

Research Note

MARIO DAVIDOVSKY'S "META-INSTRUMENTS"

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ABSTRACT

Mario Davidovsky (b. 1934) is regarded in the US as one of the most important pioneers of electronic music. He is known for his twelve "Synchronisms" (1962-present) in which acoustic instruments are paired with fixed electronic sound. Davidovsky's innovations are essentially musical rather than technical: he has created a personal language made up of hybrid electronic and instrumental sound elements, creating 'meta-instruments,' and characterized by constant shifts in time/spatial perspective, timbre, and narrative continuity. *Synchronisms* #10 (1992) for guitar and pre-recorded electronic sound displays all of these ideas, which I will summarize and illustrate.

1. INTRODUCTION

Mario Davidovsky (b. 1934) is regarded in the US and Europe as an important pioneer of electronic music. He is best known for his twelve *Synchronisms* (1962-present) in which acoustic instruments are paired with fixed electronic sound. Davidovsky's innovations are essentially musical rather than technical: he has created a personal language made up of hybrid electronic and instrumental sound elements, creating 'meta-instruments,' and characterized by constant shifts in time/spatial perspective, timbre, and narrative continuity. *Synchronisms* #10 (1992) for guitar and pre-recorded electronic sound displays all of these ideas, which I will summarize and illustrate.

Born in Medanos, Argentina, March 4, 1934, Mario Davidovsky is the son of immigrant Polish Jewish parents who arrived in Argentina at the turn of the century. Aaron Copland invited Davidovsky as a Fellow to Tanglewood for a performance of his *Noneto* in 1958. Working closely with Copland, Davidovsky met Milton Babbitt, and in 1960 he returned to the United States under a succession of Guggenheim and Rockefeller grants at the Columbia-Princeton Electronic Music Center. He has remained there since. Davidovsky is a member of the American Academy of Arts and Letters, and the Fanny P. Ma-

son Professor of Music, Emeritus, at Harvard University. He is the former Director of the Columbia/Princeton Electronic Music Center. *Synchronisms* No. 6 was awarded the Pulitzer Prize in 1971.

The title "*Synchronisms*" refers to the integration of electronic and acoustic sound, to the synchronization of the player and prerecorded sound by means of a carefully notated score, and to the interpenetration of different temporal levels active throughout each piece.

There are excellent recordings of many of the *Synchronisms*; but recordings can't replace the experience of alive performance of these works, because manipulation of acoustical space is an essential part of their composition. Davidovsky has said, "I started to think about space in the same way that Schoenberg taught me about *klangfarbenmelodie*. I was thinking about 'spacefarbenmelodie,' with space being almost like a color." [1] This spatial manipulation recalls Edgard Varèse's concept of sound projection, where different sound strata are projected by dynamics, envelope and concentration of frequencies, so that certain events are heard "in front of" others, so to speak.

The creation of "meta-instruments" is the most salient feature of the *Synchronisms*. In *Synchronisms* No. 6 for piano, he writes, "In this particular piece, the electronic sounds in many instances modulate the acoustical characteristics of the piano, by affecting its decay and attack characteristics. The electronic segment should perhaps not be viewed as an independent polyphonic line, but rather as if it were inlaid into the piano part." [2]

Disjunction is a characteristic feature of Davidovsky's music for purely acoustic instruments, as well as electronic music; indeed, much of his instrumental music draws on ideas he developed in the electronic medium. Dramatic registral, timbral and dynamic shifts project pitch structure, which is chromatic but not serial. Davidovsky thinks of each of his works as a multiple narrative, as he explains in the following remarks, which I include despite its length, because it precisely captures the quality

of a conversation with Mario:

I will begin the piece, more often than not, with a statement like a motive. I try to make a statement in a similar manner to how Beethoven would present a theme in a symphony—very consistent and cohesive and natural and elegant. In my case, I will construct that kind of statement out of motives that are essentially very different from each other. You could say that each of those motives have their own implied rhythm, their own implied harmony, even their own character. Then what I do, more or less looking back at Beethoven, is to take those motives, and actually generate a different piece of music. Instead of constructing voice leading, I will develop strata. You could say that Carter does stratification, but the difference is that Elliott seems to talk about each instrument as a different person. In a way, my case involves one person telling four stories—the one person is the remnant of the voice leading. What I like to think I do is that each of those motives develops their own trajectory. It's almost like super-glorified voices that develop a simultaneous story. Even though they might seem completely unrelated, eventually the four voices come together. Let's go back to the bunch of motives that I have in my theme, one is sweet, etc. . . As the process of the piece begins, take the sweet guy, rework the material in such a way that it becomes bitter. The next time, go back and make it dancing and funny. What I like to do expressively is take all of these motives that have a certain character and make them imitate every character that exists in the *commedia dell'arte* so to speak. To a certain extent, when you get to the end of the piece, all the motives equal one, like very different types of brick building materials that are capable of transfiguration. In that context, all the materials are mastered and twisted, and by the end they are very at peace with each other. I use this approach as a way to compensate for the fact that I have chosen not to use triadic harmony.[3]

Despite all this, Mario's music is essentially lyrical, with constant veiled references to the Classical tradition, especially the Beethoven Quartets. The 10th *Synchronism* is clearly an homage, if not to the Flamenco tradition itself, then to some characteristic features of Flamenco guitar technique.

2. SYNCHRONISM #10

The 10th *Synchronism* is an excellent example of Davidovsky's musical world. The electronic portion of the work is unusual in that it is partially made from pre-recorded acoustic material, including highly modified guitar samples, while previous *Synchronisms* had been created in a "classical" electronic music studio, by recording and splicing electronically generated sound.

We only have time to begin a discussion of this piece, and to point out aspects in common with the other *Synchronisms*.

The guitar is alone for more or less the first two-fifths of the piece. In its opening measures it introduces motives that will dominate both aspects (See A, Example 1.) Each idea in this solo passage has an analogue and development in the electronic sound. In fact the guitar itself can be thought of in this piece as a kind of "natural" electronic music studio. The electronic sound enters *al niente*, and a first time listener might mistakenly believe that the electronic sound enters before this point as a result of the guitar writing.

The image shows a page of musical notation for 'SYNCHRONISMS NO. 10' by Mario Davidovsky, edited by David Starobin. The score is for Guitar and Tape. It features three marked sections: A (measures 1-5), B (measures 9-13), and C (measures 15-18). Section A shows a guitar solo with dynamic markings like *mf* and *f*. Section B shows a complex texture with dynamic markings like *ff* and *sfz*. Section C shows a guitar solo with dynamic markings like *mf* and *sfz*. The score includes various musical notations such as slurs, accents, and dynamic markings. At the bottom, there is a copyright notice: 'Copyright © 1995 by C.F. Peters Corporation, 373 Park Avenue South, New York, NY 10016. International Copyright Secured. All Rights Reserved. Alle Rechte vorbehalten. Edition Peters 67494'.

Figure 1. Example 1: *Synchronisms* #10 mm. 1-18. Motives; sudden dynamic and timbral shifts

Its sudden timbral and dynamic shifts (See B, C, Example 1) can be heard as projecting certain sounds toward the

listener. This does not become completely evident until the electronic part becomes active, where disruptive guitar punctuations, now linked to electronic sounds, seem to project into stereo space, as in the climactic passage below:

The musical score consists of two systems of staves. The top system has a treble clef and a key signature of one sharp (F#). It begins with a 'secco' marking and a dynamic of *f*. The second measure has a dynamic of *ff* and is marked 'a tutta forza'. The third measure returns to *f* and 'secco'. The bottom system has a bass clef and a key signature of one sharp. It starts with a dynamic of *mf* and a 'p sub.' marking. The score includes various articulations such as slurs, accents, and dynamic hairpins. The piece concludes with a final *mf* dynamic.

Figure 2. Example 2: *Synchronisms #10* mm. 122-124

These marked distinctions in dynamic levels create different levels of spatial projection, magnified by the electronic sound.

A number of features common to all the *Synchronisms* appear in this passage, each making use of the specific acoustical problem of its acoustical instrument:

- modification of the attack and decay characteristics of the guitar by the electronic sound: note the sustained electronic pitches in the beginning of this example, which form the decay of the tremolo figure and also the attack and decay of the secco event.
- voice passing, especially in the last two measures
- amalgam of fast-paced acoustical and electronic ideas
- exchange of color and function between the guitar and electronic sound; i.e., the guitar becomes a generator of characteristic “electronic” sound, while the electronic sound takes on guitar-like qualities.

While the above passage is an unusually dramatic moment, it also represents procedures throughout the piece. I’d like you to watch a performance of *Synchronisms #10* by Jay Sorce; it will be clear how these details shape the entire piece.

Obviously, our discussion only scratches the surface of this compelling work, whose eloquence is built on dramatic gesture, humor, nostalgia and many unnameable qualities; these embody an unusual and ardent musical voice.

3. REFERENCES

- [1] Dan Lippel, “*Synchronisms #10* for Guitar and Electronic Sounds and Festino: Seminal works for guitar by Mario Davidovsky p. 16 ”<academia.edu>. I am indebted to Dan Lippel’s paper for the three musical examples.
- [2] Mario Davidovsky, *Synchronisms #6* for Piano and Electronic Sounds (King of Prussia, PA: E.B. Marks Music Corp., 1972), 2.
- [3] Mario Davidovsky, interview by Dan Lippel, 15 March 2006, New York.