Experimental Music
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The following statement was given as an address to the convention ot the Music Teachers National Association in Chicago in the winter ot 1957. It was printed in the brochure accompanying George Avakian"s recording ot my twenty-five-year retrospective concert at Town Hall, New York, in 1958.

Formerly, whenever anyone said the music I presented was experimental, I objected. It seemed to me that composers knew what they were doing, and that the experiments that had been made had taken place prior to the finished works, just as sketches are made before paintings and rehearsals precede performances. But, giving the matter further thought, I realized that there is ordinarily an essential difference between making a piece of music and hearing one. A composer knows his work as a woodsman knows a path he has traced and retraced, while a listener is confronted by the same work as one is in the woods by a plant he has never seen before.

Now, on the other hand, times have changed; music has changed; and I no longer object to the word "experimenial." I use it in fact to describe all the music that especially interests me and to which I am devoted, whether someone else wrote it or I myself did. What has happened is that I have become a listener and the music has become something to hear. Many people, of course, have given up saying "experimental" about this new music. Instead, they either move to a halfway point and say "controversial" or depart to a greater distance and question whether this "music" is music at all.

For in this new music nothing takes place but sounds: those that are notated and those that are not. Those that are not notated appear in the written music as silences, opening the doors of the music to the sounds that happen to be in the environment. This openness exists in the fields of modem sculpture and architecture. The glass houses of Mies van der Rohe reflect their environment, presenting to the eye images of clouds, trees, or grass, according to the situation. And while looking at the constructions in wire of the sculptor Richard Lippold, it is inevitable that one will see other things, and people too, if they happen to be there at the same time, through the network of wires. There is no such thing as an empty space or an empty time. There is always something o see, something to hear. In fact, try as we may to make a silence, we cannot. For certain engineering purposes, it is desirable to have as silent a situation as possible. Such a room is called an

anechoic chamber, its six walls made of special material, a room without echoes. I entered one at Harvard University several years ago and heard two sounds, one high and one low. When I described them to the engineer in charge, he informed me that the high one was my nervous system in operation, the low one my blood in circulation. Until I die there will be sounds. And they will continue following my death. One need not fear about the future of music.

But this fearlessness only follows if, at the parting of the ways, where it is realized that sounds occur whether intended or not, one turns in the direction of those he does not intend. This turning is psychological and seems at first to be a giving up of everything that belongs to humanity—for a musician, the giving up of music. This psychological turning leads to the world of nature, where, gradually or suddenly, one sees that humanity and nature, not separate, are in this world together; that nothing was lost when everything was given away. In fact, everything is gained. In musical terms, any sounds may occur in any combination and in any continuity.

And it is a striking coincidence that just now the technical means to produce such a free-ranging music are available. When the Allies entered Germany towards the end of World War II, it was discovered that improvements had been made in recording sounds magnetically such that tape had become suitable for the high-fidelity recording of music. First in France with the work of Pierre Schaeffer, later here, in Germany, in Italy, in Japan, and perhaps, without my knowing it, in other places, magnetic tape was used not simply to record performances of music but to make a new music that was possible only because of it. Given a minimum of two tape recorders and a disk recorder, the following processes are possible: 1) a single recording of any sound may be made; 2) a rerecording may be made, in the course of which, by means of filters and circuits, any or all of the physical characteristics of a given recorded sound may be altered; 3) electronic mixing (combining on a third machine sounds issuing from two others) permits the presentation of any number of sounds in combination; 4) ordinary splicing permits the juxtaposition of any sounds, and when it includes unconventional cuts, it, like rerecording, brings about alterations of any, or all of the original physical characteristics. The situation made available by these means is essentially a total sound-space, the limits of which are ear-determined only, the position of a particular sound in this space being the result of five determinants: frequency or pitch, amplitude or loudness, overtone structure or timbre, duration, and morphology (how the sound begins, goes on, and dies away). By the alteration of any one of these determinants, the position of the sound in sound-space changes. Any sound at any point in this total

sound-space can move to become a sound at any other point. But advantage can be taken of these possibilities only if one is willing to change one's musical habits radically. That is, one may take advantage of the appearance of images without visible transition in distant places, which is a way of saying "television," if one is willing to stay at home instead of going to a theatre. Or one may fly if one is willing to give up walking.

Musical habits include scales, modes, theories of counterpoint and harmony, and the study of the timbres, singly and in combination of a limited number of sound-producing mechanisms. In mathematical terms these all concern discrete steps. They resemble walking—in the case of pitches, on stepping-stones twelve in number. This cautious stepping is not characteristic of the possibilities of magnetic tape, which is revealing to us that musical action or existence can occur at any point or along any line or curve or what have you in total sound-space; that we are, in fact, technically equipped to transform our contemporary awareness of natures manner of operation into art.

Again there is a parting of the ways. One has a choice. If he does not wish to give up his attempts to control sound, he may complicate his musical technique towards an approximation of the new possibilities and awareness. (I use the word "approximation" because a measuring mind can never finally measure nature.) Or, as before, one may give up the desire to control sound, clear his mind of music, and set about discovering means to let sounds be themselves rather than vehicles for man-made theories or expressions of human sentiments.

This project will seem fearsome to many, but on examination it gives no cause for alarm. Hearing sounds which are just sounds immediately sets the theorizing mind to theorizing, and the emotions of hurpan beings are continually aroused by encounters with nature. Does not a mountain unintentionally evoke in us a sense of wonder? Otters along a stream a sense of mirth? Night in the woods a sense of fear? Do not rain falling and mists rising up suggest the love binding heaven and earth? Is not decaying flesh loathsome? Does not the death of someone we love bring sorrow? And is there a greater hero than the least plant that grows? What is more angry than the flash of lightning and the sound of thunder? These responses to nature are mine and will not necessarily correspond with another's. Emotion takes place in the person who has it. And sounds, when allowed to be themselves, do not require that those who hear them do so unfeelingly. The opposite is what is meant by response ability.

New music: new listening. Not an attempt to understand something that is being

said, for, if somethiqg were being said, the sounds would be given the shapes of words. Just an attention to the activity of sounds.

Those involved with the composition of experimental music find ways and means to remove themselves from the activities of the sounds they make. Some employ chance operations, derived from sources as ancient as the Chinese *Book of Changes*, or as modern as the tables of random numbers used also by physicists in research. Or, analogous to the Rorschach tests of psychology, the interpretation of imperfections in the paper upon which one is writing may provide a music free from one's memory and imagination. Geometrical means employing spatial superimpositions at variance with the ultimate performance in time may be used. The total field of possibilities may be roughly divided and the actual sounds within these divisions may be indicated as to number but left to the performer or to the splicer to choose. In this latter case, the composer resembles the maker of a camera who allows someone else to take the picture.

Whether one uses tape or writes for conventional instruments, the present musical situation has changed from what it was before tape came into being. This also need not arouse alarm, for the coming into being of something new does not by that fact deprive what was of its proper place. Each thing has its own place, never takes the place of something else; and the more things there are, as is said, the merrier.

But several effects of tape on experimental music may be mentioned. Since so many inches of tape equal so many seconds of time, it has become more and more usual that notation is in space rather than in symbols of quarter, half, and sixteenth notes and so on. Thus where on a page a note appears will correspond to when in a time it is to occur. A stop watch is used to facilitate a performance; and a rhythm results which is a far cry from horse's hoofs and other regular beats.

Also it has been impossible with the playing of several separate tapes at once to achieve perfect synchronization. This fact has led some towards the manufacture of multiple-tracked tapes and machines with a corresponding number of heads; while others—those who have accepted the sounds they do not intend—now realize that the score, the requiring that many parts be played in a particular togetherness, is not an accurate representation of how things are. These now compose parts but not scores, and the parts may be combined in any unthought ways. This means that each performance of such a piece of music is unique, as interesting to its composer as to others listening. It is easy to see again the parallel with nature, for even with leaves of the same tree, no two are exactly alike. The parallel in art

is the sculpture with moving parts, the mobile.

It goes without saying that dissonances and noises are welcome in this new music. But so is the dominant seventh chord if it happens to put in an appearance.

Rehearsals have shown that this new music, whether for tape or for instruments, is more clearly heard when the several loud-speakers or performers are separated in space rather than grouped closely together. For this music is not concerned with harmoniousness as generally understood, where the quality of harmony results from a blending of several elements. Here we are concerned with the coexistence of dissimilars, and the central points where fusion occurs are many: the ears of the listeners wherever they are. This disharmony, to paraphrase Bergson's statement about disorder, is simply a harmony to which many are unaccustomed.

Where do we go from here? Towards theatre. That art more than music resembles nature. We have eyes as well as ears, and it is our business while we are alive to use them.

And what is the purpose of writing music? One is, of course, not dealing with purposes but dealing with sounds. Or the answer must take the form of paradox: a purposeful purposelessness or a purposeless play. This play, however, is an affirmation of life—not an attempt to bring order out of chaos nor to suggest improvements in creation, but simply a way of waking up to the very life we're living, which is so excellent once one gets one's mind and one's desires out of its way and lets it act of its own accord.