

Precursors to the Formation of the Columbia-Princeton Electronic Music Center

During the late 1940s and early 1950s a few composers conceived of an electronic music center in which tape recordings could be produced. What was born was the Columbia-Princeton Electronic Music Center, which began operation in 1959 and presented its first concert in May of 1961. A number of composers and circumstances contributed to this event.

Otto Luening, born in 1900, studied in Switzerland with Ferruccio Busoni. In his *Sketch of a New Esthetic of Music* (1911),¹ Busoni predicted a revolution in harmony, convinced that instrumental music had reached a dead end. He also suggested a scale of thirty-six tones. As a teacher, Busoni expected experimentation and analysis from composers. Luening's first exposure to these ideas was in 1918. During the 1920s Luening developed what he called acoustic harmony. This concept uses the overtone series as a source of harmonic materials, becoming the harmonic-dissonant norm for the piece. This approach eventually led Luening to compose electronic music.

Vladimir Ussachevsky was born in Manchuria, China, of Russian parents, in 1911. After studying at Pomona College and receiving a doctorate at Eastman School of Music in 1938, he worked in various schools and in the State Department, due his language skills. In 1951, he began post-graduate study at Columbia University with Luening.

Very technical in approach, Ussachevsky developed four experimental compositions for demonstration, held at Columbia on May 8, 1952. There has been much debate about the actual date of this concert. Many reference sources have identified May 9 as the date, which is identical to the first concert of the CPEMC. Insisting it was a different date, Ussachevsky and some sources stated May 5 as the date. The calendars for

2008 and 1952 are identical. I discovered this while using a perpetual calendar from the *World Almanac* to determine dates referenced in concert reviews. May 4, 1952 was a Sunday.² On that date the *New York Times* printed an announcement that the following Thursday would be a Composer's Forum. Holding the Composers' Forum on Monday would have deviated from the norm. Also reviews printed on May 9 referred to the forum as "last night." Carl Rahkonen was my co-author in *Vladimir Ussachevsky: A Bio-Bibliography*³, and a student at the University of Utah in Ussachevsky's class, "A Composer Examines His Century." Even he had doubts about this re-dating until he observed some of the manuscripts of Ussachevsky held at the Library of Congress, in which the diagonal line in the 8 is so light that the numeral can be mistaken for a 5.

Virgil Thomson, reviewing in the *New York Herald Tribune* of May 9, 1952, wrote that the electronic pieces "were utterly charming and ...delighted the audience no end."⁴ Ussachevsky describes the one of these, *Transposition*, as the first and simplest principle in making tape music. "Most tape recorders have two speeds, and so any sound you record is immediately available in two versions, the original and one an octave higher -- or an octave lower. If you have two tape recorders, then any sound can be recorded up or down as many times as one wishes."⁵ All sounds in *Transposition* are derived from a single tone, the lowest "A" on the piano, which is 27.5 c.p.s.

During the summer of 1952, Henry Cowell allowed his two fellow composers to use his home in Woodstock, New York to produce *Sonic Contours*, and *Fantasy in Space*. Some historians errantly cite this as the location of the performance. On Tuesday, October 28, 1952, a concert was held at the Museum of Modern Art under the auspices of the American Composers Alliance and Broadcast Music, Inc. It began with *Suite for Solo*

Violin and Solo Piano with Orchestra by Lou Harrison and the premiere of *Eight Etudes and a Fantasy*, for woodwind quintet by Elliott Carter. Then Luening and Ussachevsky loaded speakers onto the stage. Writing in *Horizon*, David Randolph called it “the beginning of a new era in the annals of music in America.” *Sonic Contours* began with a “low rumble, suggesting the sound of the very lowest notes on the piano... With this hearing (I hesitate to use the word performance) of Vladimir Ussachevsky’s *Sonic Contours*, tape recorder music had made its official bow in the United States.”⁶ One segment consisted of voices in a sped-up conversation between Ussachevsky, his wife Betty, and audio engineer Peter Mauzey.

This was followed by three works of Luening. The composer describes *Low Speed* as “an exotic composition that took the flute below its natural range.” *Invention in Twelve Tones* was based on a twelve tone row with complex contrapuntal combinations. *Fantasy in Space* is an impressionistic piece using flute sounds. Nat Hentoff in *Downbeat* described it as “most successful because of its firm structure involving a basic melodic line to which Luening taped other lines and accompanying harmonic figures in a pungently cohesive fusing.”⁷

Reaction to these works was strong. In *Musical America* Ronald Eyer stated “the Ussachevsky and Luening pieces for tape recorder were frankly experimental and not too encouraging.”⁸ But most saw favor in the new timbres. In the *New York Herald Tribune* of October 29 Jay Harrison described “the sound of echo, the sound of tone heard through aural binoculars. It is vaporous, tantalizing, cushioned. It is in the room, yet not a part of it. It is something entirely new.” *Time* magazine on November 10 declared “the twentieth century instrument is the record machine--a phonograph or tape recorder.”

The program was broadcast over various stations, and in December, Dave Garroway invited Luening and Ussachevsky to NBC Television for an appearance on *Today*. Luening recalls that “we were met at the studio by a member of Musicians Local 802, who asked if I had a union card. I said, ‘No, but if any flutist in the union can improvise the program, I will be glad to have him take over.’ That settled the matter.”⁹

The first composition to combine orchestral and tape music was *Rhapsodic Variations for Tape Recorder and Orchestra*, a collaboration of Luening and Ussachevsky which predated by a few months Edgard Varèse’s *Deserts*. Soon after the success of *Rhapsodic Variations* in March of 1954, Alfred Wallenstein of the Los Angeles Philharmonic requested that Luening and Ussachevsky produce an orchestral paraphrase of *Fantasy in Space* and *Sonic Contours*. Luening later recalled that “transcription proved a post-graduate course in notation and ear training for the composers.”¹⁰

The composition was a *A Poem in Cycles and Bells for Tape Recorder and Orchestra*, premiered on November 18, 1954. As with the earlier collaboration, each composer was responsible for approximately half the work. In this one, Luening was first. After a two minute introduction, the material from *Fantasy in Space* is heard, accompanied by the orchestra. An interlude of strings ushers in the sound of *Sonic Contours*, as Ussachevsky's imprint is laid upon the work. The composers introduced interaction between the orchestra and tape.

The significance of the works performed in 1952, and those that followed, may be seen in the foundation of the Columbia-Princeton Electronic Music Center. During the

mid-1950s Luening and Ussachevsky toured several European electronic studios, to survey and evaluate international developments in electronic music.

The Center was originally conceived as a network of studios, but the Rockefeller Foundation desired only Columbia and Princeton, believing the four composers there could work well together. While they shared the view that electronics could expand the musical horizon, Luening and Ussachevsky considered the tape to be an extension of the orchestra or instrumental ensemble. Babbitt excelled in his use of the synthesizer. Ussachevsky, while editing the notes for the Tenth Anniversary recording, assessed his colleague's contribution as such: "Milton Babbitt's works for the RCA Synthesizer were the first to demonstrate impressively the subtle shading of electronically generated materials achieved by careful balancing of programmed controls over amplitude, timbre and time."¹¹

The Rockefeller Foundation, which had almost rejected the proposal after some board members heard a recording of the "strange sounds,"¹² approved the grant of \$175,000; space would be provided at Columbia University. The Center came into existence on February 20, 1959, under the direction of Otto Luening and Vladimir Ussachevsky of Columbia, and Milton Babbitt and Roger Sessions of Princeton, with Ussachevsky serving as the first chairman. Many composers would use this studio to compose new works, among them, Edgard Varèse, Chou Wen Chung, Alice Shields, and Pril Smiley.

In March of 1960, Leonard Bernstein conducted a Young Person's Concert, entitled "Unusual Instruments of Present, Past and Future," with the Luening-Ussachevsky collaboration, *Concerted Piece for Tape Recorder and Orchestra*. It begins with a

recurring five-note theme in the first section, composed by Luening. His is one of sophisticated electronic bell tones and more gradual manipulation. Those of the second part, composed by Ussachevsky, are more percussive, and include sounds resembling glissandos and oriental gongs; he refined some of these techniques in his *Suite from No Exit*. Both composers increased the interplay between the tape and the orchestra. Once again their music evoked varied responses from the critics. Arthur Cohn described it as a “sensible musical effort,” utilizing new sound techniques and vivid new timbres.¹³ However, Peter Dickinson, writing in the *Musical Times*, viewed this as a “poor synthesis or antithesis of live and prefabricated music...[a] venture...as hazardous as the combination of a symphony orchestra and a jazz band.”¹⁴

The following spring, the Columbia-Princeton Electronic Music Center presented its initial concerts in the McMillin Theatre at Columbia University on May 9-10, 1961. At the opening concert, Jacques Barzun presented introductory remarks to an invited audience from New York and elsewhere: “Your presence here, at a concert of electronic music, is a compliment to the composers...No doubt your expectations are mixed. You are ready to be surprised, to have your curiosity satisfied, and possibly even to experience snatches of enjoyment as you would at an ordinary concert. If that is your state of mind I am fairly sure you will not be disappointed.”¹⁵

Then, seven new works became part of the sonic landscape: *Electronic Study no. 1* by Mario Davidovsky, *Leiyla and the Poet* by Halim El-Dabh, *Creation Prologue* by Vladimir Ussachevsky, *Composition for Synthesizer* by Milton Babbitt, *Stereo Electronic Music No. 1* by Bulent Arel, *Gargoyles for Violin Solo and Synthesized Sound* by Otto

Luening, and *Symphonia Sacra* by Charles Wuorinen. This concert evoked many heated statements both pro and con.

Luening had recalled that while Douglas Moore was interested in the work he and Ussachevsky were doing, Paul Henry Lang “neither listened, watched, nor visited our laboratory. He seemed to hope that electronic music would just fizzle out.”¹⁶ This was later borne out in Lang’s articles in the *New York Herald Tribune*, entitled “Dictatorship of the Tube” (May 21), and “Music and Musicians: The Chaos Machine” (May 28). Otto Luening described Paul Henry Lang as the “master of ponderous headlines.”¹⁷ Lang had allegedly misquoted Barzun, who replied: “Your second-hand report of what I am supposed to have said in opening the concert of electronic music at Columbia University shows again how hard it is to insinuate a fresh notion into the mind even of the judicious and interested.”¹⁸

But the fresh notions were in fact assimilated into the society at large. A mere fifteen years after *Rhapsodic Variations* and *Poem in Cycles and Bells*, Luening's electronic works were considered conservative by some. When a Luening piece was played at a European festival of avant-garde music in 1969, a Romanian critic grumbled “We did not come here to listen to Waldteufel and Tchaikovsky.”¹⁹

In its first eighteen years, over 65 composers from nineteen countries used the Columbia-Princeton Electronic Music Center to realize nearly 300 compositions.²⁰ Today there are two independently operated electronic music studios at Columbia and Princeton. There are also hundreds more throughout the United States. But the seed was planted with the CPEMC.

¹ Ferruccio Busoni, *Sketch of a New Esthetic of Music* (New York: G. Schirmer, 1911)

- ² “Perpetual Calendar,” in *The World Almanac and Book of Facts*, 1996 (Funk & Wagnall’s Corporation, 1995), 310-311.
- ³ Ralph Hartsock, and Carl Rahkonen. *Vladimir Ussachevsky: a Bio-Bibliography* (Westport, Connecticut: Greenwood Press, 2000)
- ⁴ Virgil Thomson. “Composers’ Forum,” *New York Herald Tribune*, 9 May 1952. Reprinted in *Tape Music, 1952-1954: Composers Otto Luening, Vladimir Ussachevsky*. 1954.
- ⁵ Eugene Bruck. Liner Notes to *Sounds of New Music* (New York: Folkways Records, FX 6160, 1962), [2]
- ⁶ David Randolph, “A New Music Made with a Machine,” *Horizon* 1, no. 3 (Jan. 1959): 51-52.
- ⁷ Nat Hentoff, “Counterpoint,” *Downbeat* 20 (29 July 1953): 8.
- ⁸ Ronald Eyer, “Works for Tape Recorder Played in Stokowski Concerts,” *Musical America* 72 (15 Nov. 1952): 8.
- ⁹ Otto Luening, “Origins,” in *The Development and Practice of Electronic Music*, ed. Jon H. Appleton and Ronald C. Perera, 17 (Englewood Cliffs, N. J.: Prentice-Hall, 1975).
- ¹⁰ Otto Luening, “An Unfinished History of Electronic Music,” *Music Educators Journal* 55 (Nov., 1968): 135-136.
- ¹¹ Vladimir Ussachevsky, Handwritten edits to *Tenth Anniversary, Columbia Princeton Electronic Music Center*, and “About the Columbia-Princeton Electronic Music Center,” Liner notes from *Tenth Anniversary, Columbia-Princeton Electronic Music Center*. Composers Recordings CRI 268, 1972.
- ¹² Otto Luening, *The Odyssey of an American Composer: The Autobiography of Otto Luening* (New York: Charles Scribner’s Sons, 1980), 553.
- ¹³ Arthur Cohn, “New York Philharmonic,” *Musical Courier* 161 (May 1960): 18.
- ¹⁴ Peter Dickinson, “The Avant-Garde in New York: Spring 1960,” *Musical Times* 101 (June 1960): 377.
- ¹⁵ Jacques Barzun, “A Request for the Loan of Your Ears,” in *Critical Questions on Music and Letters, Culture and Biography, 1940-1980*, ed. Bea Friedland (Chicago: University of Chicago Press, 1982), 63.
- ¹⁶ Otto Luening, *The Odyssey of an American Composer*, 547.
- ¹⁷ Otto Luening, “An Unfinished History of Electronic Music,” 141.
- ¹⁸ Otto Luening, “An Unfinished History of Electronic Music,” 142.
- ¹⁹ Genevieve Marcus. “New Concepts in Music from 1950 to 1970: A Critical Investigation of Contemporary Aesthetic Philosophy and its Translation into Musical Structures.” (Ph. D. diss., UCLA, 1973), 203.
- ²⁰ *The Columbia-Princeton Electronic Music Center and the computer music programs at Columbia and Princeton Universities, Accomplishment and Promise* (New York: CPEMC, March, 1977). From the Vladimir Ussachevsky Collection at the Library of Congress. This was written while Ussachevsky was Chairman of the Committee of direction for the CPEMC.