

September 19, 1969

PRELIMINARY REPORT

At this stage I will give an outline of the following project only:

"Music-Notation that Responds to the Demands of Analyzing and Synthesizing Electronic Music"

Hitherto, all new approaches to Music Notation of this field were based either on graphic illustration of wave-form symbols, or on simpler or higher developed diagrams. These diagrams show the relationship between basic physical factors, through a coordinating system. From that notation one gets information about amplitudes, D.B.s, norms of speed of tape-running; and the more elaborate method indicates contents of timbre. None of these systems show any fluent continuation of musical data, which is typical to the traditional notation. They postulate written units in different geometrical frames. Each unit represents the accumulated sound-parts in a certain part of the composition. In the following report I will touch upon the historical development of music notation; and prove that there are similar problems in various epochs.

The idea is to show that the fluency of music in time, is reflected in the notation of music. The musical information has been multiplied, so that none of the traditional symbols are able to translate the contents of sound into notation, any more. Therefore, no further development through addition of new symbols can serve the purpose.

According to this basic analysis of the characteristics of a proper notation, we developed a technical process that is organically related to the production-process: A screen of a television bulb receives the graphic notation in lines, dots, or whatever practical forms, written on a running strip. This information is then fed through photo-electric mediators into a pre-prepared organization of sound producing instruments (such as oscillators of various wave forms; filters; running recorder-tapes; etc.). The notation, then, will give immediate criteria to the composer, based on an exact time analysis, and is combined with the external sound production. The script, therefore, does not only open and close electrical contacts; it also performs prefixed sound qualities.

This way the composer is able to re-write his composition on his desk at home, and design, develop, correct his musical thoughts. He can critically reflect on his formulations, the way he does when writing a traditional score.

In the main report I will give a detailed technical diagram of the apparatus used, and develop the portrayal of the history of music, in details.

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The music of the western civilization, according to its media, is divided into vocal and instrumental music. The mechanical instruments (string - wind - percussion) in our days have been superseded by the electronic sound production. Music produced by the electronic instruments (not to be confused with electronically amplified mechanical instruments) brings about a new sphere of communication by musical language. This is different from the traditional concept, yet it is ~~by~~ continuation with the experience of history. The notion of music as art started by the invention of musical notation. The meaning of sound complexes could be graphically formulated, and therefore fully controlled and developed.

Electronic music of today has no notation that is equivalent to its wealth of acoustical information. The Center for Electronic Music in Israel at the Hebrew University of Jerusalem decided to launch a research project for Electronic Music Notation which aims ~~to~~ solve the complex problem of technical manipulation which is combined of human approach and photo electric programing. A successful solution would have the significance of a major break through for the theory of electronic music composition.

Attached is a detailed program of the project.

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