

Scientific musical tuning comes to the Arab world

by Muriel Mirak-Weissbach

The Schiller Institute, which has pioneered the campaign to lower musical tuning to the scientific pitch of $C=256$, opened a new exciting front in the worldwide musical revolution by bringing the campaign to Jordan. During the first week of February, Sheila Jones, regional coordinator of the Schiller Institute in the American Midwest, travelled to Amman, Jordan, on the invitation of the National Music Conservatory. Working with individual students, teachers, as well as parents of conservatory students and music lovers, Mrs. Jones presented the basic outlines of the Schiller Institute's *A Manual on the Rudiments of Tuning and Registration*.

The visit could not have occurred at a more opportune moment, as Jordan is embarking on a pioneering project, launched by Her Majesty Queen Noor, to teach children music, not only in the conservatory, which was founded for that purpose in 1986, but in the school system as a whole. As a brochure of the National Music Conservatory/Noor Al Hussein Foundation details, the NMC has a special task to help fulfill Jordan's commitment "to develop a literate and skilled music community capable of responding to the challenges of the 21st century." The conservatory has rapidly grown from a string program with three Jordanian teachers and 45 students (between 6 and 12 years old), to an institution with six programs, 300 students, and 37 members of the faculty. The school's pioneering role in introducing musical instruction to Jordanian children was acknowledged at the annual Jerash Festival, initially, in a symbolic way; young performers were encouraged to take part, without being subjected to heavy challenges and criticism. In 1992, the NMC's participation in the Jerash Festival signalled "a qualitative move towards firmly establishing music ensembles that should exist in the cultural structure of Jordan and strive for excellence and professional musicianship."

The bel canto method

Mrs. Jones presented the basic concepts of the bel canto method and tradition, demonstrating the scientific basis for tuning at $C=256$, and illustrated, through well-known classical pieces, the way in which higher tuning distorts the musical significance of the composer's ideas. Most importantly, Mrs. Jones established the primacy of the singing voice in all music, not only theoretically, but in practice, by leading the students, teachers, and parents to discover their own singing

voices. Many of the students, who came for individual instruction in the mornings, were self-taught and presented a wide variety of questions; one young woman had developed a beautiful soprano voice, but with limited range, and wanted to expand it. Through simple bel canto vocalization exercises emphasizing the three distinct voice registers, Mrs. Jones helped her discover capabilities in her chest and head voice. Others, including women who have performed professionally, were eager to explore the implications of registration for musical interpretation.

Three public presentations during the week were devoted to this aspect of the work, in which Mrs. Jones used video clips and other audio-visual aides to show how higher tuning violates the natural laws of the human signing voice, as well as the laws of classical composition based upon it. World famous musicians like Piero Cappuccilli and Norbert Brainin were shown demonstrating the musical difference between the two tunings for the baritone voice, in operatic arias, and the violin, in an unaccompanied piece by J.S. Bach. In both cases, the superiority of the scientific tuning was obvious to the listeners; the question that arose was, "Why would anyone want to raise the pitch and ruin the music?" Thus, the historical and political nature of the tuning fight became the focus of discussion, leading to a lively debate regarding the criteria needed to judge the music of, for example, Richard Wagner, a composer who helped destroy scientific tuning and with it, the classical composition method. Mrs. Jones quipped, "If you want to consider Wagner a great composer, that's your choice; but consider the fact that he had to destroy music to write his own. Furthermore, ask yourselves why his leading singers, competing against huge orchestras playing at ultra-fortissimo volumes, and expected to sing at $A=460$ Hz, dropped dead on the stage while performing his operas."

Music for all children

In sessions with schoolteachers, the focus was on pedagogy for the very young. Jordan's national music program foresees the introduction of music from kindergarten on, in all schools, which means that kindergarten teachers who have not heretofore had to teach music, must be trained very rapidly. Drawing on the experience of the Schiller Institute in building children's choruses in Mexico and in the United



Sheila Jones teaches a class on music and scientific tuning in Chicago, 1987.

States, Mrs. Jones emphasized the fact that, since all music is based on the singing voice of the young boy soprano (as the famous Florentine bas-reliefs of Luca della Robbia document), it should be most natural for children to learn to sing. She stressed the importance of making singing a game for very young children, suggesting that the children cut out colored notes, red, yellow, and blue, corresponding to the registers, and play with them as they sing, so as to associate the registral shifts with lively, colorful forms. When the teachers present pointed out that those children who do sing in Jordan generally sing with a “white” voice, closer to a shout than to music, Mrs. Jones introduced the basic techniques used to “round” the voice, elevate it into its lawful place, and vibrate the tone. As in all the lectures and private lessons, the point was made most forcefully when the participants spontaneously put the ideas to a direct test, experimenting with their own voices and learning to sing.

By the end of the week, literally everyone in the conservatory had begun to sing.

The high-point of the week’s workshops came when Director Fakhoury, himself an accomplished musician and composer from Lebanon, applied the concepts to the string orchestra of the conservatory. The orchestra, which includes tots who are just beginners as well as accomplished students and their teachers, was asked to perform the first movement of Bach’s Brandenburg Concerto at the common pitch of $A=440$ Hz and then at the scientific tuning of $A=432$ ($C=256$). Students and teachers immediately heard the musical difference, in the clear articulation of voices, which made

it possible for each instrument to be heard.

To translate the point Mrs. Jones had been stressing all week with individual string students, Fakhoury had the orchestra “sing” its music. First, he asked the players to put down their instruments and sing their parts for the first movement. Then, he had them sing and play their parts at the same time. Finally, he had them play only, but continuing to “sing in the head.” The qualitative leap made by the orchestra through this exercise, performed at the lower tuning, was astounding. Students were thrilled, as the piece suddenly came alive. One violinist said the piece “made sense for the first time.” Another, a 12-year-old boy, reporting on the session in a later class with adults, said that the first time they had played, at 440, “it sounded miserable,” but that afterwards, it “sounded beautiful.” Most important was the fact that each orchestra member could fully hear, as a sovereign musical voice in dialogue with other musical voices, his or her own voice. This revolutionized the self-conception of each component.

Fakhoury seized on this feature, and commented, “At the higher tuning, every musician feels overshadowed by the first violin, which is dominant, whereas at $C=256$, every voice is heard.” Transposing the musical fact into social terms, he added, “It is as if the lower tuning allowed everyone in the orchestra to play a crucial role, and to hear that this crucial role is grasped. Society,” he said, “is like an orchestra, in which each individual has a very important part to play”—a particularly relevant observation in the context of Jordan’s ongoing process of democratization.