

## EIRMusic

# Let instruments sing as the human voice does

*At the Schiller Institute's annual summer conference in Oberwesel, Germany on July 24-25, more than 250 people participated in a wide-ranging discussion of political, scientific, and cultural issues. In last week's EIR, we published Lyndon LaRouche's keynote address. What follows is an edited transcript of a conference panel on the topic, "Bel Canto—Instruments Must Sing as Vox Humana." The speakers were musicians Anno Hellenbroich (who also moderated the panel), Arturo Sacchetti, Giampiero Del Santi, Natalia Kotsioubinskaia, and Liliana Gorini. (Unfortunately, we have to leave the musical examples to the reader's imagination, but we hope the importance of the text will be clear even without them.)*

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### Opening remarks: Anno Hellenbroich

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The title of this session, "Musical Instruments as *Vox Humana*," gives an idea of what we would like to say. I would like to welcome our eminent guests and musicians from Italy, first of all, organist and conductor Arturo Sacchetti; oboist Giampiero Del Santi, whom you heard yesterday; and pianist Natalia Kotsioubinskaia.

To make understandable what we are talking about, we can only do so, not by speaking too much about our topic, but by combining our talks with elements of demonstration. Therefore, we have chosen for this afternoon a pedagogical path in four steps: After my introduction, Maestro Sacchetti will give an idea of the project he is leading in Busseto, the hometown of Giuseppe Verdi — and not only leading in Italy, because the project has a worldwide significance — which will come to fruition two years from now; it will be a world historical moment, and he will give us an idea of what it is. Then, we will hear, through examples by Giampiero Del Santi and



*Sculpture by the Classical Greek sculptor Praxiteles of Hermes with the infant Dionysus. The genius of the work is that it portrays an idea in mid-motion.*

Natalia Kotsioubinskaia from two arias, how you can have a better approach to the instrument as *vox humana*, if you play at the lower, Verdi tuning. Third, we will hear Liliana Gorini present, with an example from a Brahms song, the aspect of coloration in the soprano voice, and in *Lieder*, which means to give the right color, in addition to the right register shift,



A scene from the Cantoria of Luca Della Robbia. “What Scopas and Praxiteles did in capturing an idea in mid-motion, here Luca della Robbia tries in stone: the idea of singing.”

and how this is needed for a musical representation of a song. And, finally, we want to give you one example from our work on Bach’s *St. John Passion*, so that you can see the miracles that the composer had written, but are very difficult to discover, and we will try to do it step by step, to see what musicians have to do to learn it.

In other words, we are confronted by a paradox. Take the Bach chorale, which we will later sing. Here we have a sheet of paper with these black notes, and the question is: What actually did the composer mean when he put down these notes? Because, only in very rare instances is the composer still alive. We had one example last night, but usually, with the Classical compositions which we have and which we play,

the composer is dead, so we cannot ask him.

How we can derive the musical idea of this composition? I remind you of the observation made by Helga Zepp-LaRouche about Maupertuis, when he proposed vivisection, to dissect criminals, in order to see how a criminal mind works—that is how far Illuminism went. If you apply the same wrong and perverted idea to music, you can say, “Dissect a dead singer and find out how a singer has sung.” Is this workable? No. So, we have to find a different approach in developing a concept, an understanding, from the history of the development of artistic ideas.

We started with the Florentine Renaissance, and looked at the picture of Luca della Robbia’s *Cantoria*. Lyndon LaRouche mentioned as one problem, as one of the solutions to the paradox, what Greek sculptors Scopas and Praxiteles did when they tried to develop, in stone, an idea in mid-motion.

In this work of Luca della Robbia, at the beginning of the Florentine Renaissance, if you look closely you can see these children singing *bel canto*. What Scopas and Praxiteles did in capturing an idea in mid-motion, here Luca della Robbia tries in stone: the idea of singing. It’s fantastic! Look at the way the mouth is shaped: It’s the round sound of *bel canto*. We can say, yes, there was discussion at that time to develop a round sound. You can see how the head is shaped, you can see that they are singing, not shouting, and you can also see that the tone is coming through the nose, through the frontal sinuses. Imagine the person who composed this, what they were thinking and discussing: How can a *bel canto* voice be trained?

Della Robbia’s carving also shows a little child singing. You can see that he started singing already at a very early age—and we saw the same last night, with Sacchetti’s little boy, Eugenio,

playing the violin. Here we learned something: to approach music from this standpoint of pedagogy. We have to convey this to people.

Now, Leonardo da Vinci, in the opening of his treatise on painting, has this fantastic idea, to say: I assign music for the presentation of the invisible. I think this is a fantastic idea, *the representation of the invisible*.

So, they were looking into how an idea can be transmitted, so that the person who listens can understand this beauty, in the way we heard, for instance, this morning, how Felix Mendelssohn described this process of beauty in his duet *Sonntagmorgen*.

To make one point very clear, in reflection of what we are



*Maestro Sacchetti addresses the music panel in Oberwesel, July 25, 1999. On his right is Anno Hellenbroich, and on his left is Liliana Gorini.*

discussing, and what Lyndon LaRouche said yesterday, and in one of the quotes he had in his article on “Prometheus and Europe” [EIR, July 23, 1999], when he said that all renaissances start by replicating the notions of those ideas which were formed during Plato’s Academy, during the Classical period. But the essential point Lyn makes, is that in the ideal that is formed in the notion of the Greek Classics or Plato’s Academy, the idea rises above the differences of spoken and written languages, and this empowers Classical musical compositions, since J.S. Bach, with a degree of immediate pre-science of universality, which is not achieved in any other non-Classical medium.

And then, you come to the actual hard work of what the musicians start to learn: The actual communication of ideas, including the artistic conceptions, occurs as if directly “from mind to mind,” not as information embodied within some transmitted literal message, but it is the image of an idea existing in one mind, generated, and thus reproduced, within another mind, which is scientific and artistic communication of principled ideas. Therefore, he writes, “Artistry — and true scientific thinking — lies within the developed capacity to see, and also to cause others to see, an idea of this quality, as such, in its non-verbal, non-literal form, as an idea in its own right.” Therefore, Lyn comments, can we understand how the composer, having this notion of a creative idea in his mind, how he then orders the notes, the words, in a way to transmit this otherwise unspeakable event for the artistic insight? That

should be the guideline for all the examples we will present to you.

And I think there is no better witness than Rostal, the teacher of Norbert Brainin [former first violinist of the legendary Amadeus Quartet]. And we have a witness, Hartmut Cramer, who heard Brainin reporting about the teaching of Rostal, where Rostal said on one occasion: “*Die Finger sind wie Esel: die tun alles was du ihnen sagst*” (“Fingers are like donkeys, they do everything you tell them to do”). So, this is an image of what an artist knows: Everything you do mechanically makes sense only if the original idea is coming from the mind, and not the technical side, if you do not concentrate on the technical aspect.

Now, we come to our first speaker: Arturo Sacchetti, organist, choir and orchestra conductor, former artistic director of Vatican Radio, has been very active in all music fields for the last 50 years. His concert career included 2,300 concerts as choir and orchestra director, organist, cembalist, and pianist. He not only recorded 150 LPs and CDs, and performed more than once, including for the Schiller Institute, Bach’s complete organ works, but also on many other occasions he played the works of Buxtehude, Mozart, and many others. Recently, he was made director of the Perosi Festival in Tortona, where we [of the Schiller Institute] had the honor last year of participating in the general rehearsal, and we saw some of the heavy battles Sacchetti had to fight with the brass section over the question of lowering the orchestra tuning.

Last year, he was made Academician of the Royal Philharmonic Academy of Bologna. He is now preparing the performance of a Verdi opera in the Verdi tuning in Busseto, in the year 2001.

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## Arturo Sacchetti: the tuning battle

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I think many in the audience know about this problem of tuning. I would like to summarize it very briefly. History left us with musical compositions, expressed in scores. Unfortunately, these scores do not indicate exactly the tuning for voices and instruments. Over the course of centuries, tuning underwent many oscillations. Safe reference points are represented by the existence of restored historical instruments. In the course of this century, we watched a recovery of historical tuning for the Renaissance, baroque, and *galante* literature. At the beginning of the century, specialized musicians started to use original instruments, or copies of them, accompanying human voices, in the lower tuning. This did not happen for the Ottocento, the 19th-century music, which includes Verdi, and which produced a lot of very important music—symphonic, chamber music, and, obviously, opera.

It is obvious that all modern performances falsify the meaning of these compositions, because they are performed at a higher tuning. Verdi himself had complained about the very high tuning. In Naples in 1884, Verdi would not authorize the performance of his opera *La Forza del Destino*, because the orchestra was tuned too high. His firm stand was emphasized in a by now-famous letter to the Music Commission of the Italian government of 1884, saying that high tuning creates problems for singers and for music.

Soon, an historical event will take place. On Jan. 30, 1901, Verdi died; in the year 2001, will be the 100th anniversary of his death. And, this fashionable event has already unleashed many initiatives to celebrate Verdi. It is obvious from what I said, that a revival of his operas will convey a false idea, unless they are played at the tuning he wanted. For this reason, we worked out a project, which will be presented very soon, to celebrate Verdi in 2001 in his own town of Busseto, in order to propose the performance of Verdi operas at A=430 Hz, both for instruments and for voices. This revival will be fundamental to rediscover the vocal and instrumental sound of Verdi. You will hear some musical examples before I present the project. I would like to remind you that there are historical instruments of the Baroque period tuned to A=415; Mozart instruments to A=423; Beethoven, A=432; Verdi A=430-435; our century, A=440, but in musical practice now, up to A=456 Hz.

Now, we will listen to an example of the differences between these tunings before I present the project.

**Liliana Gorini:** We will perform now the same selection from Verdi's *Aida*, performed first by soprano Antonella Ba-

naudi at the conference on Verdi's tuning held in the Casa Barezzi in Busseto in February 1997, and attended then by Maestro Sacchetti, tenor Carlo Bergonzi, baritone Piero Cappuccilli, and Mr. LaRouche. We do not have Antonella Banaudi here today, so you will have to settle for me. But the idea we want to convey today, since we have the pleasure of having the first oboe of Sacchetti's orchestra, Giampiero Del Santi, here, is that you should be able to hear how the oboe is used by Verdi as a human singing voice, in this case an imitation of the soprano voice singing with it. You will hear the difference of color both in the oboe and in the voice in the high tuning, and in the natural, Verdi tuning. We start with the high tuning, the piano at A=442, and then we move to Gruendler's piano, strictly tuned to C=256, A=430.

[Giampiero Del Santi tunes his oboe to a high-tuned piano, and then performs the oboe solo introducing *Aida* in the recitativo and "Oh cieli azzurri" aria. The same is then done on a low-tuned piano. Del Santi then tunes his oboe lower by changing the mouthpiece, and performs the same at A=430. It becomes clear how the oboe and soprano voice sound smoother and more lyrical, and the soprano, Liliana Gorini, does not need to shift registers on the F of "O patria mia."]

**Gorini:** We continue with the second example, which is by Ponchielli, a composer of the time of Verdi—and this is now for oboe and piano—and you will understand the question of color of the voice and the instrument: Now it is the oboe which is singing alone, as a singer. They chose Ponchielli's because it has this melodic operatic aspect, and is based on a real soprano aria, from Donizetti's opera *La Favorita*.

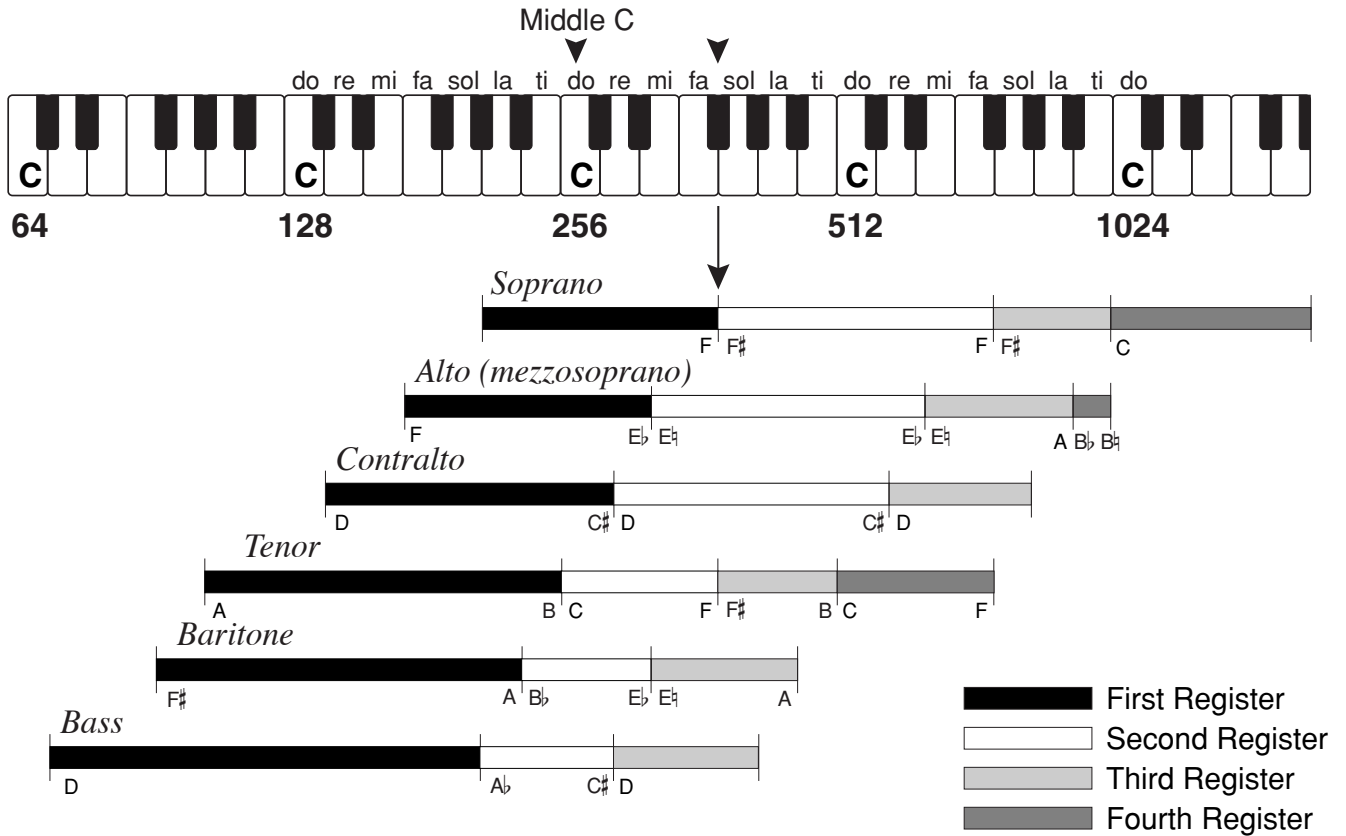
[Del Santi plays the oboe at A=456 to show how Ponchielli's sonata for oboe and piano sounds completely different in three different tunings: At A=456, the oboe does not sound at all like a human voice, but just strained; at A=442, this time with piano accompaniment, it already sounds different. But, only on the third attempt, with a piano tuned to C=256 (A=430), does the oboe really imitate the soprano voice and its color.]

**Gorini:** This sonata for piano and oboe is made from a real soprano aria from Donizetti's *La Favorita*. So, what you could hear is a coloratura soprano.

**Sacchetti:** After this example, I think the difference between the high tuning and the Verdi tuning will be clear to you. The real problem to solve, to go back to the Verdi tuning of A=430 Hz, is the question of musical instruments. Only when musical instruments will be able to keep this kind of tuning, will voices (both solo and choral voices) be able to sing in this way. What is certain, is that it is not possible to go quickly from a very high tuning to a low tuning of A=430 Hz. Both the string instruments, which are used to a certain tension of their strings, and the wind instruments, which need a special mouthpiece in order to adapt to this tuning, have to change, and the best solution is to use copies of the instruments of Verdi's time.

FIGURE 1

The six species of the human voice, and their registers



We are not yet in a condition to use this low tuning, because we lack the instruments. This is a path we have to start to go on now. But, the most important feature, is to explain to musicians why is it much better to use this tuning, rather than the high tuning they are used to. With Verdi's low tuning, these are the advantages: First of all, the color changes, because high tuning makes all the sounds very brilliant and rough. And when I speak of color, I mean the color of the instruments, and also of the voices. The fusion between instruments is a very difficult achievement for an orchestra conductor, like myself, and it becomes almost impossible with the high tuning.

High tuning also speeds up the tempo, and influences the dynamics as well. As concerns the human voice, it is obvious from the chart you published in the music manual [*A Manual on the Rudiments of Tuning and Registration, Book I* (Washington, D.C.: Schiller Institute, 1992)], that with high tuning, all register shifts, which are fundamental for *bel canto*, are misplaced (**Figure 1**). This happens because composers, particularly those who specialized in vocal repertoire, knew the

human voice and its natural register shifts perfectly well. In composing their works, they took particular care to avoid having certain difficult *fiorituras* [embellishments] straddle a register shift. At this moment, we are in a transition phase, a passage from high tuning to an attempt to recover the original, Classical tuning. The first problem we are faced with, is how to get the modern instruments we already have, to adapt to this lower tuning.

I would like to play at this point a CD which is the first example of this attempt. This is the performance of Lorenzo Perosi's *Mosè* that we did last year in the Cathedral of Tortona, at A=435-437, which was a transitional compromise. We adopted this tuning in order to allow the solo voices—four baritones, two tenors, two basses, and one soprano—to have a natural vocal extension. The work was composed in 1900, when the tuning was A=437. In the orchestral introduction, you will notice the smoothness of the orchestra, despite the fact that we have not yet reached the low tuning we want.

[Sacchetti plays the beginning of the CD until the oboe

solo, the oboeist being Giampiero Del Santi, on a very vocal part, and thereafter, the entrance of the four-voice choir.]

## The Busseto project

I would like to discuss briefly at this point the Busseto project, for the Verdi celebration for the year 2001. This project has been inspired by Mr. Lyndon LaRouche, and his book *A Manual on Tuning and Registration*, which in Italian appeared as *Canto e Diapason*, and which demonstrates the question of tuning in relation to each of the four voices. The Busseto project aims at recovering Verdi's operas, performing them at A=432. It is a rigorous project, because the idea is to create a stock of instruments which are strictly tuned to A=430. This stock of instruments will be put at the disposal of young musicians who come to Busseto to learn how to play at the Verdi tuning, in a kind of permanent master-class.

The instrumental part of the master-class will be to teach instrumentalists, and also conductors. After a period of studying and practicing this tuning, instrumentalists will be joined by singers of the *bel canto* academy of Maestro Carlo Bergonzi, who has been holding regular *bel canto* master-classes in Busseto for many years. With this joint experience, we will be able to prepare and perform Verdi operas which are connected to Busseto for particular reasons: the opera *I Due Foscari*, composed in Busseto in the Casa Barezzi; the opera *Giovanna di Guzmán*, which is the Italian version of the *Vespri Siciliani*, the only opera that was originally performed in the Parma opera theater and in the Emilia region, where Busseto is located. Also, some performances of operas composed by Verdi after 1880, which is the time when Verdi fought to lower the tuning: *Simon Boccanegra* and *Otello*.

This is the Verdi project which aims at creating, for the first time in history, a permanent orchestra tuned to A=430. This orchestra shall be joined by solo and choral voices in the performance of Verdi works.

This project will unleash a lot of polemics. Mainly because a part of the international music world supports the high tuning, without any scientific motivation, but stating that voices should adapt to the tuning of the instruments. The results of their performances are not coherent with the music world of the time of the composers. Therefore, not only works of Verdi, but all vocal, instrumental, chamber, and oratorio works of the 19th century do not correspond to the will of the composers.

The most famous singers endorsed our campaign to go back to the Verdi tuning. There have been many cases in which famous singers have summoned the first oboeist [who gives the orchestra the tuning pitch] to their dressing room, telling him or her: If you do not lower the tuning, I will not sing tonight. With this Busseto project, we aim at achieving performances which respect scientifically, musically, and from the standpoint of interpretation, the creativity and the intent of the composers.

**Anno Hellenbroich:** Thank you very much Arturo, thank you very much Giampiero Del Santi. I think what Sacchetti described is very real, many of us experienced the polemics when you propose such a project. For example, when we published *A Manual on Tuning and Registration* in 1992, there was a review in the *New York Times* which was completely hysterical around this issue. This is something in the center of our cultural fight, and we fully support what Arturo described, and some of us want to be there in one and a half years when the Verdi opera will first be performed. Now, I would like to move to the third step of our presentation, and this is a short presentation by Liliana Gorini on the question of musical color, using the example of Brahms's *Lied* "Mainacht."

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## Gorini: the 'color of the voices'

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This question of coloration has been emphasized often in the recent writing of LaRouche, one of his most beautiful is "Prometheus and Europe," which I advise you to read, because you will understand much better than in this presentation what we are trying to do, particularly on the connection between poetry and music. But, also Bergonzi and Cappuccilli, at the press conferences in Italy to announce the release of *Canto e Diapason*, said that the question of the Verdi tuning is very important, because the high tuning changes not only the register shifts, but also the "color of the voices."

Since there may be some confusion about what this means, I want to give a small example to show that the question of color of the voice goes beyond the register shift. A composer, as Leonardo da Vinci said, is also a painter: He uses colors, as he uses register shifts, in a conscious way. This is particularly clear not only in opera, but even more in a *Lied*, because it is a direct reflection of the poetry, of the human language which has by itself colors and shifts. For example, Dante, in his *De Vulgari Eloquentia*, speaks of "diesis" (sharps) in poetry. So, when you start to learn a song, you have to have all of this in mind: music, poetry, and painting, too.

I chose Brahms's "Mainacht," because I was inspired by the great German alto Gertrude Pitzinger, whom I had the pleasure of working with on this song. She told me, "Before you start the song, do not even start the first note. Think about the image and the painting, and think about this while the piano is playing the introduction." Brahms, in this case, is not just a composer, but a painter, too. I will sing the beginning of the song, and I marked on the score, blue for the dark colors and red for the light colors, and as you will see, in the beginning it does not correspond to a register shift. I will sing it first as it is meant by Brahms, and then again in a lighter color, to show that you can change color consciously when you sing.

[She sings the first page of the song.] Marian Anderson,

who performed this song beautifully, obviously does a better dark color than I. But, if you want, you can also do it lighter than that, in what Maestro José Briano used to call an *innocente* sound, a white sound. [She sings it white, opening all vowels and giving less support to the voice.]

On the following page you do have a change of color which corresponds to a register shift up to the third register (head voice), on F-sharp and G, and then goes back to the dark color on the part — which even Lotte Lehmann explains in her book on *Lieder*, when, after watching a couple of doves singing their delight (like a flute), the singer continues, “But I go away seeking darker shadows,” which does go down to the first register (chest voice) and is also darker. In this case, color and registration do correspond.

Now, this is a poem by Hoelty, who lived before Schiller, and in this case, as in most cases of poetry, there is a literal meaning, and there is a meaning which goes beyond the literal meaning. Great singers see this, such as Lotte Lehmann; in her book about *Lieder*, she writes that you have to go beyond the description of nature (the moonlight, the bushes, the doves) and understand the metaphor hidden in the poetry and the music together. And, in order to communicate this idea to the audience, you have to use what Leonardo indicated in his treatise on the human voice, “De Vocie,” as the use of vowels and their color.

In Leonardo’s drawings for the treatise, there are vowels which are darker, and vowels which are brighter. In the first strophe of this poem, dark vowels such as “u,” “oe,” and “o” predominate, while in the last strophe, which is a hopeful image, you have a predominance of more open and lighter vowels such as “e” and “a” (like *lächendes Bild*, smiling image, or *Seele*, soul), and what Brahms does, is he puts this more hopeful and lighter color in the piano accompaniment too, which moves more. [She sings the last strophe of the *Lied*.]

To conclude, I want to emphasize the connection between music and politics, because the musicians, composers, and poets who have been mentioned here, in many cases were also political figures. In the case of Verdi, he was not only a composer, but he was also a member of the Italian Senate and a builder of the Italian nation, and he based many of his operas on political subjects. For example, one of his most political operas, *Simon Boccanegra*, is based on a letter by Petrarca, who himself was not only a poet but also a diplomat, and who invited Italy to follow its mission of developing the seas rather than fighting each other domestically, as happened between Genoa and Venice at the time of Petrarca. Other compositions are based on Schiller. Verdi himself writes that he was taught by Dante, Petrarca, Shakespeare, and Schiller. As Steve Meyer has shown in his work on Moses Mendelssohn [*Fidelio*, Summer 1999], poets and musicians and philosophers built the German nation. That’s why for us, culture, in this sense, is the best way of doing politics, because it does build a nation of citizens. Thank you.

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## Hellenbroich on the ‘St. John Passion’

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**Editor’s note:** *The final presentation, by Anno Hellenbroich, was on Bach’s St. John Passion. Because of the extensive interplay between the speaker and the performers, which is difficult to follow on the written page, we publish only a short excerpt of Hellenbroich’s remarks.*

We come to the final part of this pedagogical approach to understand better the complexity of the question, and we use a road which is very true historically, and to show you why, I will read to you a short sentence from the letters of Carl Philipp Emmanuel Bach to the future biographer of his father, Johann Sebastian Bach, namely Johann Nikolaus

## The campaign to lower the tuning pitch

More than a decade ago, on April 9, 1988 at the Schiller Institute’s conference “Music and Classical Aesthetics” at the Casa Verdi in Milan, Italy, an international campaign was launched to restore the original pitch used by all Classical composers from Bach through Brahms and Verdi. This lower tuning, at middle C=256 Hertz, is grounded in the physical laws which God has written into the universe, by His creation of the human singing voice.

The campaign was originally inspired by Lyndon H. LaRouche, Jr., whose collaborators, led by Italian soprano Liliana Gorini, uncovered the historical evidence that Giuseppe Verdi, Italy’s greatest composer and nation-builder, had in 1884 demanded a *ceiling* for pitch at a diapason of A=432, based upon C=256. They showed that Verdi had gotten the Italian government to pass a decree to this effect, by demanding: “Why should the note called A in Paris or Milan become a B-flat in Rome?”

At the April 1988 Milan conference, the great Italian baritone Piero Cappuccilli made history, demonstrating the superiority of the lower “Verdi A.” Singing Verdi’s “O de’ verd’anni miei” from *Ernani*, and “Il balen” from *Trovatore*, first at the low C=256 pitch, and then at modern high pitch, he made clear which was “the natural voice,” as he put it. Verdi’s tuning gave the far more natural tone.

The musical proof of the principle was simple. Schiller Institute researchers discovered that the C scale itself was created during the 15th-century Florentine Golden Renais-

Forkel, which he wrote in January 1775, more than 200 years ago.

“His students had to start studying the pure thorough bass in four parts; he then proceeded to chorales. In the exercises, he at first set the basses himself and made the pupils invent only the alto and tenor parts. By degrees, he let them also set the basses. Omitting the thorough bass and the introduction to chorales is without any doubt the best method to learn composition, as far as harmony is concerned.”

Therefore, we have chosen as an example, one of the chorales of Bach’s *St. John Passion*, No. 26, to show one aspect, and the aspect we would like to show was formulated by Lyndon LaRouche in a memorandum at the end of March, when he said that all instrumental performers must practice *bel canto* vocalization and singing as a prerequisite for competent instrumental practice and performance. Instrumental-

ists must sing the relevant *bel canto* singing voice in that registration in their mind, and oblige the instrument to perform *vox humana* in that sense. Instrumental music is for monkeys and electronic devices, not for people, Lyn says. For string instruments, this involves the challenge of using fingering and bowing to create appropriate *bel canto* forms of singing voice registration. The problems of virtually impossible or remote fingering positions can be addressed only through appropriate methods of bowing. The human singing voice, with its appropriate singing voice registration, must sing in the mind, while the performer obliges his or her instrument, including the keyboard instruments, to sing accordingly.

Now I would like to ask the instrumentalists to come here and also the chorus, so that we can briefly present to you the examples which we would like to perform. . . .

sance, based on a program of teaching all children to sing *bel canto*, as they are taught to read and write, at ages 5-10. The Florentines found that the average child at that age had a *register shift* at what is today known as F-sharp, and so they built the musical scale to fall half below, and half above, that inflection point. A scale so derived starts on C=256 Hz, for which the A is between 430 and 432 Hz.

Maestro Cappuccilli showed that Verdi intended the *poetry* of his arias to be colored in a precise way by these vocal registers, which are retained in adult voices, such that some words must fall below, and some above, the singer’s register shift. When the pitch is raised above C=256, the poetry ends up in the wrong place.

### **A Schiller Institute petition**

In July 1988, two Italian Senators announced in Rome at a Schiller Institute press conference, a bill to make A=432 mandatory at state institutions. Passage was sabotaged by the Italian Communist Party, but the Schiller Institute began to circulate the bill as a public “Petition to Lower the Standard Pitch,” and thousands of the world’s leading singers have signed it.

Signators include Dame Joan Sutherland (soprano), Carlo Bergonzi (tenor), Piero Cappuccilli, Luciano Pavarotti (tenor), Placido Domingo (tenor), Sherrill Milnes (baritone), Christa Ludwig (mezzo), Giuseppe di Stefano (tenor), Elly Ameling (soprano), Birgit Nilsson (soprano), Dietrich Fischer-Dieskau (baritone), Cornelius Reid (leading vocal textbook author), and conductor Sir Richard Bonyge, to name a few.

In Cremona, Italy, in November 1988, violinist Dr. Norbert Brainin, founder and primarius of the legendary Amadeus Quartet, added leading instrumentalists to the campaign to lower the pitch when he tuned down his price-

less Stradivarius violin and demonstrated the superiority of the C=256 tuning for fine strings, in a presentation at the Cremona International Institute for Violinmaking. In Munich, Germany, in December 1988, Dr. Brainin in concert demonstrated Bach’s Violin Sonata No. 1 at both C=256 and A=440.

In New York, in January 1990, Conductor Anthony Morss led the Lubo Opera in the Schiller Institute’s full-length performance of Beethoven’s *Fidelio* at C=256, at Lincoln Center with original instruments.

In January 1991, the Schiller Institute published the ground-breaking book *A Manual on Tuning and Registration, Book I*, which spells out the musical proof for the theory advanced in Milan. Using more than 300 examples from original scores of Mozart, Verdi, and other masters, the book documents that all Classical vocal music must be performed at C=256.

On April 8, 1993, at Carnegie Hall’s Weill Recital Hall in New York, the era’s leading *bel canto* tenor, Carlo Bergonzi, presented a public master-class to demonstrate the examples in the Schiller Institute’s *Manual on Tuning*. Excerpts from a dozen arias were demonstrated first at the scientific “Verdi pitch” of C=256 (A=432), and then at the 1993 “New York” pitch which Steinway & Sons had just raised officially to A=442. “Within a few years, opera itself might even vanish,” Bergonzi warned the 230 singers and voice teachers in the audience.

On April 8, 1993, America’s leading singer, Marian Anderson, also passed away. Since that day, the Schiller Institute has organized dozens of “Marian Anderson Memorial Concerts” at the C=256 pitch across the United States and in Europe, as a drive to educate citizens in large numbers about the science of Classical music.

—Kathy Wolfe