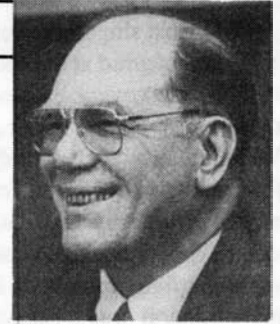


Interview: Lyndon H. LaRouche, Jr.



On scientific tuning and the beauty of musical composition

Below are excerpts from an interview published in the July 1988 issue of the Italian cultural review Il Machiavellico. It was conducted by Liliana Celani.

Il Machiavellico: Mr. LaRouche, I would like to put to you, as the initiator of the project to lower tuning internationally to C-256, a question I was asked by many singers during the Milan conference: How did you get such a bright idea?

LaRouche: My original contributions to Leibniz's science of physical economy were first developed during the interval 1948-52, as a study of the possibility of measuring the causal relationship between fundamental scientific progress and the increase of the potential productive powers of labor of farmers and industrial operatives. The solution of this problem demanded that I be able to show, that the creative mental processes responsible for valid fundamental discoveries in physical science were susceptible of intelligible representation from the vantage-point of such as Bernhard Riemann.

As a necessary complement to this, I was obliged to supply a crucial demonstration that the form of creativity so found in physical science employed the same individual creative potentialities responsible for the composition of classical forms of polyphony.

For reasons which I think obvious, I argued that the classical song-form is a distilled expression of the lawful development of polyphony out of classical poetry, to such effect that the development of polyphony from J.S. Bach through Beethoven, provided a basis for treating the classical song-form, especially the Italian and German classical forms, as what I described back in 1952 as the "Rosetta Stone" for comprehension of the common language of classical poetry and polyphony. In this setting, I showed in a preliminary way, that the creative-mental processes developed by the leading classical composers were the same processes by which great, valid fundamental discoveries in physical science are accomplished.

By comparing the false assertions of modern "information theory" (e.g., Wiener and von Neumann) with the kindred fallacies respecting creativity by Immanuel Kant, I was able to show that the creative processes of the individual mind are

an intelligible process which has the same space-time curvature as we meet in a Gauss-Riemann correction of Kepler's physics, and as Pacioli and Leonardo da Vinci, as well as Kepler, show to be the characteristic curvative of living processes, and of classical aesthetical constructions. So, in classical polyphony, the essential thing is not a pairwise, mechanistic relationship between discrete tones, but movement through those harmonic intervals which are characteristic of the creative-mental processes' natural movements through the musical domain.

The "Rosetta Stone" argument was premised upon the observation that if a spoken language is unleashed from grunting, growling, and shouting in the throat, it has a natural music.

This is what is employed by classical prosody, and what is plainly employed by the composer in building a classical song-composition around a piece of poetry. It is obvious enough that the elementary structure of classical polyphonic composition is prosodic throughout, and that instrumental compositions are instrumental abstractions from the principles of vocal polyphony: I.e., the well-tempered vocal polyphony, so situated, is the essence of music.

It was my correlated view, that the destruction of the principles of classical poetry, including the modernist decadence in the utterance of spoken language, away from the classical, has impaired the ability of many performers and audiences to grasp the interpretation of classical poetry and music alike.

This is demonstrated most readily by comparing the way classical song is often sung, with the reading of the language shown very clearly by such classical composers as Mozart, Beethoven, and Schubert. If the habitual prosody of utterance emphasizes the nouns, rather than the verbs, there is a shift of emphasis in ironic meaning of the spoken line, and the utterance of classical poetry. The classical composer's song reads the poetry with emphasis upon the verb, rather than the noun. Emphasizing the noun suggests an erotic interpretation of the poetry or music, rather than the emotions of "agapē/caritas," which are the natural emotions of the creative mood of concentration.

The most singular experience which put me on this track in music occurred at the end of the war, while I was in India, awaiting the voyage back to the United States and demobilization. Starved for music, I found an HMV recording of Wilhelm Furtwängler conducting a Tchaikovsky symphony; for the first time, I heard Tchaikovsky performed as if it were music! It was my first encounter with Furtwängler; it was electrifying. I became obsessed with the desire to discover an intelligible explanation for the difference I had heard, in a more general way. The view of the classical song as the "Rosetta Stone" of music supplied that intelligible explanation.

The nature of the problem can not be defined rigorously unless we approach matters of instrumental composition from the standpoint of classical vocal polyphony. From that standpoint, the elementary principles involved become clear. It is elementary to hear the differences in the poetical reading of classical song, when the song is performed with an elevated pitch, rather than that employed by Bach, Mozart, Beethoven, and so forth.

The execution of song and vocal polyphony demands a voice so well trained, that the effect is that the singer is "only singing naturally," and the poetic values seem to be naturally communicated in this way.

My thesis on this subject was more or less completed a quarter-century later. By 1979, I was exploding with dissatisfaction over my friends' musical investigations, and insisted that we must shift emphasis away from study of the matter in an instrumental context, and ground all investigations in the principles of the human voice. It became increasingly obvious to me, through fresh investigations of the implications of a beloved old friend of my youth, Mozart's K. 475, that the principles of a $C = 256$ (circa $A = 430$) well-tempered tuning, were used in the songs of Mozart and Beethoven as a characteristic voice-register passing, for a poetic purpose. The same principle is evident in their instrumental compositions. Unless we lower the tuning to the level at which the soprano naturally passes on this value, we compel the singers to misinterpret the works (as to ruin their voices by shouting), and achieving similar sorts of undesired effects.

The additional factors were two. First, on many grounds, I know that there was never a "Romantic period" universal to musical composition. Chopin is classical, not Romantic, and classical composers such as Brahms and Verdi were at their high points while the Romantics were. Modernism had begun to supersede Richard Wagner et al. at a time Brahms was composing his last classical compositions. The attempt to divide music into Hegelian sorts of "periods," is a folly. Throughout the history of music, from the 15th century to the present, various opposing factions existed as contemporaries, as the artficial controversy between Bach and Rameau prefigures the controversies between the faction of Wagner and that of Brahms and Verdi during the course of the 19th

century. It is the same in physical science, where the constructive-geometric heritage of Cusa, Leonardo da Vinci, and Kepler, continues through Leibniz, Gauss, and Riemann, against the opposing reductionist faction of Descartes, Newton, LaPlace, and Helmholtz, down to the present day.

Finally, since classical Athens, through the harmonic principles of St. Augustine, the Golden Renaissance, and the classical period in European poetry, drama, and music, there are certain intelligible principles of harmonics which, contrary to Immanuel Kant and the Romantics, for example, define rigorously the principles of aesthetical beauty.

Just as in the simple example of the way in which civilized cuisine lifts the family and circles of friends out of the state of eating like pigs at a trough, so it is indispensable for the moral development of populations, that as much as possible of their experience of life be saturated with true beauty. Nothing is more central to daily experience of thinking and speaking in language. Let languages be rendered beautiful by emphasis upon the musical principles of a literate language filled with classical prosody. Let us sing, and be joyful.

The well-tempered system, set such that the soprano voice's absolutely natural register-passage coincides with the geometrical mean, conforms precisely to a Gauss-Riemann determination of the well-tempered intervals. Let children learn this from the earliest age, and find the joy of polyphony by the ages of five or six. Let them have a single perfect pitch, and thus a natural placement of their voices, and beautiful singing will be natural to them. The result will be a renaissance in the capacity for composing and performing music, and in the hearing of it. The result will be more beauty, and thus a moral uplifting of the populations. . . .

Il Machiavellico: In your autobiography, and on many occasions, you emphasize the role classical music had to making you a creative politician, as opposed to what we are forced to watch in the political panorama. How did your interest for classical music start, and how did it influence your accomplishments?

LaRouche: My intense creative work of the 1948-52 period was a constant struggle against those influences which tended to abort my abilities to sustain intense concentration-spans over long periods of many successive days or more. I recognized that frustrations of this sort were caused immediately by induced internal emotional states; I also recognized that by immersing myself for several hours in certain choices of music, I was purged of unwanted emotional states, and infused with the state of mind in which prolonged creative concentration came easily.

Immediately, this established the basis for my musicological judgment on compositions and their performances. Some qualities of compositions and performances fostered the desired effect; others had a contrary effect, or merely an indifferent one.

I examined myself, to the purpose of recognizing more

Some of the signers

Below are some of the musicians who have signed the Schiller Institute's proposed bill to standardize the tuning pitch at A = 432 cycles per second. (Affiliations for identification purposes only.)

Renata Tebaldi, soprano; Piero Cappuccilli, baritone; Mirella Freni, soprano; Ruggero Raimondi, bass; Giuseppe di Stefano, tenor; Nicola Martinucci, tenor; Fiorenza Cossotto, mezzosoprano; Maria Chiara, soprano; Marcella de Osma, soprano; Gianandrea Gavazzeni, conductor; Luciano Chailly, conductor; Bruno Rigacci, conductor; Gian M. Sanzogno, conductor; Gianni Lazzari, chorus master, Teatro dell'Opera of Rome; Oslavio di Credico, singer and teacher of singing at Genoa Conservatory; Edgardo Egaldi, chorus master, Teatro Regio, Parma; Marco Balderi, master of RAI Symphonic Chorus, Milan. Ettore Campogalliani, teacher of singing, Mantua; Luisa Gorini Magenta, teacher of singing, Milan Conservatory; Vittoria Mastropaolo, teacher of singing, Milan Conservatory; Carmen Vilalta, soprano, teacher of

singing at N. Paganini Conservatory, Genoa; Ornella Bazzini, teacher, Milan Conservatory; Wilma Colla, teacher of singing, Parma Conservatory; Carlo Perucci, artistic director, Arena di Verona; Birgit Nilsson, soprano; Christa Ludwig, mezzosoprano; Peter Schreier, tenor; Prof. Heinz Marten, former teacher of singing at Cologne Conservatory; Emily Hastings, mezzosoprano, Dusseldorf; Josef Hochmann, first violin, Philharmonia Hungarica orchestra. Kerstin Meyer, mezzosoprano, headmistress, Stockholm Music Academy for Opera; Ann-Charlotte Björling, soprano; Thorbjörn Lindhjern, baritone, teacher, Oslo Opera; Lone Koppel, soprano, Opera Theater of Copenhagen; Ib Hansen, bass, Opera Theater of Copenhagen; Gardar Cortes, tenor, director, Opera Theater of Reykjavik, Iceland; Styrbjörn Lindedal, director, Gothenburg Opera Theater; Bidu Sayao, soprano, Metropolitan Opera, New York; Gilda Cruz-Romo, soprano, Metropolitan Opera; Jascha Silberstein, first 'cello, Metropolitan Opera Orchestra; Dianne Kesling, mezzosoprano, Metropolitan Opera; Norman Shetler, pianist; Alberta Masiello, assistant conductor, Metropolitan Opera orchestra; Anthony Amato, conductor, director, Amato Opera theater; Ellen Repp, teacher of singing, Metropolitan Opera and Manhattan School of Music; Nico Castel, teacher of diction, Metropolitan Opera; Peter Volpe, bass, New Jersey State Opera; Jodi Laski-Mihova, founder, Lubo Opera, New Jersey; Nedda Casei, mezzosoprano, Metropolitan Opera.

exactly the distinction between those emotional states which foster extended creative concentration-span, and those of a contrary or indifferent effect. So, I recognized that the emotional correlative of creative concentration is a "fundamental emotion" contrary in nature to the erotic emotions of lust, anxiety, fear, hatreds, and rages. This "fundamental emotion" is the same identified by the original Greek New Testament as *agapē*, the emotion associated with love of God, love of mankind, love of truth, and love of beauty as classical aesthetical principles define "beauty."

Once this distinction had been made, I was able to use my recognition of precisely defined emotional states in myself to guide me in isolating those aspects of musical compositions which coincided with the strongest resonance of these emotional states. For example, I can not hear the two opening sections of Mozart's "Requiem" well performed without experiencing tears of joy. I came thus to understand that the spark of creative genius in a great composer, as distinct from mastery of music as a language, is the composer's acquired confidence in such *agapic* emotions.

It is possible, by aid of the proper understanding of the synthetic-geometrical principles underlying a Riemann Surface, to show exactly how Mozart and Beethoven, for example, exhibit such infallible genius in choosing the feature of development of a composition which makes it a unified creative experience in the same sense as a valid fundamental discovery in physical science. Yet, neither Bach, Mozart, nor Beethoven were masters of such features of physical science; how did they work through the process of composition to such remarkable results, seemingly so guided by nothing but an infallible instinct respecting the potentialities of

their native language of music?

Similarly, in the distinctions among performances of these compositions, in which none of the better or worse interpreters are masters of Riemannian physics, do some performers constantly improve their performances with advancing maturity, and others fail entirely to capture what musicians may more easily recognize as the true voice of a Bach's, Mozart's, or Beethoven's singing? Or, how does a performer's "bad mood" impair a performance relative to his or her usual standard of musical conscience?

It became obvious to me that *agapē* is not merely an "emotional state," as "emotion" is usually defined. The emotion we associate with *agapē* is a form of intelligence, and is, indeed, an integral, inseparable aspect of the quality of Reason. It guides us along the upward paths of discovery and related decisions, and so appears to the composer or performer habituated to its joys as a more or less infallible "musical instinct."

The faculty so exhibited in superior compositions and performances, is precisely that associated with the ironical features of the composition and presentation of classical poetry.

Once I had discovered this, I was content. The restless uncertainties vanished. All that remained was the pleasure of discovering new things in familiar compositions, by means of this viewpoint.

Il Machiavellico: What would you do as President of the United States in 1988 to lower tuning and defend singing and music more generally?

LaRouche: We are unfortunately accustomed to think of

Presidents and parliaments as making new laws and similar sorts of enterprises. So, we have accreted in all nations a monstrous excess of laws. As President, my included concern would be to establish a period of massive de-legislation, which I propose should be the principal quantity of exertions of the Congress. The law must be simplified, and that in conformity with natural law, to such effect that the law as a whole is brought into congruity with reason and the good conscience of the citizen, rather than the largely arbitrary, and unintelligible mess it has become.

The proper, essential function of a President is that of leadership. The foremost function of leadership, is to recognize the great missions of work to be accomplished during a period of a nation's and civilization's life, and to lead the nation to the successful accomplishment of such great works. The correlative of this aspect of leadership, is a moral role, to infuse the nation with joy in such great undertakings, and to infuse with joy the development of young children and youth into adults more fully developed in their individual moral and other potentials of personal character.

On this account, the Executive Mansion of the United States must become a center of radiation of the highest standards of science and classical art. It were prudent that the professions of sociology and psychology were to be greatly diminished, and more scientists and classical artists employed instead. The presidency must act to establish the achieving scientists and artists as heroes of the popular consensus. If he succeeds, we shall see science and classical art as we might never have imagined possible, and a better, happier people, too.

I have discovered that the best circumstance in which to achieve a Socratic dialogue on issue of policy and science, is at a dinner assembled in the style of a large family. Let the masters of cuisine make the meal beautiful, and set an enriched standard for the family's mealtime life together. The dialogue develops naturally, and with a freedom not customarily achieved in an auditorium or formal seminar. The proper preparation of such a mealtime is the performance of classical art. Eat lightly before the performance, to keep distracting appetites quieted, and feast together as a happy family should afterward. . . .

A presidency which establishes and sustains its direct links with the population through such events, sets the tone for the nation. This is aided by dispatches of the Executive Mansion which make available to a broader population the relevant transactions of the Executive Mansion itself. In the course of this, if the President of the United States sponsors a public dialogue on the subject of musical excellence, he will evoke a general curiosity about such matters, and so, a movement will be sparked throughout much of the population, and that movement will grow.

Since this behavior is already my established disposition, to the degree my present circumstances permit, I shall certainly do no differently in the Executive Mansion.

Fight for classical tuning takes world press by storm

Italy

La Stampa, July 10, page 1, "Carabinieri at the Opera: 'Maestro, Down with the Pitch!' "

Probably the first reaction of whoever reads the news [of the bill presented by Italian Senators Mezzapesa and Boggio] will be: "Look at that! With all the problems, the crises, the annoyances and catastrophes that are hitting us, just look at what our parliamentarians are occupying themselves with!" . . . But no, this is not the case. The bill presented by the senators . . . does not point to an unknown situation, but rather faces most opportunely a persistent abuse which exploits general indifference in order to infiltrate the nerve centers of music life again and again.

. . . The so-called "ear" is an unplumbed mystery. But what can the state do to make sure the officially recognized tuning fork is respected? Perhaps send into concert halls and opera houses squads of carabinieri or police with "perfect pitch," so that when the orchestra conductor begins the Fifth Symphony with E, E, E, C-sharp, instead of E-flat, C, they stop him and say: "Maestro, take it a little bit lower!"

Corriere della Sera, July 10, "For the Tuning Fork, the Senate's 'A' ."

In Verdi's time, convention established the tuning fork in correspondence with the natural value—as was thought—of the human voice. . . . It was modified in 1939 to 440. . . . For some, this meant going through the roof, subjecting opera voices to danger and damage. . . . It is necessary therefore to say "stop" to this tendency. . . . What is wanted is that classical works be performed with the correct tuning, as the composer intended, and to defend voices subjected to tensions which will wear them out. . . . The human voice—and here all the singers agree, from Pavarotti to Tebaldi, from Freni to Raimondi—stays where it was, because it is not an industrial product. . . .

A cry of alarm was raised recently by the Cremona stringed instrument builders . . . worried about the damage a wild tuning pitch does to 17th-18th century instruments.

What is needed now, is to find an equilibrium, with obvious variations, which saves brilliance of orchestral sound, and safeguards the voices. . . .

Italian National Radio Ora della Musica program 8 p.m., July 3.