

ANZ

Approximately ten years have gone by since the first noteworthy experiments in electronic music ^{were carried out}. Today, electronic music is ~~being produced~~ (production of) ubiquitous, taking place anywhere between primitive home made equipment and formidable million-dollar installations. Misconceptions about the nature of this ~~sector~~ ^{are} of music ~~making~~ ^{are} considerably slower in receding than its growth would suggest.

Electronic music ~~is based on~~ owes its existence to the possibilities of generating sounds in vacuum tubes and of recording these sounds on magnetic tape. The essential elements of the instrumentation are oscillators generating various types of waves (e.g. sine-waves, which ~~produce~~ ^{yield} pure tones without partials, square-waves, and sawtooth-waves, which produce sounds of complex spectra), noise generators (e.g. "white noise", which is the sum total of all audible frequencies sounded simultaneously), and filters (devices by which complex sound spectra - including the noises - may be modified through eliminating certain frequency bands so that different timbres are obtained).

Additional ~~and~~ instruments influencing attack and decay, articulation, dynamic level of the sounds, echo-like reverberation and other characteristics are available in various ~~types~~ combinations and stages of development. The sounds thus obtained are recorded on magnetic tapes and may be further modified to ~~an~~ ^{some} extent by various processes of cutting, splicing, re-recording at different speeds or in retrograde motion, and synchronizing.

Ins. p. 2
A

In the RCA Synthesizer operated ^{in New York} ~~at Columbia University~~ 2
under the supervision of Columbia and Princeton Universities
~~differs from~~ the components ^{designed} ~~described~~ here are integrated
in one piece of machinery. They are put into concerted
action by commands transmitted ^{electronically} from a ~~well~~ ~~and~~ ~~containing~~ ~~the~~ system of
composer has punched ~~new~~ ~~of holes~~ ~~representing~~ perforations
into a roll of paper. The Siemens Company in Munich ^{that the}
developed a similar installation.

The apparatus constructed by the Bell Telephone Company
differs from the machinery sketched so far in that the ⁱⁿ⁻ ~~to a computer~~
structures of the composer are committed ~~to~~ ^{on} Bell cards and
translated by a ^{suitable} converter ^{expressed in numerical form on} into impulses that are directly
recorded on the tape. Im. p. 3 B

Obviously in none of these ~~cases~~ ^{arrangements} a computer takes over the
role of the creative mind. For even in the cases last described
the computer does no more or less than execute the instructions
of the person who sets up the program, that is: the composer.
The notion that electronic music is "automated", "me-
chanized", ~~a sufficient~~ "contrived by synthetic brains" is en-
tirely unfounded. p. 3

Im. p. 1 A ~~The work of nearly~~ elements described here are the basic equipment
of nearly ~~nearly~~ all electronic ~~studios~~ laboratories in America and in
Europe (including the studio at San Fernando Valley State College).
~~is and is based on~~ ~~the~~ ~~many~~ Variations in the
state of perfection of some of these elements may suggest
more emphasis on some, less on other sound qualities
and musical processes.

Ins. p. 2 **B** Whether the introduction of computer techniques repre- 3
sent real progress in electronic music depends entirely
on the degree in which these techniques will facilitate and
accelerate the admittedly laborious procedures ^{at this time.}
required. The material of sounds offered by the ad-
vanced machinery is so far not significantly different
from that previously available.

→ The so-called Musique concrète (inaugurated by Pierre Schaeffer
in Paris) does not employ electronically generated sounds, but
recordings of ~~musical instruments~~ noises that are afterwards
processed like the ~~electronic~~ electronic sounds. While in the
early days of the movement a sharp line of demarcation
was drawn between electronic and concrete music, in
recent years sounds from either source were frequently
combined.

The opening work on this program, by György Ligeti
(a Hungarian composer living in Vienna), is not electronic at
all. It is an orchestral work chosen because of the vicinity of
its sound quality to that of electronic music. It may
be observed that composers who have worked in the elect-
ronic medium show a tendency to ~~reproduce~~ reproduce
typically electronic ~~timbres~~ timbres in their instrumental
works. (

Milton Babbitt's ~~Concerto~~ work was produced on
the RCA Synthesizer in a four-track version. The two-
track stereo adaptation offered on this program was pre-
pared by the composer. The composition shows the wide range
of the synthesizer's ^{through the} ~~potential~~ ^{lines and its neat articulation} ~~potential~~ to great advantage. The

conspicuous presence of tremolo-like sounds in the
middle section is, of course, an ^{ingredient} ~~expression~~ of the composer's

personally personal style, not necessitated by the apparatus he used.
These sections may be distinguished, the last being introduced by percussive
sounds.

While Rabbitt uses echo effects hardly at all, the (4)
piece by Herbert Eimert ~~is~~ almost entirely consists of such.

It has a strongly suggestive quality, evoking the picture
of vast lonely spaces, of voices of lost humans reverber-
ating from invisible shores. It is interesting to notice
that the electronic medium very early ~~tempted~~^{were} tempted
(composers working in

to mix recorded vocal sounds with the electronic ones
(which, of course, is a touch of musique concrète) and later
reproduced vocal timbres by electronic means. The work
~~originated~~ originated at the studio of the West German Radio in Cologne,
which has standard equipment of very high quality.
In the work by Ernst Krenck, realized at the laboratory

of San Fernando Valley State College by the composer, with
the assistance of Beverly Grigby and John Bartley, recor-
ding engineer, electronic sounds and recorded instru-
mental and other sounds (noises) are combined. The char-
acter of the installation available favored a certain
roughness of articulation. (did not promote polish ~~and~~ or
shut men best

The ~~rather sharp~~ sharp contrasts created a dramatic atmo-
sphere, ~~resulting~~ supported the subtitles of the six sections of
the piece (played without interruption). ~~Without the~~
Thus they do not represent a program,
but an afterthought. Structurally, ~~by~~ five sections
of the piece are the result of selecting and organizing
sound material produced by more or less improvisatory
methods. The fourth ("constructive") section consists
of one sequence of sound events played against
itself in retrograde motion at four different speed-
and pitch levels (technically speaking a four-part
mensuration canon).

Ingrar Lidholm's ballet "Riter" contains (5)
one section made up of electronic sounds. Here again
the ~~abstract~~ idea of synthetic vocal sounds reverber-
ating in space prevails, although with a higher
degree of urgency than in the contemplative, nostalgic
piece of Limer. The tape was made at the Swedish Radio in
Stockholm.
... - Grigoby

The work of Tokoro Magurumi is pure musique
concrete inasmuch as it is a montage of bell sounds
recorded at various temples all over Japan. It is
distinguished by very refined technical manipulation
of the material and a peculiar soothing quality.

Marco Davidowsky's Study was realized at
the Ussachevsky Laboratory at Columbia University
in New York, technically comparable to the Cologne
installation. It is very impressive because of its
brilliant playfulness and quasi-virtuoso character.

~~The improvisation to this program~~
We hope that the present program will,
among other things, demonstrate that electronic
music is by no means stereotyped, but in its
diversification reflects the personalities of the com-
posers just as their non-electronic music does,
and that electronic music, far from being
impersonal and mechanical, conveys a great deal
of emotional impact.