answer: Which one
of us is right?"
¶The man answered,
"I just stand." ¶When
I was studying
with Schoenberg
one day as he was
writing some .
counterpoint to
show the way to
do it, he used
an eraser.
And then while he
was doing this

he said, "This end
of the pencil
is just as im-
portant as the
other end." I
have several
times in the course
of this lecture
mentioned ink. Com-
posing, if it
is writing notes,
is then actu-
ally writing,
and the less one
thinks it's thinking
the more it be-
comes what it is:
writing. Could mu-
sic be composed
(I do not mean
improvised) not
writing it in
pencil or ink?

The answer is
no doubt Yes and
the changes in
writing are pro-
phetic. The *So-
natas and In-
terludes* were com-
posed by playing
the piano,
listening to
differences,
making a choice,
roughly writing
it in pencil;
later this sketch
was copied, but
again in pen-
cil. Finally
an ink manuscript
was made care-
fully. The *Mu-
sic of Changes*
was composed in
almost the same
way. With one change:
the origi-
nal pencil sketch
was made exact-
ly, an era-
ser used whenev-
er necessar-
y, elimin-
ating the need
for a neat pen-
cil copy. In
the case of the
*Imaginar-
y Landscape Num-
ber IV*, the first
step of playing
the instrument
was elimin-
ated. The oth-
ers kept. *Music
for Piano*
was written di-
rectly in ink.

The excessively small type in the following pages is an attempt to emphasize the intentionally pontifical character of this lecture.

II. Indeterminacy

This is a lecture on composition which is indeterminate with respect to its performance. The *Klavierstück XI* by Karlheinz Stockhausen is an example. *The Art of the Fugue* by Johann Sebastian Bach is an example. In *The Art of the Fugue*, structure, which is the division of the whole into parts; method, which is the note-to-note procedure; and form, which is the expressive content, the morphology of the continuity, are all determined. Frequency and duration characteristics of the material are also determined. Timbre and amplitude characteristics of the material, by not being given, are indeterminate. This indeterminacy brings about the possibility of a unique overtone structure and decibel range for each performance of *The Art of the Fugue*. In the case of the *Klavierstück XI*, all the characteristics of the material are determined, and so too is the note-to-note procedure, the method. The division of the whole into parts, the structure, is determinate. The sequence of these parts, however, is indeterminate, bringing about the possibility of a unique form, which is to say a unique morphology of the continuity, a unique expressive content, for each performance.

The function of the performer, in the case of *The Art of the Fugue*, is comparable to that of someone filling in color where outlines are given. He may do this in an organized way which may be subjected successfully to analysis. (Transcriptions by Arnold Schoenberg and Anton Webern give examples pertinent to this century.) Or he may perform his function of colorist in a way which is not consciously organized (and therefore not subject to analysis)—either arbitrarily, feeling his way, following the dictates of his ego; or more or less unknowingly, by going inwards with reference to the structure of his mind to a point in dreams, following, as in automatic writing, the dictates of his subconscious mind; or to a point in the collective unconscious of Jungian psychoanalysis, following the inclinations of the species and doing something of more or less universal interest to human beings; or to the "deep sleep" of Indian mental practice—the Ground of Meister Eckhart—identifying there with no matter what eventuality. Or he may perform his function of colorist arbitrarily, by going outwards with reference to the structure of his mind to the point of sense perception, following his taste; or more or less unknowingly by employing some operation exterior to his mind: tables of random numbers, following the scientific interest in probability; or chance operations, identifying there with no matter what eventuality.

The function of the performer in the case of the *Klavierstück XI* is not that of a colorist but that of giving form, providing, that is to say, the morphology of the continuity, the expressive content. This may not be done in an organized way: for form unvitalized by spontaneity brings about the death of all the other elements of the work. Examples are provided by academic studies which copy models with respect to all their compositional elements: structure, method, material, and form. On the other hand, no matter how rigorously controlled or conventional the structure, method, and materials of a composition are, that composition will come to life if the form is not controlled but free and original. One may cite as examples the sonnets of Shakespeare and the *haikus* of Basho. How then in the case of the *Klavierstück XI* may the performer fulfill his function of giving form to the music? He must perform his function of giving form to the music in a way which is not consciously organized (and therefore not subject to analysis), either arbitrarily, feeling his way, following the dictates of his ego, or more or less unknowingly, by going inwards with reference to the structure of his mind to a point in dreams, following, as in automatic writing, the dictates of his subconscious mind; or to a point in the collective unconscious of Jungian psychoanalysis, following the inclinations of the species and doing something of more or less universal interest to human beings; or to the "deep sleep" of Indian mental practice—the Ground of Meister Eckhart—identifying there with no matter what eventuality. Or he may perform his function of giving form to the music arbitrarily, by going

outwards with reference to the structure of his mind to the point of sense perception, following his taste; or more or less unknowingly by employing some operation exterior to his mind: tables of random numbers, following the scientific interest in probability; or chance operations, identifying there with no matter what eventuality.

However, due to the presence in the *Klavierstück XI* of the two most essentially conventional aspects of European music—that is to say, the twelve tones of the octave (the frequency characteristic of the material) and regularity of beat (affecting the element of method in the composing means), the performer—in those instances where his procedure follows any dictates at all (his feelings, his automatism, his sense of universality, his taste)—will be led to give the form aspects essentially conventional to European music. These instances will predominate over those which are unknowing where the performer wishes to act in a way consistent with the composition as written. The form aspects essentially conventional to European music are, for instance, the presentation of a whole as an object in time having a beginning, a middle, and an ending, progressive rather than static in character, which is to say possessed of a climax or climaxes and in contrast a point or points of rest.

The indeterminate aspects of the composition of the *Klavierstück XI* do not remove the work in its performance from the body of European musical conventions. And yet the purpose of indeterminacy would seem to be to bring about an unforseen situation. In the case of *Klavierstück XI*, the use of indeterminacy is in this sense unnecessary since it is ineffective. The work might as well have been written in all of its aspects determinately. It would lose, in this case, its single unconventional aspect: that of being printed on an unusually large sheet of paper which, together with an attachment that may be snapped on at several points enabling one to stretch it out flat and place it on the music rack of a piano, is put in a cardboard tube suitable for safekeeping or distribution through the mails.

This is a lecture on composition which is indeterminate with respect to its performance. The *Intersection* 3 by Morton Feldman is an example. The *Music of Changes* is not an example. In the *Music of Changes*, structure, which is the division of the whole into parts; method, which is the note-to-note procedure; form, which is the expressive content, the morphology of the continuity; and materials, the sounds and silences of the composition, are all determined. Though no two performances of the *Music of Changes* will be identical (each act is virgin, even the repeated one, to refer to René Char's thought), two performances will resemble one another closely. Though chance operations brought about the determinations of the composition, these operations are not available in its performance. The function of the performer in the case of the *Music of Changes* is that of a contractor who, following an architect's blueprint, constructs a building. That the *Music of Changes* was composed by means of chance operations identifies the composer with no matter what eventuality. But that its notation is in all respects determinate does not permit the performer any such identification: his work is specifically laid out before him. He is therefore not able to perform from his own center but must identify himself insofar as possible with the center of the work as written. The *Music of Changes* is an object more inhuman than human, since chance operations brought it into being. The fact that these things that constitute it, though only sounds, have come together to control a human being, the performer, gives the work the alarming aspect of a Frankenstein monster. This situation is of course characteristic of Western music, the masterpieces of which are its most frightening examples, which when concerned with humane communication only move over from Frankenstein monster to Dictator.

In the case of the *Intersection* 3 by Morton Feldman, structure may be viewed as determinate or as indeterminate; method is definitely indeterminate. Frequency and duration characteristics of the material are determinate only within broad limits (they are with respect to narrow limits indeterminate); the timbre characteristic of the material, being given by the instrument designated, the piano, is determinate; the amplitude characteristic of the material is indeterminate. Form conceived in terms of a continuity of various weights—that is, a continuity of numbers of sounds, the sounds themselves particularized only with respect to broad range limits (high, middle, and low)—is determinate, particularly so due to the composer's having specified boxes as time units. Though one might equally describe it as indeterminate for other reasons. The term "boxes" arises from the composer's use of graph paper for the notation of his composition. The function of the box is comparable to that of a green light in metropolitan thoroughfare control. The performer is free to play the given number of sounds in the range indicated at any time during the duration of the box, just as when driving an automobile one may cross an intersection at any time during the green light. With the exception of method, which is wholly indeterminate, the compositional means are characterized by being in certain respects determinate, in others indeterminate, and an interpenetration of these opposites obtains which is more characteristic than either. The situation is therefore essentially non-dualistic; a multiplicity of centers in a state of non-obstruction and interpenetration.

The function of the performer in the case of the *Intersection* 3 is that of a photographer who on obtaining a camera uses it to take a picture. The composition permits an infinite number of these, and, not being mechanically constructed, it will not wear out. It can only suffer disuse or loss. How is the performer to perform the *Intersection* 3? He may do this in an organized way which may be subjected successfully to analysis. Or he may perform his function of photographer in a way which is not consciously organized (and therefore not subject to analysis)—either arbitrarily, feeling his way, following the dictates of his ego; or more or less unknowingly, by going inwards with reference to the structure of his mind to a point in dreams, following, as in automatic writing, the dictates of his subconscious mind; or to a point in the collective unconsciousness of Jungian pyschoanalysis, following the inclinations of the species and doing something of more or less universal interest to human beings; or to the "deep

sleep" of Indian mental practice—the Ground of Meister Eckhart—identifying there with no matter what eventuality. Or he may perform his function of photographer arbitrarily, by going outwards with reference to the structure of his mind to the point of sense perception, following his taste; or more or less unknowingly by employing some operation exterior to his mind: tables of random numbers, following the scientific interest in probability; or chance operations, identifying there with no matter what eventuality.

One evening Morton Feldman said that when he composed he was dead; this recalls to me the statement of my father, an inventor, who says he does his best work when he is sound asleep. The two suggest the "deep sleep" of Indian mental practice. The ego no longer blocks action. A fluency obtains which is characteristic of nature. The seasons make the round of spring, summer, fall, and winter, interpreted in Indian thought as creation, preservation, destruction, and quiescence. Deep sleep is comparable to quiescence. Each spring brings no matter what eventuality. The performer then will act in any way. Whether he does so in an organized way or in any one of the not consciously organized ways cannot be answered until his action is a reality. The nature of the composition and the knowledge of the composer's own view of his action suggest, indeed, that the performer act sometimes consciously, sometimes not consciously and from the Ground of Meister Eckhart, identifying there with no matter what eventuality.

This is a lecture on composition which is indeterminate with respect to its performance. *Indices* by Earle Brown is not an example. Where the performance involves a number of players, as it does in the case of *Indices*, the introduction of a score—that is, a fixed relation of the parts—removes the quality of indeterminacy from the performance. Though tables of random numbers (used in a way which introduces bias) brought about the determinations of the composition (structure, method, materials, and form are in the case of *Indices* all thus determined), those tables are not available in its performance. The function of the conductor is that of a contractor, who, following an architect's blueprint, constructs a building. The function of the instrumentalists is that of workmen who simply do as they are bid. That the *Indices* by Earle Brown was composed by means of tables of random numbers (used in a way which introduces bias) identifies the composer with no matter what eventuality, since by the introduction of bias he has removed himself from an association with the scientific interest in probability. But that the notation of the parts is in all respects determinate, and that, moreover, a score provides a fixed relation of these parts, does not permit the conductor or the players any such identification. Their work is laid out before them. The conductor is not able to conduct from his own center but must identify himself insofar as possible with the center of the work as written. The instrumentalists are not able to perform from their several centers but are employed to identify themselves insofar as possible with the directives given by the conductor. They identify with the work itself, if at all, by one remove. From that point of view from which each thing and each being is seen as moving out from its own center, this situation of the subservience of several to the directives of one who is himself controlled, not by another but by the work of another, is intolerable.

(In this connection it may be remarked that certain Indian traditional practices prohibit ensemble, limiting performance to the solo circumstance. This solo, in traditional Indian practice, is not a performance of something written by another but an improvisation by the performer himself within certain limitations of structure, method, and material. Though he himself by the morphology of the continuity brings the form into being, the expressive content does not reside in this compositional element alone, but by the conventions of Indian tradition resides also in all the other compositional elements.)

The intolerable situation described is, of course, not a peculiarity of *Indices*, but a characteristic of Western music, the masterpieces of which are its most imposing examples, which, when they are concerned not with tables of random numbers (used in a way which introduces bias) but rather with ideas of order, personal feelings, and the integration of these, simply suggest the presence of a man rather than the presence of sounds. The sounds of *Indices* are just sounds. Had bias not been introduced in the use of the tables of random numbers, the sounds would have been not just sounds but elements acting according to scientific theories of probability, elements acting in relationship due to the equal distribution of each one of those present—elements, that is to say, under the control of man.

This is a lecture on composition which is indeterminate with respect to its performance. The *4 Systems* by Earle Brown is an example. This piece may be performed by one or several players. There is no score, either for the solo circumstance or for that of ensemble. The quality of indeterminacy is for this reason not removed from the performance even where a number of players are involved, since no fixed relation of the parts exists. The original notation is a drawing of rectangles of various lengths and widths in ink on a single cardboard having four equal divisions (which are the systems). The vertical position of the rectangles refers to relative time. The width of the rectangles may be interpreted either as an interval where the drawing is read as two-dimensional, or as amplitude where the drawing is read as giving the illusion of a third dimension. Any of the interpretations of this material may be superimposed in any number and order and, with the addition or not of silences between them, may be used to produce a continuity of any time-length. In order to multiply the possible interpretations the composer gives a further permission—to read the cardboard in any of four positions: right side up, upside down, sideways, up and down.

This further permission alters the situation radically. Without it, the composition was highly indeterminate

of its performance. The drawing was not consciously organized. Drawn unknowingly, from the Ground of Meister Eckhart, it identified the composer with no matter what eventuality. But with the further permission—that of reading the cardboard right side up, upside down, sideways, up and down—the drawing became that of two different situations or groups of situations and their inversions. Inversions are a hallmark of the conscious mind. The composer's identification (though not consciously so according to him) is therefore no longer with no matter what eventuality but rather with those events that are related by inversion. What might have been non-dualistic becomes dualistic. From a non-dualistic point of view, each thing and each being is seen at the center, and these centers are in a state of interpenetration and non-obstruction. From a dualistic point of view, on the other band, each thing and each being is not seen: relationships are seen and interferences are seen. To avoid undesired interferences and to make one's intentions clear, a dualistic point of view requires a careful integration of the opposites.

If this careful integration is lacking in the composition, and in the case of *4 Systems* it is (due to the high degree of indeterminacy), it must be supplied in the performance. The function of the performer or of each performer in the case of *4 Systems* is that of making something out of a store of raw materials. Structure, the division of the whole into parts, is indeterminate. Form, the morphology of the continuity, is also indeterminate. In given interpretations of the original drawing (such as those made by David Tudor sufficient in number to provide a performance by four pianists lasting four minutes) method is determinate and so too are the amplitude, timbre, and frequency characteristics of the material. The duration characteristic of the material is both determinate and indeterminate, since lines extending from note-heads indicate exact length of time, but the total length of time of a system is indeterminate. The performer's function, in the case of *4 Systems*, is dual: to give both structure and form; to provide, that is, the division of the whole into parts and the morphology of the continuity.

Conscious only of his having made a composition indeterminate of its performance, the composer does not himself acknowledge the necessity of this dual function of the performer which I am describing. He does not agree with the view here expressed that the permission given to interpret the drawing right side up, upside down, and sideways, up and down obliges the integration of the opposites: conscious organization and its absence. The structural responsibility must be fulfilled in an organized way, such as might be subjected successfully to analysis. (The performers in each performance have, as a matter of record, given to each system lengths of time which are related as modules are in architecture: fifteen seconds and multiples thereof by two or four.) The formal responsibility must be fulfilled in one or several of the many ways which are not consciously organized. However, due to the identification with the conscious mind indicated in *4 Systems* by the presence of inversions, though not acknowledged by the composer, those ways which are not consciously organized that are adjacent to the ego are apt to be used, particularly wbere the performer wishes to act in a way consistent with the composition as here viewed. He will in these cases perform arbitrarily, feeling his way, following the dictates of his ego; or he will perform arbitrarily, following his taste, in terms of sense perception.

What might have given rise, by reason of the high degree of indeterminacy, to no matter what eventuality (to a process essentially purposeless) becomes productive of a time-object. This object, exceedingly complex due to the absence of a score, a fixed relation of the parts, is analagous to a futurist or cubist painting, perhaps, or to a moving picture where flicker makes seeing the object difficult.

From the account which appears to be a history of a shift from non-dualism to dualism (not by intention, since the composer does not attach to the inversions the importance here given them, but as a by-product of the action taken to multiply possibilities) the following deduction may be made: To ensure indeterminacy with respect to its performance, a composition must be determinate of itself. If this indeterminacy is to have a non-dualistic nature, each element of the notation must have a single interpretation rather than a plurality of interpretations which, coming from a single source, fall into relation. Likewise—though this is not relevant to *4 Systems*—one may deduce that a single operation within the act of composition itself must not give rise to more than a single notation. Where a single operation is applied to more than one notation, for example to those of both frequency and amplitude characteristics, the frequency and amplitude characteristics are by that operation common to both brought into relationship. These relationships make an object; and this object, in contrast to a process which is purposeless, must be viewed dualistically. Indeterminacy when present in the making of an object, and when therefore viewed dualistically, is a sign not of identification with no matter what eventuality but simply of carelessness with regard to the outcome.

This is a lecture on composition which is indeterminate with respect to its performance. *Duo II for Pianists* by Christian Wolff is an example. In the case of *Duo II for Pianists*, structure, the division of the whole into parts, is indeterminate. (No provision is given by the composer for ending the performance.) Method, the note-to-note procedure, is also indeterminate. All the characteristics of the materials (frequency, amplitude, timbre, duration) are indeterminate within gamut limitations provided by the composer. The form, the morphology of the continuity, is unpredictable. One of the pianists begins the performance: the other, noticing a particular sound or silence which is one of a gamut of cues, responds with an action of his own determination from among given possibilities within a given time bracket. Following this beginning, each pauist responds to cues provided by the other, letting no silence fall between responses, though these responses themselves include silences. Certain time brackets are in zero time. There is no score, no fixed relation of the parts. *Duo II for Pianists* is evidently not a time-object, but rather a process the beginning and ending of which are irrelevant to its nature. The ending, and

the beginning, will be determined in performance, not by exigencies interior to the action but by circumstances of the concert occasion. If the other pieces on the program take forty-five minutes of time and fifteen minutes more are required to bring the program to a proper length, *Duo II for Pianists* may be fifteen minutes long. Where only five minutes are available, it will be five minutes long.

The function of each performer in the case of *Duo II for Pianists* is comparable to that of a traveler who must constantly be catching trains the departures of which have not been announced but which are in the process of being announced. He must be continually ready to go, alert to the situation, and responsible. If he notices no cue, that fact itself is a cue calling for responses indeterminate within gamut limitations and time brackets. Thus he notices (or notices that he does not notice) a cue, adds time bracket to time bracket, determines his response to come (meanwhile also giving a response), and, as the second hand of a chronometer approaches the end of one bracket and the beginning of the next, he prepares himself for the action to come (meanwhile still making an action), and, precisely as the second hand of a chronometer begins the next time bracket, he makes the suitable action (meanwhile noticing or noticing that he does not notice the next cue), and so on. How is each performer to fulfill this function of being alert in an indeterminate situation? Does he need to proceed cautiously in dualistic terms? On the contrary, he needs his mind in one piece. His mind is too busy to spend time splitting itself into conscious and not-conscious parts. These parts, however, are still present. What has happened is simply a complete change of direction. Rather than making the not-conscious parts face the conscious part of the mind, the conscious part, by reason of the urgency and indeterminacy of the situation, turns towards the not-conscious parts. He is therefore able, as before, to add two to two to get four, or to act in organized ways which on being subjected to analysis successfully are found to be more complex. But rather than concentrating his attention here, in the realm of relationships, variations, approximations, repetitions, logarithms, his attention is given inwardly and outwardly with reference to the structure of his mind to no matter what eventuality. Turning away from himself and his ego-sense of separation from other beings and things, he faces the Ground of Meister Eckhart, from which all impermanencies flow and to which they return. "Thoughts arise not to be collected and cherished but to be dropped as though they were void. Thoughts arise not to be collected and cherished but to be dropped as though they were rotten wood. Thoughts arise not to be collected and cherished but to be dropped as though they were pieces of stone. Thoughts arise not to be collected and cherished but to be dropped as though they were the cold ashes of a fire long dead." Similarly, in the performance of *Duo II for Pianists*, each performer, when he performs in a way consistent with the composition as written, will let go of his feelings, his taste, his automatism, his sense of the universal, not attaching himself to this or to that, leaving by his performance no traces, providing by his actions no interruption to the fluency of nature. The performer therefore simply does what is to be done, not splitting his mind in two, not separating it from his body, which is kept ready for direct and instantaneous contact with his instrument.

This is a lecture on composition which is indeterminate with respect to its performance. That composition is necessarily experimental. An experimental action is one the outcome of which is not forseen. Being unforseen, this action is not concerned with its excuse. Like the land, like the air, it needs none. A performance of a composition which is indeterminate of its performance is necessarily unique. It cannot be repeated. When performed for a second time, the outcome is other than it was. Nothing therefore is accomplished by such a performance, since that performance cannot be grasped as an object in time. A recording of such a work has no more value than a postcard; it provides a knowledge of something that happened, whereas the action was a non-knowledge of something that had not yet happened.

There are certain practical matters to discuss that concern the performance of music the composition of which is indeterminate with respect to its performance. These matters concern the physical space of the performance. These matters also concern the physical time of the performance. In connection with the physical space of the performance, where that performance involves several players (two or more), it is advisable for several reasons to separate the performers one from the other, as much as is convenient and in accord with the action and the architectural situation. This separation allows the sounds to issue from their own centers and to interpenetrate in a way which is not obstructed by the conventions of European harmony and theory about relationships and interferences of sounds. In the case of the harmonious ensembles of European musical history, a fusion of sound was of the essence, and therefore players in an ensemble were brought as close together as possible, so that their actions, productive of an object in time, might be effective. In the case, however, of the performance of music the composition of which is indeterminate of its performance so that the action of the players is productive of a process, no harmonious fusion of sound is essential. A non-obstruction of sounds is of the essence. The separation of players in space when there is an ensemble is useful towards bringing about this non-obstruction and interpenetration, which are of the essence. Furthermore, this separation in space will facilitate the independent action of each performer, who, not constrained by the performance of a part which has been extracted from a score, has turned his mind in the direction of no matter what eventuality. There is the possibility when people are crowded together that they will act like sheep rather than nobly. That is why separation in space is spoken of as facilitating independent action on the part of each performer. Sounds will then arise from actions, which will then arise from their own centers rather than as motor or psychological effects of other actions and sounds in the environment. The musical recognition of the necessity of space is tardy with respect to the recognition of space on the part of

the other arts, not to mention scientific awareness. It is indeed astonishing that music as an art has kept performing musicians so consistently huddled together in a group. It is high time to separate the players one from another, in order to show a musical recognition of the necessity of space, which has already been recognized on the part of the other arts, not to mention scientific awareness. What is indicated, too, is a disposition of the performers, in the case of an ensemble in space, other than the conventional one of a huddled group at one end of a recital or symphonic hall. Certainly the performers in the case of an ensemble in space will be disposed about the room. The conventional architecture is often not suitable. What is required perhaps is an architecture like that of Mies van der Rohe's School of Architecture at the Illinois Institute of Technology. Some such architecture will be useful for the performance of composition which is indeterminate of its performance. Nor will the performers be huddled together in a group in the center of the audience. They must at least be disposed separately around the audience, if not, by approaching their disposition in the most radically realistic sense, actually disposed within the audience itself. In this latter case, the further separation of performer and audience will facilitate the independent action of each person, which will include mobility on the part of all.

There are certain practical matters to discuss that concern the performance of music the composition of which is indeterminate with respect to its performance. These matters concern the physical space of the performance. These matters also concern the physical time of the performance. In connection with the physical time of the performance, where that performance involves several players (two or more), it is advisable for several reasons to give the conductor another function than that of beating time. The situation of sounds arising from actions which arise from their own centers will not be produced when a conductor beats time in order to unify the performance. Nor will the situation of sounds arising from actions which arise from their own centers be produced when several conductors beat different times in order to bring about a complex unity to the performance. Beating time is not necessary. All that is necessary is a slight suggestion of time, obtained either from glancing at a watch or at a conductor who, by his actions, represents a watch. Where an actual watch is used, it becomes possible to foresee the time, by reason of the steady progress from second to second of the second hand. Where, however, a conductor is present, who by his actions represents a watch which moves not mechanically but variably, it is not possible to foresee the time, by reason of the changing progress from second to second of the conductor's indications. Where this conductor, who by his actions represents a watch, does so in relation to a part rather than a score—to, in fact, his own part, not that of another—his actions will interpenetrate with those of the players of the ensemble in a way which will not obstruct their actions. The musical recognition of the necessity of time is tardy with respect to the recognition of time on the part of broadcast communications, radio, television, not to mention magnetic tape, not to mention travel by air, departures and arrivals from no matter what point at no matter what time, to no matter what point at no matter what time, not to mention telephony. It is indeed astonishing that music as an art has kept performing musicians so consistently beating time together like so many horseback riders huddled together on one horse. It is high time to let sounds issue in time independent of a beat in order to show a musical recognition of the necessity of time which has already been recognized on the part of broadcast communications, radio, television, not to mention magnetic tape, not to mention travel by air, departures and arrivals from no matter what point at no matter what time, to no matter what point at no matter what time, not to mention telephony.

. . . . . .

An Indian lady invited me to dinner and said Dr. Suzuki would be there. He was. Before dinner I mentioned Gertrude Stein. Suzuki had never heard of her. I described aspects of her work, which he said sounded very interesting. Stimulated, I mentioned James Joyce, whose name was also new to him. At dinner he was unable to eat the curries that were offered, so a few uncooked vegetables and fruits were brought, which he enjoyed. After dinner the talk turned to metaphysical problems, and there were many questions, for the hostess was a follower of a certain Indian yogi and her guests were more or less equally divided between allegiance to Indian thought and to Japanese thought. About eleven o'clock we were out on the street walking along, and an American lady said, "How is it, Dr. Suzuki? We spend the evening asking you questions and nothing is decided." Dr. Suzuki smiled and said, "That's why I love philosophy: no one wins."

The following text is made up of questions and quotations. The quotations are some from the writings of others and some from my own writings. (That from Christian Wolff is from his article "New and Electronic Music," copyright 1958 by the Audience Press, and reprinted by permission from Audience, *Volume V, Number 3, Summer 1958.) The order and quantity of the quotations were given by chance operations. No performance timing was composed. Nevertheless, I always prescribe one before delivering this lecture, sometimes adding by chance operations indications of when, in the course of the performance, I am obliged to light a cigarette.*

III. Communication

NICHI NICHI KORE KO NICHI: EVERY DAY IS A BEAUTIFUL DAY
What if I ask thirty-two questions?
What if I stop asking now and then?
Will that make things clear?
Is communication something made clear?
What is communication?
Music, what does it communicate?
Is what's clear to me clear to you?
Is music just sounds?
Then what does it communicate?
Is a truck passing by music?
If I can see it, do I have to hear it too?
If I don't hear it, does it still communicate?
If while I see it I can't hear it, but hear something else, say an egg-beater, because I'm
inside looking out, does the truck communicate or the egg-beater, which communicates?
Which is more musical, a truck passing by a factory or a truck
passing by a music school?
Are the people inside the school musical and the ones outside unmusical?
What if the ones inside can't hear very well, would that change my question?
Do you know what I mean when I say inside the school?
Are sounds just sounds or are they Beethoven?
People aren't sounds, are they?

without having made any special effort to get into one[14] (if one can discount lamentation).

The in-the-heart path of music leads now to self-knowledge through self-denial, and its in-the-world path leads likewise to selflessness.[15] The heights that now are reached by single individuals at special moments may soon be densely populated.

[14] Painting in becoming literally (actually) realistic—(this is the twentieth century) seen from above, the earth, snow-covered, a composition of order superimposed on the "spontaneous" (Cummings) or of the latter letting order be (from above, so together, the opposites, they fuse) (one has only to fly [highways and topography, Milarepa, Henry Ford] to know)—automatically will reach the same point (step by step) the soul leaped to.

[15] The machine fathers mothers heroes saints of the mythological order, works only when it meets with acquiescence (cf. *The King and the Corpse*, by Heinrich Zimmer, edited by Joseph Campbell).

. . . . . .

Peggy Guggenheim, Santomaso, and I were in a Venetian restaurant. There were only two other people dining in the same room and they were not conversing. I got to expressing my changed views with regard to the French and the Italians. I said that I had years before preferred the French because of their intelligence and had found the Italians playful but intellectually not engaging; that recently, however, I found the French cold in spirit and lacking in freedom of the mind, whereas the Italians seemed warm and surprising. Then it occurred to me that the couple in the room were French. I called across to them and said, "Are you French?" The lady replied. "We are," she said, "but we agree with you completely."

Richard Lippold called up and said, "Would you come to dinner and bring the *I-Ching*?" I said I would. It turned out he'd written a letter to the Metropolitan proposing that he be commissioned for a certain figure to do *The Sun*. This letter withheld nothing about the excellence of his art, and so he hesitated to send it, not wishing to seem presumptuous. Using the coin oracle, we consulted the *I-Ching*. It mentioned a letter. Advice to send it was given. Success was promised, but the need for patience was mentioned. A few weeks later, Richard Lippold called to say that his proposal had been answered but without commitment, and that that should make clear to me as it did to him what to think of the *I-Ching*. A year passed. The Metropolitan Museum finally commissioned *The Sun*. Richard Lippold still does not see eye to eye with me on the subject of chance operations.

The question of leading tones came up in the class in experimental composition that I give at the New School. I said, "You surely aren't talking about ascending half-steps in diatonic music. Is it not true that anything leads to whatever follows?" But the situation is more complex, for things also lead backwards in time. This also does not give a picture that corresponds with reality. For, it is said, the Buddha's enlightenment penetrated in every direction to every point in space and time.

The following article was written at the request of Dr. Wolfgang Steinecke, Director of the Internationale Ferienkürse für Neue Musik at Darmstadt. The German translation by Heinz Klaus Metzger was published in the 1959 issue of Darmstädter Beiträge. *The statement by Christian Wolff quoted herein is from his article "New and Electronic Music," copyright 1958 by the Audience Press, and reprinted by permission from* Audience, *Volume V, Number 3, Summer 1958.*

HISTORY OF EXPERIMENTAL MUSIC IN THE UNITED STATES

Once when Daisetz Teitaro Suzuki was giving a talk at Columbia University he mentioned the name of a Chinese monk who had figured in the history of Chinese Buddhism. Suzuki said, "He lived in the ninth or the tenth century." He added, after a pause, "Or the eleventh century, or the twelfth or thirteenth century or the fourteenth."

About the same time, Willem de Kooning, the New York painter, gave a talk at the Art Alliance in Philadelphia. Afterwards there was a discussion: questions and answers. Someone asked De Kooning who the painters of the past were who had influenced him the most. De Kooning said, "The past does not influence me; I influence it."

A little over ten years ago I acted as music editor for a magazine called *Possibilities*. Only one issue of this magazine appeared. However: in it, four American composers (Virgil Thomson, Edgard Varèse, Ben Weber, and Alexei Haieff) answered questions put to them by twenty other composers. My question to Varèse concerned his views of the future of music. His answer was that neither the past nor the future interested him; that his concern was with the present.

Sri Ramakrishna was once asked, "Why, if God is good, is there evil in the world?" He said, "In order to thicken the plot." Nowadays in the field of music, we often hear that everything is possible; (for instance) that with electronic means one may employ any sound (any frequency, any amplitude, any timbre, any duration); that there are no limits to possibility. This

is technically, nowadays, theoretically possible and in practical terms is often felt to be impossible only because of the absence of mechanical aids which, nevertheless, could be provided if the society felt the urgency of musical advance. Debussy said quite some time ago, "Any sounds in any combination and in any succession are henceforth free to be used in a musical continuity." Paraphrasing the question put to Sri Ramakrishna and the answer he gave, I would ask this: "Why, if everything is possible, do we concern ourselves with history (in other words with a sense of what is necessary to be done at a particular time)?" And I would answer, "In order to thicken the plot." In this view, then, all those interpenetrations which seem at first glance to be hellish—history, for instance, if we are speaking of experimental music—are to be espoused. One does not then make just any experiment but does what must be done. By this I mean one does not seek by his actions to arrive at money but does what must be done; one does not seek by his actions to arrive at fame (success) but does what must be done; one does not seek by his actions to provide pleasure to the senses (beauty) but does what must be done; one does not seek by his actions to arrive at the establishing of a school (truth) but does what must be done. One does something else. What else?

In an article called "New and Electronic Music," Christian Wolff says: "What is, or seems to be, new in this music? . . . One finds a concern for a kind of objectivity, almost anonymity—sound come into its own. The 'music' is a resultant existing simply in the sounds we hear, given no impulse by expressions of self or personality. It is indifferent in motive, originating in no psychology nor in dramatic intentions, nor in literary or pictorial purposes. For at least some of these composers, then, the final intention is to be free of artistry and taste. But this need not make their work 'abstract,' for nothing, in the end, is denied. It is simply that personal expression, drama, psychology, and the like are not part of the composer's initial calculation: they are at best gratuitous.

"The procedure of composing tends to be radical, going directly to the sounds and their characteristics, to the way in which they are produced and how they are notated."

"Sound come into its own." What does that mean? For one thing: it means that noises are as useful to new music as so-called musical tones, for the simple reason that they are sounds. This decision alters the view of

history, so that one is no longer concerned with tonality or atonality, Schoenberg or Stravinsky (the twelve tones or the twelve expressed as seven plus five), nor with consonance and dissonance, but rather with Edgard Varèse who fathered forth noise into twentieth-century music. But it is clear that ways must be discovered that allow noises and tones to be just noises and tones, not exponents subservient to Varèse's imagination.

What else did Varèse do that is relevant to present necessity? He was the first to write directly for instruments, giving up the practice of making a piano sketch and later orchestrating it. What is unnecessary in Varèse (from a present point of view of necessity) are all his mannerisms, of which two stand out as signatures (the repeated note resembling a telegraphic transmission and the cadence of a tone held through a crescendo to maximum amplitude). These mannerisms do not establish sounds in their own right. They make it quite difficult to hear the sounds just as they are, for they draw attention to Varèse and his imagination.

What is the nature of an experimental action? It is simply an action the outcome of which is not foreseen. It is therefore very useful if one has decided that sounds are to come into their own, rather than being exploited to express sentiments or ideas of order. Among those actions the outcomes of which are not foreseen, actions resulting from chance operations are useful. However, more essential than composing by means of chance operations, it seems to me now, is composing in such a way that what one does is indeterminate of its performance. In such a case one can just work directly, for nothing one does gives rise to anything that is preconceived. This necessitates, of course, a rather great change in habits of notation. I take a sheet of paper and place points on it. Next I make parallel lines on a transparency, say five parallel lines. I establish five categories of sound for the five lines, but I do not say which line is which category. The transparency may be placed on the sheet with points in any position and readings of the points may be taken with regard to all the characteristics one wishes to distinguish. Another transparency may be used for further measurements, even altering the succession of sounds in time. In this situation no chance operations are necessary (for instance, no tossing of coins) for nothing is foreseen, though everything may be later minutely measured or simply taken as a vague suggestion.

Implicit here, it seems to me, are principles familiar from modern

painting and architecture: collage and space. What makes this action like Dada are the underlying philosophical views and the collagelike actions. But what makes this action unlike Dada is the space in it. For it is the space and emptiness that is finally urgently necessary at this point in history (not the sounds that happen in it—or their relationships) (not the stones—thinking of a Japanese stone garden—or their relationships but the emptiness of the sand which needs the stones anywhere in the space in order to be empty). When I said recently in Darmstadt that one could write music by observing the imperfections in the paper upon which one was writing, a student who did not understand because he was full of musical ideas asked, "Would one piece of paper be better than another: one for instance that had more imperfections?" He was attached to sounds and because of his attachment could not let sounds be just sounds. He needed to attach himself to the emptiness, to the silence. Then things—sounds, that is—would come into being of themselves. Why is this so necessary that sounds should be just sounds? There are many ways of saying why. One is this: In order that each sound may become the Buddha. If that is too Oriental an expression, take the Christian Gnostic statement: "Split the stick and there is Jesus."

We know now that sounds and noises are not just frequencies (pitches): that is why so much of European musical studies and even so much of modern music is no longer urgently necessary. It is pleasant if you happen to hear Beethoven or Chopin or whatever, but it isn't urgent to do so any more. Nor is harmony or counterpoint or counting in meters of two, three, or four or any other number. So that much of Ives (Charles Ives) is no longer experimental or necessary for us (though people are so used to knowing that he was the first to do such and such). He did do things in space and in collage, and he did say, Do this or this (whichever you choose), and so indeterminacy which is so essential now did enter into his music. But his meters and rhythms are no longer any more important for us than curiosities of the past like the patterns one finds in Stravinsky. Counting is no longer necessary for magnetic tape music (where so many inches or centimeters equal so many seconds): magnetic tape music makes it clear that we are in time itself, not in measures of two, three, or four or any other number. And so instead of counting we use watches if we want to know where in time we are, or rather where in time a sound is to be. All this can be summed up by saying each aspect of sound (frequency, amplitude, timbre, duration) is to be seen as a continuum, not as a series of discrete steps favored by conventions (Occidental or Oriental). (Clearly all the Americana aspects of Ives are in the way of sound coming into its own, since sounds by their nature are no more American than they are Egyptian.)

Carl Ruggles? He works and reworks a handful of compositions so that they better and better express his intentions, which perhaps ever so slightly are changing. His work is therefore not experimental at all but in a most sophisticated way attached to the past and to art.

Henry Cowell was for many years the open sesame for new music in America. Most selflessly he published the New Music Edition and encouraged the young to discover new directions. From him, as from an efficient information booth, you could always get not only the address and telephone number of anyone working in a lively way in music, but you could also get an unbiased introduction from him as to what that anyone was doing. He was not attached (as Varèse also was not attached) to what seemed to so many to be the important question: Whether to follow Schoenberg or Stravinsky. His early works for piano, long before Varèse's *Ionization* (which, by the way, was published by Cowell), by their tone clusters and use of the piano strings, pointed towards noise and a continuum of timbre. Other works of his are indeterminate in ways analogous to those currently in use by Boulez and Stockhausen. For example: Cowell's *Mosaic Quartet*, where the performers, in any way they choose, produce a continuity from composed blocks provided by him. Or his *Elastic Musics*, the time lengths of which can be short or long through the use or omission of measures provided by him. These actions by Cowell are very close to current experimental compositions which have parts but no scores, and which are therefore not objects but processes providing experience not burdened by psychological intentions on the part of the composer.

And in connection with musical continuity, Cowell remarked at the New School before a concert of works by Christian Wolff, Earle Brown, Morton Feldman, and myself, that here were four composers who were getting rid of glue. That is: Where people had felt the necessity to stick sounds together to make a continuity, we four felt the opposite necessity to get rid of the glue so that sounds would be themselves.

Christian Wolff was the first to do this. He wrote some pieces vertically on the page but recommended their being played horizontally left to right,

as is conventional. Later he discovered other geometrical means for freeing his music of intentional continuity. Morton Feldman divided pitches into three areas, high, middle, and low, and established a time unit. Writing on graph paper, he simply inscribed numbers of tones to be played at any time within specified periods of time.

There are people who say, "If music's that easy to write, I could do it." Of course they could, but they don't. I find Feldman's own statement more affirmative. We were driving back from some place in New England where a concert had been given. He is a large man and falls asleep easily. Out of a sound sleep, he awoke to say, "Now that things are so simple, there's so much to do." And then he went back to sleep.

Giving up control so that sounds can be sounds (they are not men: they are sounds) means for instance: the conductor of an orchestra is no longer a policeman. Simply an indicator of time—not in beats—like a chronometer. He has his own part. Actually he is not necessary if all the players have some other way of knowing what time it is and how that time is changing.

What else is there to say about the history of experimental music in America? Probably a lot. But we don't need to talk about neo-classicism (I agree with Varèse when he says neo-classicism is indicative of intellectual poverty), nor about the twelve-tone system. In Europe, the number twelve has already been dropped and in a recent lecture Stockhausen questions the current necessity for the concept of a series. Elliott Carter's ideas about rhythmic modulation are not experimental. They just extend sophistication out from tonality ideas towards ideas about modulation from one tempo to another. They put a new wing on the academy and open no doors to the world outside the school. Cowell's present interests in the various traditions, Oriental and early American, are not experimental but eclectic. Jazz per se derives from serious music. And when serious music derives from it, the situation becomes rather silly.

One must make an exception in the case of William Russell. Though still living, he no longer composes. His works, though stemming from jazz —hot jazz—New Orleans and Chicago styles—were short, epigrammatic, original, and entirely interesting. It may be suspected that he lacked the academic skills which would have enabled him to extend and develop his ideas. The fact is, his pieces were all expositions without development and

therefore, even today, twenty years after their composition, interesting to hear. He used string drums made from kerosene cans, washboards, out-of-tune upright pianos; he cut a board such a length that it could be used to play all the eighty-eight piano keys at once.

If one uses the word "experimental" (somewhat differently than I have been using it) to mean simply the introduction of novel elements into one's music, we find that America has a rich history: the clusters of Leo Ornstein, the resonances of Dane Rudhyar, the near-Eastern aspects of Alan Hovhaness, the tack piano of Lou Harrison, my own prepared piano, the distribution in space of instrumental ensembles in works by Henry Brant, the sliding tones of Ruth Crawford and, more recently, Gunther Schuller, the microtones and novel instruments of Harry Partch, the athematic continuity of clichés of Virgil Thomson. These are not experimental composers in my terminology, but neither are they part of the stream of European music which though formerly divided into neo-classicism and dodecaphony has become one in America under Arthur Berger's term, consolidation: consolidation of the acquisitions of Schoenberg and Stravinsky.

Actually America has an intellectual climate suitable for radical experimentation. We are, as Gertrude Stein said, the oldest country of the twentieth century. And I like to add: in our air way of knowing nowness. Buckminster Fuller, the dymaxion architect, in his three-hour lecture on the history of civilization, explains that men leaving Asia to go to Europe went against the wind and developed machines, ideas, and Occidental philosophies in accord with a struggle against nature; that, on the other hand, men leaving Asia to go to America went with the wind, put up a sail, and developed ideas and Oriental philosophies in accord with the acceptance of nature. These two tendencies met in America, producing a movement into the air, not bound to the past, traditions, or whatever. Once in Amsterdam, a Dutch musician said to me, "It must be very difficult for you in America to write music, for you are so far away from the centers of tradition." I had to say, "It must be very difficult for you in Europe to write music, for you are so close to the centers of tradition." Why, since the climate for experimentation in America is so good, why is American experimental music so lacking in strength politically (I mean unsupported by those with money [individuals and foundations], unpublished, undiscussed, ignored), and why is there so little of it that is truly uncompromis-

ing? I think the answer is this: Until 1950 about all the energy for furthering music in America was concentrated either in the League of Composers or in the ISCM (another way of saying Boulanger and Stravinsky on the one hand and Schoenberg on the other). The New Music Society of Henry Cowell was independent and therefore not politically strong. Anything that was vividly experimental was discouraged by the League and the ISCM. So that a long period of contemporary music history in America was devoid of performances of works by Ives and Varèse. Now the scene changes, but the last few years have been quiet. The League and the ISCM fused and, so doing, gave no concerts at all. We may trust that new life will spring up, since society like nature abhors a vacuum.

What about music for magnetic tape in America? Otto Luening and Vladimir Ussachevsky call themselves experimental because of their use of this new medium. However, they just continue conventional musical practices, at most extending the ranges of instruments electronically and so forth. The Barrons, Louis and Bebe, are also cautious, doing nothing that does not have an immediate popular acceptance. The Canadian Norman McLaren, working with film, is more adventurous than these—also the Whitney brothers in California. Henry Jacobs and those who surround him in the San Francisco area are as conventional as Luening, Ussachevsky, and the Barrons. These do not move in directions that are as experimental as those taken by the Europeans: Pousseur, Berio, Maderna, Boulez, Stockhausen, and so forth. For this reason one can complain that the society of musicians in America has neither recognized nor furthered its native musical resource (by "native" I mean that resource which distinguishes it from Europe and Asia—its capacity to easily break with tradition, to move easily into the air, its capacity for the unforeseen, its capacity for experimentation). The figures in the ISCM and the League, however, were not powerful aesthetically, but powerful only politically. The names of Stravinsky, Schoenberg, Webern are more golden than any of their American derivatives. These latter have therefore little musical influence, and now that they are becoming quiescent politically, one may expect a change in the musical society.

The vitality that characterizes the current European musical scene follows from the activities of Boulez, Stockhausen, Nono, Maderna, Pousseur, Berio, etc. There is in all of this activity an element of tradition, continuity with the past, which is expressed in each work as an interest in continuity whether in terms of discourse or organization. By critics this activity is termed post-Webernian. However, this term apparently means only music written *after* that of Webern, not music written *because of* that of Webern: there is no sign of *klangfarbenmelodie*, no concern for discontinuity—rather a surprising acceptance of even the most banal of continuity devices: ascending or descending linear passages, crescendi and diminuendi, passages from tape to orchestra that are made imperceptible. The skills that are required to bring such events about are taught in the academies. However, this scene will change. The silences of American experimental music and even its technical involvements with chance operations are being introduced into new European music. It will not be easy, however, for Europe to give up being Europe. It will, nevertheless, and must: for the world is one world now.

History is the story of original actions. Once when Virgil Thomson was giving a talk at Town Hall in New York City, he spoke of the necessity of originality. The audience immediately hissed. Why are people opposed to originality? Some fear the loss of the *status quo*. Others realize, I suppose, the fact that they will not make it. Make what? Make history. There are kinds of originality: several that are involved with success, beauty, and ideas (of order, of expression: i.e., Bach, Beethoven); a single that is not involved, neuter, so to say. All of the several involved kinds are generally existent and only bring one sooner or later to a disgust with art. Such original artists appear, as Antonin Artaud said, as pigs: concerned with self-advertisement. What is advertised? Finally, and at best, only something that is connected not with making history but with the past: Bach, Beethoven. If it's a new idea of order, it's Bach; if it's a heartfelt expression, it's Beethoven. That is not the single necessary originality that is not involved and that makes history. That one sees that the human race is one person (all of its members parts of the same body, brothers—not in competition any more than hand is in competition with eye) enables him to see that originality is necessary, for there is no need for eye to do what hand so well does. In this way, the past and the present are to be observed and each person makes what he alone must make, bringing for the whole of human society into existence a historical fact, and then, on and on, in continuum and discontinuum.