

What Max Planck had Already Known: The True Human Mind

by Lyndon H. LaRouche, Jr.

June 14, 2011

*[Published in **Executive Intelligence Review**, Volume 38, Number 25, June 24, 2011. View [PDF of original](#) at the LaRouche Library.]*

An associate from “The Basement Team” responded to my writing on this subject, with related written materials, and with comment by her, on the subject of the actual human mind (as distinct from the brain), presenting me with relevant excerpts from what Max Planck had already reported on this subject, as from his “The Meaning and Limits of Exact Science.” Planck’s writing on that subject, can not be separated from his exchanges with Wolfgang Köhler on the higher psychology of the human mind.

It has been my long-standing judgment on the subject of Classical artistic composition, that that principle of metaphor which underlies that principle of human creativity on which scientific creativity depends, demands that we must not presume that sense-perceptions give us an image of the actually observed subject-matter; but, rather, such perceptions are, so to speak, virtually “shadows” which had been cast by a relevant object. I have, therefore, often suggested, that if we are observing the footprints being left behind by the steps of a walking man, we must imagine the creature which is making that pattern, as, in some sense, as if they had been made by a “creature” invisible to the footprints as such. That “creature,” once having been introduced by that presumption, proceeds with the following “vicarious hypothesis,” that “something” is generating and leaving that trail of footprints, but, we can not presume that a willfully acting human species, can be treated as only a finite object, or series of objects; therefore, we can not presume automatically, that the trail of footprints, and also that which has created the footprints, are ontologically equivalent images in a functional sense. After all, the experiencing of the attributed image of each of the pair, is only a phenomenon. Could a mere phenomenon be the cause of those phenomena?

The fact that the time has long since passed when a competent practice of physical science, or related matters, could tolerate a notion of “sense-certainty” premised on the evidence of five built-in qualities of sense-perception, should not be a laughingstock among serious scientists. Mankind today has access to a growing mass of modes of perception, a mass which outguns, by a far reach, the five delivered in the package with the newborn infant.

Sense certainty still exists as now, even in otherwise civilized cultures, but the native five senses, or prosthetic substitutes for some of them, are now merely the instruments by aid of which a vast and growing panoply of “synthetic senses” has been acquired, to serve as augmentations of the power of the human individual and his, or her society. It should be clear, even from this evidence itself, that the “original” five senses, or some replacement devices among them, are a highly necessary, if monstrously deficient means in the struggle for the continued existence of our human species, and on account of the increasingly difficult challenges which we must master if our human species is to survive.

On the Subject of Music

For example, Sky Shields has recently been engaged in exploring the notion of time as being an ontological, rather than merely a formal, categorical issue. He is currently in the process of, first, treating the distinction between a mere series of notes (with time-notations for each note being performed), and sensing of the principle of Bachian counterpoint which defines the principled character *of the effect of* a performed Bach fugue on its audience, respectively.

That is to emphasize, that a Bach fugue is not itself, ontologically, a set of a series of notes. It is, rather, the effect of a species of process which orders the proper performance and auditing of the notes, not as a mathematically ordered series of tones as such, but which is, ontologically, the music, as actual music is distinguished from the bare score itself. The notes, as purported discrete objects, and the music, as a process, are not to be heard in the same ordering of musical existences as a score’s merely formal sequence of particles of any kind. The difference may be recognized as a distinction in the notion of “meaning” of the process, rather than a sequence of discrete objects. In other words, competence requires Wilhelm Furtwängler’s notion of “performing between the notes.”

The point in which I, together with Sky [Shields], and with our associates in this project, are engaged in our respective parallel missions on this account, are, for example, that we are each using intrinsically ironical references for the purpose of showing the relevant subject at issue, as through reference to such crucial examples. It is our shared intention to clarify the difference in meaning, in ontological terms, contrasting the principled paradox, posed by contrasting “clock time,” as a notion of metronome time-as-such; with the passage of time which must be ordered as the existence of the ontological existence, as emphasized by Furtwängler, of a special kind of physically defined, enunciated process in time, rather than “clock time” as such.

Max Planck & Albert Einstein

This bears on the question which we, and others, know as a concern expressed by both Max Planck and his associate Wolfgang Köhler, in respect to their then ongoing dialogues respecting such matters. This is the same issue which defines the difference between the concept of the quantum by Planck, and the contrary meaning assigned to the “quantum” by such reductionist opponents of Planck and Albert Einstein, as those who followed the intent of those most evil figures of the Twentieth Century, those who were led by Bertrand Russell and his devotees.¹ The relevance of that work of Planck and Einstein deserves to be chosen as the context of this report here and now.

Actually, as I have emphasized in earlier communications, time as such does not exist as an independent conception. Time is something adduced, primarily, from the imputable tempo inherent in a physical process, whereas measurable “time” is measurable in fact only as a product of the relative relationships expressed as a comparison of rates of respective physical processes as such, as Academician Vernadsky and his circles had noted.

There is a well-established precedent for treatment of such frauds against science as that of Mach and Russell respectively, as in the specific case of the attacks on the discovery, by Johannes Kepler, of the principle of universal gravitation. Theirs is a notion of time, as Sky has emphasized, associated with the reductionist follies of both the silly, but vicious Isaac Newton, and the well-known image of the ontologically desperate Pierre-Simon Laplace.

Despite that pair of Newton and Laplace, the method employed by Kepler for the only authentic, original discovery of the principle of gravitation has, despite all that particular confusion, remained a principled type of relevant precedent, in which the essence of that type of paradox employed for the discovery of gravitation by Kepler, is implicitly resolved. The values are variable in terms of comparisons of rates; time is an expression of a physical process, rather than a Euclidean-like, independently self-standing notion of time *per se*. It is as Vernadsky et al. adduced; it can only be the universe which sets the clock of time, not the other way around. The evidence to this effect is fairly defined as elementary.

¹ During the interval of Germany’s engagement with “World War I,” Albert Einstein witnessed a raging attack on Planck launched by the German and Austrian reductionist followers of the reductionist Ernst Mach. Later that attack on Planck by the Machians, was echoed against Einstein himself, this time by those devotees of Bertrand Russell, during the interval of the 1920s Solvay conferences, as later, to the present date.

For example:

Kepler's notable solution for the mystery of the planetary orbits generally, contrasts two respectively distinct categories of phenomena, both as being locatable in the contrast of those two ontological categories of sense-perceptible coincidences called sight and harmonics. The result of that, was the defining of the principle of gravitation by the ontological paradox of two types of phenomena employed to define, thus, a universal principle which is neither of the two, but, which is the expressed product of their ontologically ironical coincidence. Stated otherwise, two respectively exclusive categories of shadows, in this way, define a principle which, in this instance, defines a quality of universal physical principle, as in Kepler's uniquely original discovery of the principle of gravitation.

Kepler's solution, which is an expressed and literal outgrowth of Cardinal Nicholas of Cusa's founding of a system of modern science, as in Cusa's *De Docta Ignorantia* (1440), had been the notable reference-point for identifying the systemic difference between the common follies shared by the reigning bodies of official opinion among the Roman and medieval cultures, and that scientific revolution which is the foundation of all competent modern science, the foundation which is to be drawn from the Florentine revolution associated with Brunelleschi's employment of the catenary as a universal physical principle, rather than merely another curve. This choice being that used instead of being merely another form, represents a choice of solution for an ontological paradox, which included the direction of Brunelleschi's discovery, and, also, the related case of the world-outlook of the great Renaissance figure of Nicholas of Cusa.

This case, when considered in the light of reference to the great Classical Greek and Egyptian cultures typified by the figures of such as Plato's figure of Solon, and of the advocates of such as Archytas, Plato, and Eratosthenes, touches more or less boldly on the systemic distinction which separates the conflicting notions of sense-certainty from actual reason.

Now Add Vernadsky

The most significant modern exposition respecting the essence of such ontological distinctions, especially since Gottfried Leibniz, has been, later, expressed in terms measured in consequences by Bernhard Riemann, that as Riemann's revolutionary achievements have followers such as Planck, Einstein, and Academician V.I. Vernadsky.

Those three latter figures, who are the leading intellectual giants of science since approximately the turn of the 20th Century, are most distinguished for the outstanding importance of their share in a combined, seminal, various and combined role. I mean their role in their putting aside what had become the more popular assumptions of the generality

of academics of their time, by having been the followers of the crucially subsuming discovery of principle which is embedded in the unique features of the work of Bernhard Riemann.

That much said, here so far, when considered against a background setting from which I proceed now, has led to the relevant further developments associated with the outcome of Riemann's own discoveries.

That much said, here so far, on the account of that background setting from which I proceed here now, I resume, afresh, the now familiar theme found earlier among my published writings on the subject of the systemic, ontological nature and functions of the same human mind, as to be found in the impact of the discoveries of Bernhard Riemann on such as, again, Max Planck, Albert Einstein, and Wolfgang Köhler, in particular.

This is a subject which has, already, become, lately, a subject of increasingly frequent attention among such as the members of our "Basement Team."

What Is the Human Mind?

As I have already emphasized above, the commonplace, but wrong presumption is, that the human knowledge of the universe, as "from the top down," is confined to the agency-like role presumably assigned to five distinct qualities called "human sense perception." The relatively most evident flaw in that view, is that it is a view accessible to what might have been classified, much earlier, as decently educated persons and the like, but, which is, unfortunately, an expression of the fact that that sort of folk represent, in the main, those associated with persons still victim to the popular presumption of such as the dupes of actually black magic specialist Newton, the deluded notion that "sense-perception is sense-certainty."

The fallacy of exactly that presumption, properly indicated as faulty, has become well-known with an appropriate understanding, only, so far, among a markedly limited ration of the total population, even a limited ration among what are classified as "well-educated" folk of the trans-Atlantic societies. It is fair to say, that only a relatively small fraction, even from among those who are science graduates of prominent universities, appear today as having a clear grasp of these as being ontological issues. This is demonstrated by the fact that the quaint and silly doctrine of black-magic specialist Isaac Newton is parroted in academia still today.

That latter failing, among even most among what might be considered "well-educated" persons and their strata, presently, is expressed in a very large degree, in the widespread addiction to reductionist axioms of the type of the modern British Liberalism. That Liberalism is rooted in the doctrines of a merely residual estimation of the quality of sense-

certainty which is traceable to the original standpoint of Paolo Sarpi's general innovation in his partial modification of the cult of Aristotle, and to the fruit of such types among Sarpi disciples, which is expressed in the model of modern British empiricist ideology generally.

The most vicious expression of that systemic form of mental failure by Sarpi, as, in a somewhat different mode by Aristotle and Euclid earlier, is expressed in modern times, in the form of the dogmas of Adam Smith and such rabid followers of Smith as the Jeremy Bentham who differs from Smith only in respect to Bentham's added elements of rampant depravity, as those elements were supplied by the Bentham who had become Lord Shelburne's notorious agent of the then newly founded British Foreign Office. The worst such, then yet to come, would be the Bertrand Russell whose depravity was so numbing in its virtually Satanic extremity, that the very idea of any morality at all, could not be decently mentioned in the case when the name of that Russell is being considered, when considered either in respect to social policies, or physical science.

As Adam Smith had already asserted, the only form of substitute for an (inherently misleading) estimate of the actually human morality which Smith had actually prescribed, was to be located entirely within the bounds of Smith's general definition of an alleged limitation of human choices of behavior and belief, to choices in behavior and belief which lay strictly within the bounds of the controlling and guiding effects of the experiences of pleasure and pain.

Meanwhile, truth itself was already outlawed by Smith and by the likes of Bentham and Bertrand Russell, who sought to make depravity *per se* mandatory. There was no actual principle, or morality permitted within the notions of Bentham and Russell, or H.G. Wells. Pleasure and pain, as defined by such as them, were thus to be administered as a system of management prescribed for a cattle-farm called the domain of British "Liberalism," a belief which has been an effect of those virtual slaughterhouses which have been not merely included, but featured, as in the practices of the British reign over the populations of Africa today.

There is no essential connection between a so-called Sarpian "principle" of British Liberalism, and what might be decently considered as either morality, or the actual cultivation of human reason. In the end, the virtual "cattle-farm" called the domain of British Liberalism, remains a standard which has been empowered, as at the bottom of the system, as to be seen in the case of the British policies of practice toward "black Africa" since the British navy was deployed in the Nineteenth-century Spanish trade in Africans captured, or simply murdered as slaves.

The actual human mind, today, is expressed as a process of development of an increased number of parameters each equivalent to the addition of universal physical principles.

This process of discovery of new, discovered, implicitly universal physical principles, has already greatly dwarfed the authority of the original set of “five which came in the box.” Consequently, as customary opinion based on the original five defines a reflected notion of the mind which considered those five as the outer boundaries of the powers of that mind, the accumulation of an increased repertoire of universal physical principles, or their equivalent as principles, shifts the individual’s belief in his or her own mind, to expanding, successively higher levels, up to the accumulated effect of the individual human mind which, consequently, considers an indefinitely expanding universe of mind as a process of unlimited up-reaching of that mind’s conception of itself.

As that occurs, those persons whose cultural outlook tends to be confined to something proximate to the “original five senses,” become already of the image of a relatively lower quality of species, a mind stuck in the mud of a superseded mentality.

I. What Is Bought and Sold on the Market for Ideas

Some ideas respecting economy, prior to resuming the theme with which this report was opened, and which are necessary to situate the subject-matter of this report.

That much said thus far:

To understand science, one must, first, identify the political or kindred motives of those who have sought to define it. On that account, I devote this present chapter of the report to what I have prepared as, chiefly, a descriptive treatment of the subject of physical time from the standpoint of the introduction to the content of this present chapter of the report. To this end, science itself is all too often, and too widely degraded into the role of hod-carrier of such ostensibly irrelevant subjects as monetarism, or, as in the case at hand, the case of time defined as a solitary, independently principled matter of physical science.

Society today is, as all of us present here, in the circumstances of this discussion, here, today, should know: society today is presently up to its proverbially existentialist’s neck, stuck into a virtual, existentialist political-economic and moral quicksand. This is most conspicuous for us today, with respect to the trans-Atlantic region presently. This apparent monetarist “preference” of this moment, is clearly motivated, on the side of Britain and also her pro-imperialist lackeys from sundry nations, as the effect which is motivated by the lust of monetarist London’s certain yearnings. These yearnings include a determination, as by the British empire currently, to effect the destruction of both our United States and of those

other nations of the region which might be inclined, as, for example, Greece, to take themselves out of the presently hyper-inflationary, political-economic and cultural quicksands of the present moments.

Yet, precisely because of that, the current state of trans-Atlantic affairs has become so obviously a death-trap for collected batches of entire nations, that the potential for a break-out from a virtual prison-camp of entire nations, should be considered, up to the present moment, as an implied present threat of the virtual endgame which would be a presently continuing plunge of our planet into a state of hopeless disasters. All hope that a rescue of the trans-Atlantic regions might be made a reality, now depends upon the possibility of a revival of the 1933 Glass-Steagall law, a law which might be realized afresh through urgently needed actions taken during the immediate future.

Under such conditions as those under the tradition of ancient Babylon, or the world today, no subject-matter can be competently considered, including any topic of physical science, until the implications of the political and cultural environment in which any issue, including any matter of science, is currently situated, politically, are taken into account.

That point ought to be regarded as a “natural” part of an implicitly unnatural set of motives. Nonetheless, the fact of the matter is that, in real life, the political and cultural conditions of life can never be separated from their effects on science and sundry aspects of culture. All aspects of life are therefore situated in the practice of required scientific progress of societies and their physical economies; and all science is situated in the political and other features of social life, politically and otherwise. The evasion of that fact, is the price of folly.

Thus, the mental life of the peoples of nations has decayed, in past history, a decadence brought upon that people by its own consent to policies such as those which are, for the moment, hegemonic in the trans-Atlantic region over the recent decades.

The world as a whole now, actually, depends upon the quality of potential for mankind’s physical and related progress which depends upon a sudden and sweeping overturning of what have been the long-term, presently deep-going trends downward throughout the trans-Atlantic regions. The remedy, therefore, is that reflected in a Glass-Steagall initiative put into action by the United States, but soon. In a world in which money buys the consciences even of some leading scientists, as also, similarly, officials and institutions of government and religion, a continued downward trend in respect to science, becomes what is doomed, in practice, to be treated, in return, as a corrupted subject of “natural” or other law.

From the vantage-point of the current possibility of the actual implementation of the Glass-Steagall legislation; the continued integrity of our own and other nations, now depends upon

the willingness of the relevant forces within our United States of America. The crucial fact of the present moment, is that only this United States has the deeply rooted, constitutional notion of a credit system, rather than a monetarist system.

Therefore, the hope for Europe, in particular, depends upon both copying that credit-system's type of reform associated with such standards as the original U.S. Federal Constitution, and the integrating of the European nation-state system by that same principle. This is essential if we are to bring respectively sovereign systems into safety, that to be done by aid of the principles embedded within our own Federal Constitution, as President Franklin D. Roosevelt had intended that prospect for Europe and beyond, for as long as he had lived.

As in past history of civilization, the moral quality of a nation and its people, is congruent with its commitment to the quality of progress driven by a commitment to an increasingly capital-intensive emphasis on science-driver modes of physical-economic as much as cultural progress in a direction opposite to the trends which have tended to control the destiny of the trans-Atlantic world since the horrors of Summer and Autumn of 1968. To understand science, and its indispensable contribution of net progress in the relative power and conditions of life of the population, we must know who buys and promotes it, holds it back, and directs it into decadence, presently, this considered not only on the markets of London and Wall Street and the Chicago exchange, but wherever choices among ideas are being traded, commercially, or otherwise.

The most proximate issue of science, is, therefore, the politics of a science of physical economy.

The Principle of Physical Economy

On this account, we must emphasize the fact, that there is an inherent fault in the presumption that economic systems actually exist in a manner which is properly to be distinguished from inclusion as a special case within the category of physical systems. Competent notions of the existence of economies have depended upon the physical implications of the net effects of economic practice on nature otherwise, that rather than a monetarist orientation.

On this account, we have the essential relevance of the followers of Bernhard Riemann respecting mankind's dependency on the physical processes which are expressed in the form of economies, but which remain, nonetheless, as physical processes, rather than the merely financial accounting systems of monetarism. That is the crucial consideration.

The only essential difference to be considered in defining a notion of economy, is the voluntary aspect of the human species, as expressed by the accompanying, inherent distinction of the achievements (and failures) of human behavior, as mankind is distinguished, systemically, from lower forms of life.

It is only from this vantage-point, that the vicissitudes of a practiced mode in science can be isolated, as if chemically, from the set of forward- and upward-looking political and other considerations, considerations which are the context in which the practice of science, actual, or pretended, is situated.

It should be noted here, that in the history of economy, the common parameter of such indispensable progress is termed “increase of energy-flux density.” Not the number of calories, but in the degree of concentration of heat-equivalent per capita, per square kilometer, and per cubic centimeter per unit of what is measurable in terms of the equivalents of measurable expressions of time. However, the power exerted, in effect, by mankind, when properly applied to anti-entropic effects, such as those of life, and in a still greater degree, in relevant human creativity, has effects many times greater.

Mankind’s innate creative-mental potential is implicitly the most powerful force, relative to effects for the longer time. This potential, as I have said, is expressed in the relative optimism associated with elevation of mankind’s outlook effected by means of increasing the number of “dimensions” added to the combined repertoire of “the original” and added dimensions qualified as universal physical or equivalent principles. However, the benefit is less the fact of more principles, than the dynamic represented by the continuing process of the rate of increasing their number, as the NASA effort illustrated the point into the early 1970s, and the cutting back of such programs has been correlated with the accelerating accumulation of pessimism, even acute defeatism, in the population.

II. The Ontological Ironies of Progress

There are two leading characteristics of a form of physical-economic and related progress to be considered here. We encounter this fact of experience as we progress upward from the so-called “five” original senses packed into the box for the birth of the infant. Each advancement to higher orders of physical dimensionality of principled dimensions of physical-economic progress, leaves a gap represented by universal principles not yet discovered.

However, what we presently know as fact on that account is not the limit of our capacity for improved, implicitly ontological qualities of knowledge. The following argument is required.

There is the creative imagination to be considered. The effective rates of creative potential are located in the margin of the principled imagination. This, as I have frequently noted, corresponds to an estimated gap between what has been realized as an effective form of what has been discovered, on the one hand, and what is near the verge of discoverable, on the other. Here we enter the domain typified, in one case, by the concluding paragraph of Percy Bysshe Shelley's *A Defence of Poetry*, the domain of the imagination, otherwise to be recognized as the domain of prescience.

It is that factor of prescience which defines the effective progress of the level of active intelligence of the member of society. The proper determination of the level of intelligence is not what the subject knows, but what he, or she can discover with a near-approximation of accuracy when confronted with the challenge of previously unknown questions, by a response which is near to what the human subject had never actually known before: often defined as an attempted measure of "I.Q." The ratio of what is discovered in the process of testing, with respect to what the tested subject had already known, describes a fair indication of relative actual intelligence. With human beings, it is always only such creativity which actually expresses a meaningful estimate of relative levels of intelligence.

Animals must be, in general, tamed. Creatively inclined human individuals express creativity in the conquest of what they had not been trained to know. It is the challenge of discovery which is the real source of "fun in human life."

The most significant expression of the progress of society lies in that kind of process. Stagnation, in this aspect of the matter, portends the potential for decline of civilization, just as the most notable form of decline and collapse of a culture is that induced by a "zero growth" modality, as typified in the extreme by the so-called "greenies" and their likenesses presently.

Notably, the oligarchical principle, as traditionally associated in European culture with such influences as the Apollo-Dionysus Delphi cult, is typical of a long series of successive collapses of European and kindred cultures, which have been ordered in just that way advocated by the "green" movement in the trans-Atlantic regions presently. That is precisely the essential source of the presently accelerating physical-economic and moral collapse of the nations and the economies within the trans-Atlantic region.

Those tendencies are highly recommended as expressions of policies of the type which are most likely to become the cause for the self-inflicted extinction of the human species.