Music, laughter, and creativity: Lyndon LaRouche (left) and Norbert Brainin.

Norbert Brainin On 'Motivführung'

by Lyndon H. LaRouche, Jr.

Norbert Brainin presented the notion of *Motivführung* to me, through a mutual friend, just over four years ago. Summarily, this came about under the following circumstances.

During 1990, I had posed to my collaborators the proposition, that the benchmark for the organization of the second book of the *Manual on the Rudiments of Tuning and Registration*[1] ought to be the revolutionary change in the structure of musical composition represented by the comparison of the work of Josef Haydn to his predecessor Carl Philipp Emmanuel Bach. Shortly after that, 'cellist Renée Sigerson had travelled to Germany, where she reported my proposal to Norbert Brainin. As Mrs. Sigerson reported this to me shortly afterward, Mr. Brainin had exclaimed, "*Motivführung,*" and followed that with an explanation of his meaning of that term.

My reaction to Mrs. Sigerson's report of this exchange, was one of great excitement.

During the late 1940's, I had first learned what every student of the Classical keyboard repertoire knows as the signal debt of Wolfgang Amadeus Mozart to Johann Sebastian Bach's *A Musical Offering.* For the keyboard repertoire, the key point of reference is Mozart's K. 475 Fantasy, prefaced to the K. 457 Sonata. From that point on, the K. 475 Fantasy is the most frequent point of variously direct and indirect reference met in the major keyboard and other compositions of Mozart, Beethoven,

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Schubert, and Brahms, among others.

Brainin's identification of the echoing of the Haydn Russian Quartets, notably Opus 33, No. 3, in the new method of composition presented by Mozart's six Haydn Quartets, transformed everything I knew about the implications of the Mozart K. 475 Fantasy. Putting those implications together with Brainin's *Motivführung,* revolutionized everything I knew about music axiomatically. Within weeks of receiving Renée Sigerson's report of the discussion in Germany, each nook and cranny of my previous knowledge of motivic thorough-composition was completely overhauled.

The result is to be recognized readily in a reading of my "Mozart's 1782-1786 Revolution in Music," published in the Winter 1992 edition of the *Fidelio* quarterly [Vol. I, No. 4].

Axioms and Principles

It is one of the commonplace disasters produced by modern textbook modes of education, that holders of terminal

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degrees of professional learning often lack competent insight into the most important considerations in the real history of ideas. As a case in point, consider summarily my own single fundamental discovery, known today as "The LaRouche-Riemann Method," effected over the course of the years 1948-52.

Prior to 1952, I had made what has turned out to have been one of the most important scientific discoveries of this century, a fundamental principle of the science of physical economy. This discovery has been summarized in various locations over the years, most recently in "Why Most Nobel Prize Economists Are Quacks"[2] and "Non-Newtonian Mathematics for Economists" [SEE p. 4, this issue]. This discovery led, in turn, to a fresh view of the discoveries of Georg Cantor, and that, in turn, to a fresh view of the most fundamental discovery of Bernhard Riemann, as set forth in his famous "Hypotheses" dissertation.[3] In short, it was not a study of Riemann's dissertation which led me to my discovery in economics, but, rather, my discovery in economics made possible a revolutionized view of the implications of Riemann's discovery for economics. It was as if Riemann had written his "Hypotheses" dissertation as a contribution to the application of my discoveries in physical economy. Thus, my work is known by the epithet "LaRouche-Riemann Method," rather than "Riemann-LaRouche Method."

Similarly, just as my discovery in economics revolutionized Riemann's discovery, so, it was Norbert Brainin's discovery which revolutionized my knowledge of music. My earlier understanding of the implications of Mozart's reworking of Bach's *A Musical Offering,* as in his K.475 Fantasy, or Beethoven's Opus 111 Sonata, was the relatively commonplace knowledge of all qualified musicians. The addition of one ingredient, Brainin's identification of the implications of the germ-principle in motivic thorough-composition, transformed everything which I knew of music up to that time.

Norbert Brainin's revolutionizing my knowledge of music, in that way, like my own revolutionizing of the implications of Riemann's "Hypotheses" dissertation, involves the addition of a fundamental principle to the implied set of axioms underlying an existing body of knowledge. The addition of one principle revolutionizes everything.

Briefly, then, the following qualifying remarks are to be added here.

Every effort to represent an existing body of knowledge as logically consistent, restricts all acceptable propositions in that field to an array of theorems which are each and all consistent with one another, and also consistent with an underlying set of axioms, analogous to the axioms of a formal classroom geometry. Such a set of axioms is known

among literate persons as an *hypothesis;* this is the usage of the term "hypothesis" by both Plato and Bernhard Riemann, for example, in contrast to the illiterate use of the same term in Isaac Newton's famous *"hypotheses non fingo."* Any change within the set of axioms associated with a specific hypothesis, produces a second hypothesis which is absolutely inconsistent with the first.

In rigorous scientific usage, the distinction between an ordinary discovery and a fundamental discovery, is that every fundamental discovery represents a change in the existing set of axioms, and, therefore, the generation of a new hypothesis. In mathematics, such a change in hypothesis marks an absolute mathematical discontinuity (contrary to the mystical, reductionist sleight-of-hand, respecting discontinuities, of Leonhard Euler, Cauchy, the Bourbaki group, *et al.*). Thus, for me, Norbert Brainin's presentation of his view of *Motivführung* represented a sweeping discovery, a new axiom, and, therefore, a new hypothesis.

Of all such discoveries, whether one initiates them oneself, or learns them from another, one echoes Archimedes, crying out, "Eureka!" All is changed, as if in a single instant.

My distinctive advantage in receiving this knowledge from Brainin, lay in the fact, that unlike most who shared my earlier knowledge of the musical side of the matter, my prior discoveries in economic science supplied me relevant knowledge of the human creative-mental processes. Thus, my first published presentation on this subject appeared as the second of a series of articles on the principle of metaphor in science. So, I have situated the implications of Brainin's representation of that principle of composition since.

Thus, whatever the *Brotgelehrten** might think of such matters, we who treat ideas seriously, prefer to be precise about such matters. That is the difference in point of view between the person whose world-outlook, like my own, is shaped by a Classical-humanist (e.g., Platonic) outlook, and the less fortunate fellows whose opinion has been shaped by a textbook-oriented education.

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* "Bread-scholars." Friedrich Schiller's derisive characterization of brain-dead academic careerists.

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1. See, *A Manual on the Rudiments of Tuning and Registration, Book I,* ed. by John Sigerson and Kathy Wolfe (Washington, D.C.: Schiller Institute, 1992). The project, of writing a two-volume manual, targetted by design for the use of music teachers and advanced students, was begun in 1985, but delayed by unexpected interruptions of the 1986-89 interval. The commitment to complete the then-almost-finished Book I (on the singing voice), and to proceed with Book II (on the instruments), was summoned in 1990.
2. *Executive Intelligence Review,* Vol. 22, No. 30, July 28, 1995.
3. Bernhard Riemann, "On the Hypotheses Which Underlie Geometry" (1854). See the author's "Non-Newtonian Mathematics for Economists," pp. 4-22, this issue, for a detailed analysis.