BENNINGTON COLLEGE MUSIC DIVISION

Presents

MELODIES AND RHYTHMS FOR COMPUTER AND OTHER INSTRUMENTS

By

JOEL CHADABE

with guest composer Roger Meyers and percussionist Lou Calabro

Wednesday
September 24, 1980

8:15 p.m.
Greenwall Music Workshop

SOLO (1978) — Joel Chadabe
with proximity-sensitive antennas

AFTER 'THE POND' (1979) — Roger Meyers
in remembrance of Charles Ives

SCENES FROM STEVENS (1979) — Joel Chadabe
based on poems by Wallace Stevens

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RHYTHMS — Joel Chadabe
performed with Lou Calabro -
percussion, handclaps and
toetapping

- PROGRAM NOTES-

SOLO

Solo is based on one melody which is modelled upon what I imagined as a free jazz clarinet solo. I composed the melody by creating a procedure according to which the computer could determine what each note was to be before it is played. In effect, I have composed a melody-generating machine. The melody it produces is virtually endless and, at least in its detail, continually surprising, a situation which as a composer and as a performer I find highly desirable and pleasant.

Computer-generated "instruments" are playing pitches at varying distances above and below the melody so that any group of instruments will form a chord around a melody note, giving the line varying width, timbre and contour--an idea which I associate with the lines Jackson Pollack poured onto his canvas.

I am "conducting" the computer with antennas, actually modified theremins, which are proximity sensitive and send information to the computer according to the position of my hand. As I move my right hand closer to the right antenna, I control speed by increasing the duration of each note. As I move my left hand closer to the left antenna, I control "instrumentation" by passing my hand through "zones" in which certain "instruments" are playing. The sounds of the computer-generated "instruments" were modelled after the sounds of certain acoustic instruments, specifically: xylophone, clarinet and flute. However, after I began to work with them, electronic considerations became primary and the compute sounds came less and less to sound like the acoustic models which at first gave rise to their character. When my left hand is farthest from the left antenna, only the xylophone is playing. As I move my hand in towards the antenna, I cause instruments to play in addition to the xylophone: first one clarinet, then two clarinets, then two flutes, and then, closest to the antenna, two clarinets and two flutes together.

-J.C.

AFTER 'THE POND'

<u>After 'The Pond'</u> draws on ideas that Charles Ives expressed in his music and writings, particularly his discussions of rhythmic multiplicity as a device in creating "depth" in musical textures. Ives makes his point clear in remarks to the conductor, in a preface to the second movement of the <u>Fourth Symphony:</u> "When one tries to use an analogy between the arts as an illustration, especially of some technical matter, he is liable to get it wrong. But the general aim of the plan under discussion is to bring various parts of the music to the ear in their relation, as the perspective of a picture brings to the eye. As the distant hills, in a landscape, row upon row, grow gradually into the horizon, so there may be something corresponding to this in the presentation of music. Music seems too often all foreground even if played by a master of dynamics."

Ives' The Pond is a chamber music example of the idea, where elements of the accompaniment recede in a graduated way from the solo. After 'The Pond' follows from that concept of musical space.

But After 'The Pond' reflects a concept of music basically different from Ives', in that it is an ongoing interactive process wherein the performer must react to the choices made by the computer. To play After 'The Pond', a performer must select a sequence of background textures and control the timing and the phrasing of the solo. Each texture is stored in a part of the computer program that generates the composition, and it is recalled by typing a character on the computer terminal. The solo melody is generated by scanning the background texture to determine which notes have just been played and then choosing the next melody note accordingly. Because the rhythms within the background are complex, the melodic patterns continually change in a stream of endless variation.

-R.M.

SCENES FROM STEVENS

Wallace Stevens' evocative articulations of unordinary thoughts have attracted me to his poetry for some time, and among musicians I have not been alone in this. Many of his poems have been taken for text by composers and Thirteen Ways of Looking at a Blackbird is probably the poem most often set to music by contemporary American composers. I am to be counted among them, for it is that poem that suggested the music in Scenes from Stevens. There are three verses behind the current version of the music, thought of as relating to the music in the following order . . .

I
Among twenty snowy mountains
The only moving thing
Was the eye of the blackbird.

VI
Icicles filled the long window
With barbaric glass.
The shadow of the blackbird
Crossed it, to and fro.
The mood traced in the shadow
An indecipherable cause.

V
I do not know which to prefer
The beauty of inflections
Or the beauty of innuendos,
The blackbird whitsling
Or just after.

The poems were attractive to me because they express diverse imagery linked by a common theme--in other words, sound and structure. Phrases such as "snowy mountains," "icicles" filling a window with "barbaric glass", suggested a kind

of icy magic sound, and words such as "inflections", "innuendos", "the blackbird whistling . . ." suggested a warmer feeling, perhaps a melody. The phrase "an indecipherable cause" was particularly significant because it seemed to reflect the types of processes I prefer in my music where sound follows unexpected sound in a lyric flow. It also suggested the specific structural idea behind this composition: the presence of an invisible melody for which the sounds are an accompaniment. The melody causes the accompaniment but is itself not heard, except as it emerges towards the end as "the blackbird whistling . . ."

-J.C.

RHYTHMS

Our machinery is sensitive to sound and generates a new rhythm every time I clap my hands. Then, while the music is playing, I perform changes in an improvisational response to what the machine is doing. The details of each rhythm are not predetermined--rather, the computer creates the composition as it is being performed. What I have done is to create a software rhythm machine which creates rhythm after rhythm, always different and unpredictable in the detail.

When performed with percussion, the relation between percussion and computer is twofold. The computer, by the sounds it generates and by the nature of each rhythm, determines which percussion instruments are used and suggests the types of figures the percussionist might play; the computer and percussion are in a background/foreground relationship, matching and complementing sounds and patterns The two performers are also playing as a duet, following one another in improvisitory fashion.

-J.C.

A NOTE ON THE EQUIPMENT

The equipment used by Joel Chadabe and Roger Meyers is a protable minicomputer/digital-synthesizer system designed and built by New England Digital Corporation, in Norwich, Vermont, expressly for making music.

Although the equipment is available with a traditional keyboard, in which case it is called the synclavier, the system configuration used by Chadabe and Meyers stresses greater performance flexibility than a keyboard allows. In the course of a program diverse devices are used in a wide variety of performance situations, such as proximity-sensitive antennas, which register the position of a performer's hand; a display terminal, which allows a performer to type instructions during a performance; joysticks, which allow for simultaneous control of several aspects of the music being played; and pitch sensors, which control the computer according to the pitch of sounds played or sung by performer