in ideas and practice through which new insights are nurtured and tested for assimilation into general knowledge and social practice.

The Science of Poetry

As I have indicated above (and in other locations), the proper function of poetry and musical poetry, properly conceived, is to enable the preconscious processes of one mind to communicate with the preconscious processes of another through the mediation of ambiguous arrays of predicates of preconscious ideas. The general function of poetry and musical composition like Beethoven's is to enable the culture to aid its developing members to become conscious of their preconscious processes. Not merely to make the individual conscious of their existence, but to enable persons to bring preconscious thoughts into consciousness as abstractions by a rigorous method of naming such thoughts. In that way, by bringing preconscious notions into consciousness as named abstractions, preconsciousness is made conscious (*determined*) and preconscious processes become the objects of willful consciousness.

The object before us is to make the process of synthesis of new, fruitful preconscious conceptions itself the named, conscious object of willful thought. This conception is not new. Plato comprehended it, as have the



A team of Grumman engineers, all veterans of the space program, now working on Princeton's TFTR tokamak project. Reproducing the important contributions of scientists like these and producing the future breakthroughs required by humanity means educating scientists and potential scientists to master the process of reason.

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leading Neoplatonics. This is the inner core of the secret knowledge of the Neoplatonics. The point is to make this inner secret available to a broader population.

The relevance of this undertaking for physical science, so-called, today is indicated by those aspects of experimental work in which the evidence adduced to preconsciousness cannot be "translated" into the "logical" forms of axiomatic, mathematical physics. In these aspects of experimental work, society is essentially at an impasse—an impasse that must persist until we supersede axiomatic, deductive forms of communication of scientific notions, through naming those mental processes that are in fact in correspondence with the kinds of problems set forth in the indicated writings of Bardwell, for example.

The creative preconscious synthesis of fruitful new conceptions by the informed mind is a self-developing process of exactly the "logical" form represented by a true Riemannian universe. That is, a universe in which " n ," " $n + 1$," and " $n + 2$ " are denotations of transfinite orderings of higher-order-ranked characteristics of multiply connected domains evolved out of action by a self-elaborating, transinvariant form of causal principle. If that aspect of our mental processes is named, made an abstraction for consciousness, those abstractions supersede axiomatic mathematical forms as the appropriate conceptions for communicating and being conscious of the kinds of processes we must now deliberately master.

There is nothing to be termed merely speculative in this proposal.

I have wrestled with this problem over decades. I have been governed by conceptions of which I was fully conscious, and which conceptions I have demonstrated to be valid through their predicated applications. Yet, generally speaking, I have not found these preconscious conceptions communicable to others.

Second, this problem has not remained the same for me over the past dozen years in which the organizations I now head have developed. The social process of development of the persons in these organizations has not only enlarged the scope of what I can explicitly communicate, as preconscious thoughts have been made socially thus named, willfully employed abstractions, but by enlarging the language of thought in that way, the organization's development has enabled me to advance in willful mastery of my own preconscious processes.

At this point, there is among my associates a core of persons who, to varying degrees, have mastered the rudiments of the inner secrets of the Platonics and Neoplatonics, such that we communicate policy and related conceptions to the handfuls of the Neoplatonic elite outside our organization on that level, on that basis. I know that these persons—both inside and outside the organization—are thinking in a certain preconscious way by virtue of the kinds of abstractions they employ and, more important, by the way in which they employ them.

If this core of experienced and developed social forces is mobilized to apply the fruits of its development and shared experience to the task I have projected, we can anticipate that this directed effort will lead us quickly toward the kinds of conceptual breakthroughs in scientific work I have indicated, beyond the field-particle paradoxes intrinsic to the inferior level of thought, the mere understanding.

Poetry, and forms of music, painting, and sculpture ordered according to Neoplatonic poetic principles serve as part of the essential training of the mind to master preconscious processes. In turn, only those aspects of artistic effort that serve that notion of the poetic principle are to be regarded as art.

Norman Mailer, T. S. Eliot and Leonard Bernstein are not artists because they are not scientists.