Berlin musicians debate LaRouche plan to restore scientific tuning

by Liliana Celani

Berlin was the site of an unusual "premiere" on Nov. 16. For the first time since the Berlin Wall came down, Lyndon LaRouche's worldwide campaign to revive classical music and composition, by lowering the standard tuning from its current stratospheric heights to C=256 Hertz, was presented to a large, predominantly east German audience of instrumental, vocal, and medical students. It happened at the Charité, the Medical Faculty of Humboldt University in former East Berlin. Built in 1710 by Friedrich I as a hospital, a few steps away from the Brandenburg Gate and Humboldt University itself, it still today reminds visitors, with its statues of Wilhelm and Alexander von Humboldt at the entrance, of the necessary unity between *Geisteswissenschaften* and *Naturwissenschaften* (the mental and natural sciences).

This fight to lower the tuning was the main theme at the "Ninth Conference on the Science of Singing," organized by the Phonetics Department of the Charité each year. This year the afternoon panel session, dedicated to "Verdi's Tuning: Between Problems and Reality," took place in the old lecture room of the medical faculty, with its tiers of wooden seats filled by almost 300 students, many of whom came from music conservatories in east and west Berlin.

The panel discussion was opened by Dr. Roswitha Berger, a phoneticist from Leipzig, who pointed to high tuning, and the resulting loudness of the orchestra, as one of the main causes of "overstressing in a singer's career" today.

'The Verdi tuning'

Liliana Celani of the Schiller Institute was then invited to speak on "Verdi's tuning." She explained that the scientific tuning fork set at C=256 Hz, recommended in the 17th and 18th centuries by the leading scientists and musicians, and adopted by composers from J.S. Bach to Johannes Brahms and Giuseppe Verdi, got the name of "Verdi tuning" in reference to legislation to lower orchestra tuning to A=432 (corresponding, according to the legislation, to C=256) which Verdi promoted and had approved by the Italian Parliament in 1884. Celani read Verdi's famous letter to the Italian government, recommending A=432 as a scientifically lawful tuning fork which does "not at all reduce the resonance and brilliance of a musical offering, and sounds rather fuller, more majestic and not so shrill as high tuning."

"Music is a universal language," Verdi concluded. "Why should a note be called A in Paris and Milan, and B-flat in Rome?"

"Both Verdi's letters," Celani continued, "and the legislation of 1884 make explicit in this respect the connection between art and science, which was obvious at the time of the Italian Renaissance and the German classics, but was then denied by Friedrich Karl Savigny, David Hume, and the so-called Romantics."

The Schiller Institute's petition to revive Verdi's tuning has been endorsed mainly by singers, Celani explained, among them famous opera stars such as Placido Domingo, Luciano Pavarotti, Piero Cappuccilli, and Carlo Bergonzi, as the world press reported in 1988, when the first Schiller Institute conference on scientific tuning and classical music was held in Milan at the Casa Verdi.

But, as the conference in Berlin proved, bel canto singing is not only an art, it is also a science, and it is such "since Leonardo da Vinci wrote his treatise *De Vocie* ('On the Voice')." This connection between art and science, Celani said, was made by Wilhelm von Humboldt, the founder of the Berlin University. In his 1814 essay "Über die Bedingungen, unter denen Wissenschaft und Kunst in einem Volke gedeihen," ("On the Conditions in Which Science and Art Thrive Among a People") he wrote that "the objects of science are measurable not only in terms of the material that they conceivably deal with, but also according to the mental activity which they set into motion."

Explaining human creativity

How creativity can be measured was "discovered in 1948-52 by the American scientist Lyndon H. LaRouche, who initiated the Schiller Institute campaign to lower tuning," Celani explained. "LaRouche opposed Norbert Wiener's information theory, which may be useful for calculating machines, but cannot explain human creativity. At that time, he discovered that poetry and music, and the classical *Lied* as unifying both, are able to communicate that which cannot be communicated through information theory, because they correspond to negentropic processes of the human mind." Also in this sense, LaRouche more recently commented, "Science is based on the development and solution of paradoxes, as is classical art. Thus classical art and science are located in a substance of change, of paradox, ordering of

paradox, which is the essence of *Geisteswissenschaft*." In music, the solution of such paradoxes or dissonances can be ordered as densely as possible, he argued, as in the case of the double fugues of Beethoven.

This profound basis of classical and scientific tuning was recognized by the audience, which had a unique opportunity to watch two scientific demonstrations of it. The first was a videotape showed by Celani, recorded at the Schiller Institute conference in Milan on April 9, 1988, in which world-famous baritone Piero Cappuccilli sang two Verdi arias in both tunings, today's high tuning (A=444 ca.) and Verdi's tuning (A=432), in order to show how high tuning displaces all register shifts and therefore prevents the correct interpretation of a poetic phrase.

Dr. Seidner, who organized the Berlin conference, then showed a videotape which the Charité Phonetics Department had prepared, together with the Berlin School of Singing, on "voice straining and orchestra tuning," dedicated to W.A. Mozart, during the 200th anniversay celebration of Mozart's death. In the videotape, coloratura soprano Renate Faltin, singing teacher at the East Berlin Music Conservatory, first sang vocalizations and then the coloratura measures of Mozart's "Queen of the Night" aria (going up to a super-high, fourth register F-natural) in all tunings, starting from Mozart's tuning (A=430), to Verdi's (A=432), Vienna's tuning (A=435), London's tuning in 1939 (A=440), today's (A=445), and future tunings—unless something is done—A=450 and even A=460. When the impressive videotape ended, and the laughter of the students at the singer's facial contortions in the high tuning subsided, Faltin explained, "The main problem in the high tuning was not so much the very high notes, but the central register and the shift to the third register, which happened with a tension which cannot be sustained for a long period of time."

A conductor of the Comic Opera in East Berlin confirmed that string players are well aware of the damage produced to their instruments by high tuning, and that the Smetana Quartet tunes to A=438 for this reason. He himself had sung Bach motets in the Thomas School Choir of Leipzig, and noticed that young boys tend to sing flat, unless Bach motets are transposed half a tone lower. To his question, "How can we pay the high costs of changing all wind instruments in order to lower tuning?" Liliana Celani answered with a proposal first made by Cappuccilli: "Let's save money in opera houses by avoiding any new staging for at least one year." This was welcomed by warm applause, since in the former East Germany also people are fed up with *Regietheater*—the modernist distortion of classical works. As a singing teacher said during the discussion, the most convincing argument for low tuning is the aesthetic one, and that of respecting the composer's intention.