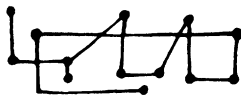


HIS OWN MUSIC



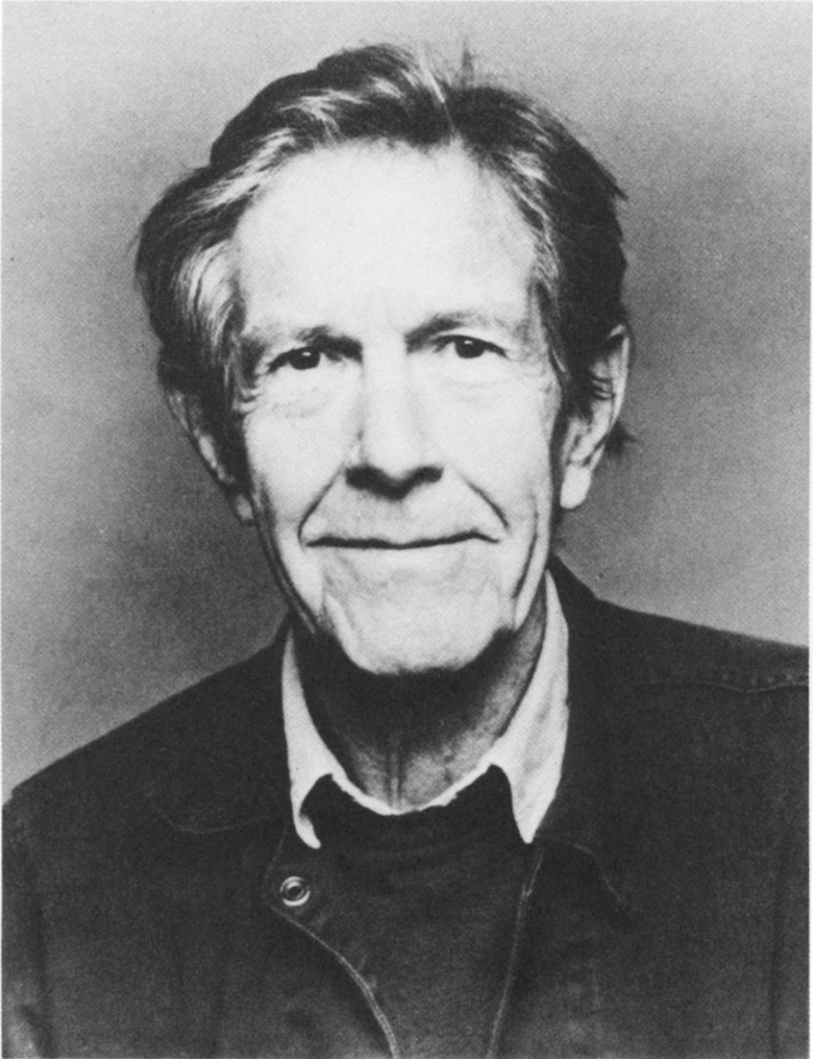
UR-CONVERSATION WITH JOHN CAGE PRODUCED BY RICHARD KOSTELANETZ*

I. To 1970

WHAT WAS YOUR *first music like?*
It was mathematical. I tried to find a new way of putting sounds together. Unfortunately, I don't have either the sketches or any clearer idea about the music than that. The results were so unmusical, from my then point

*John Cage, *various interviewers* (see Bibliography). This article is excerpted from the forthcoming book, *John Cage Conversing*, scheduled for publication (in German translation) in 1988 by the DuMont Buchverlag, Cologne. Part 2 will appear in our next issue.

Photograph by Rex Rystedt, 1984



JOHN CAGE

of view, that I threw them away. Later, when I got to California, I began an entirely different way of composing, which was through improvisation, and improvisation in relation to texts: Greek, experimental writing from *transition*

magazine, Gertrude Stein, and Aeschylus. Then, becoming through Richard Buhlig and others aware of my disconnection with musical technique or theory, I began studying the books of Ebenezer Prout. I went through them as though I had a teacher, and did all the exercises—in harmony, primarily. I don't think I did counterpoint. It was later, with Schönberg, that I studied that.

—Interview with William Duckworth (1985)

I showed Adolph Weiss my first compositions, which were of a curious, original kind of twelve-tone music in which I divided the row into fragments or motives, but instead of varying them as most composers would, I kept them static but had ways of making mosaics out of them that used all the transpositions, and the inversions and the retrogrades, and so forth, and almost never expressed the row itself. Well, in that situation, I equated the absence of any of those motives with their presence. So that I could express a fragment of a row by its duration, and that would mean by silence. So when I would send such a composition to Weiss, he would say, “Why, when you've just started your piece, why do you stop? You're not supposed to stop until you get to the end. Why do you stop in the middle?” Well, I thought about this a good deal, but I had a strong inclination toward this stopping; it was because I wasn't *going*. The music was not going, therefore it would perfectly well stop, since stopping was as much a part of it as sounding; not sounding was the same as sounding.

—Interview with Cole Gagne and Tracy Caras (1975)

In 1938 Syvilla Fort, a magnificent black dancer/choreographer in Bonnie Bird's company at the Cornish School in Seattle, was giving a dance program on Friday, and I was the only composer around. She asked me to make the music for her *Bacchanale*. The space was small, and there was no room for percussion, only room enough for a grand piano. So I had to do something suitable for her on that piano. And that's what happened. She asked me on a Tuesday. I got to work quickly and finished it by Thursday.

Were you trying to recreate African or oriental music?

At that time, because I had recently been studying with Arnold Schönberg, I wrote either twelve-tone music or percussion music. I first tried to find a twelve-tone row that sounded African, and I failed. So I then remembered how the piano sounded when Henry Cowell strummed the strings or plucked them, ran darning needles over them, and so forth. I went to the kitchen and got a pie plate and put it and a book on the strings and saw that I was going in the right direction. The only trouble with the pie plate was that it bounced. So then I got a nail, put it in, and the trouble was it slipped. So it dawned on me to put a wood

screw between the strings, and that was just right. Then weather stripping and so on. Little nuts around the screws, all sorts of things. I invited Mark Tobey and Morris Graves over to listen to it, and they were delighted. And so was Syvilla, and so was I, and so was my wife Xenia. We were all so happy, happy as could be. When Lou Harrison came over and heard it, he said: “Oh dammit! I wish I’d thought of that.”

—Interview with Stephen Montague (1982)

I might even say, or someone else might say of me, that my whole dedication to music has been an attempt to free music from the clutches of the A–B–A. When I was just beginning to write music I made a list of all the permutations of numbers such as would produce forms or relationships of parts in a musical composition. And I made them for all the numbers from 2 through 11. By the time you get to the number 11 the possibilities are extraordinarily numerous. Now, when you look at all those possibilities of formal or structural relationships, you see that European music has used only a tiny number of them, whereas if you simply listen to environmental sound you’re over and over struck by the brilliance of nonorganization.

—Interview with Hans G Helms (1972)

I remain a percussion composer whether I write for percussion instruments or not. That is, my work is never based, structurally or as an instance of process, on frequency but rather on duration considerations. Within time I write for friends who are virtuosi, strangers who play in orchestras, myself growing old, indeterminately or determinately, always nonintentionally. Since 1968 I have found two ways of turning intention toward nonintention: musicircus (simultaneity of unrelated intentions); and music of contingency (improvisation using instruments in which there is a discontinuity between cause and effect).

Did your early involvement with percussion music in some way influence you in composing with “chance” methods and to compose with “chance” methods?

Variation in gongs, tom toms, etc. and particularly variation in the effects on pianos of the use of preparations, prepared me for the renunciation of intention and the use of chance operations. Study of the philosophy of Zen Buddhism with Daisetz Suzuki was substantial to these steps. Suzuki gave a lecture on the structure of the mind. He drew an oval on the blackboard. Halfway up the left-hand side he placed two parallel lines. “They are the ego which has the capacity of flowing with its experience—out through the sense perceptions to the world of relativity; in through the dreams through the collective unconscious of Jung to the Ground of Meister Eckhart—or closing itself off from that experience by

means of its likes and dislikes, its memory. What Zen wants is that ego flow full circle.” Needing a musical discipline as strict as sitting cross-legged, I chose chance operations.

What are the special responsibilities, as you see it, that we percussionists have in the world today?

I still believe what I wrote in 1939, “Percussion music is revolution.” New music: new society. I don’t think, as some seem to be thinking, that the percussion should become like the other sections of the orchestra, more expressive in their terms (overtone structure, frequency). I believe that the rest of the orchestra should become as noisy, poverty-stricken, and unemployed as the percussion section (or at least grant its acceptability in musical society). I do not mean anything hierarchical. I just mean accepting the fact that noises are sounds and that music is made with sounds, not just musical sounds. Hopefully, new society based on unemployment. Why have labor-saving inventions otherwise?

—Interview with Stuart Smith (1983)

Lou Harrison and I wrote *Double Music* [1941] together. It is a “voiced” percussion piece. One of us wrote the soprano and tenor parts. The other wrote the bass and alto. After agreeing on a rhythmic structure, the phrases and the sections, we worked independently. When we brought the parts together in rehearsal, no notes had to be changed. We were delighted.

—Conversation with David Shapiro (1985)

We’d like to begin with your works from the 1930s and 1940s. Do they seem remote to you now? Did you have to unlearn from them in order to compose your indeterminate works of the last thirty years?

I suppose the answer to both those questions is yes. I’m always more interested in what I haven’t yet written than in what I’ve written in the past—particularly that long ago. Although now so many people are beginning to play the old music, and they invite me to the concerts, so I hear it a good deal. Some of the pieces are good and some of them are not. There are two that are quite popular that I think are good pieces: *Credo in Us* and the *Third Construction*. I think the *Second Construction* is a poor piece [though it is sometimes played very well].¹ I wasn’t quite aware that it was poor when I wrote it; I thought it was interesting. But it has carry-overs from education and theory; it’s really a fugue, but of a novel order. In this day, I think fugues are not interesting (because of the repetition of the subject).

—Interview with Cole Gagne and Tracy Caras (1980)

I admit I've been inclined as others have been inclined to get rid of bad pieces, you know, and there are some that are definitely very poor. There's an amusing point here. You have heard about that business of the *Imaginary Landscape* and the *Marches*, and there is one *Imaginary Landscape* that I decided was so bad that it should simply be forgotten, and that's brought about a curious numbering.

Was it an early one?

Yes, it was Number Two, which I thought was really pointless.

And that's published.

I don't think it is now—I think it's gone.

What would make it bad?

I think what makes things bad generally is that in the circumstances in which we are working we are working on many other things too, so that we are not able to give full attention to any one of the things we are doing when we are doing too many things. So that a piece of music was a rhythmic structure for me living, so to speak, in that rhythmic structure; and when the life in it isn't lively but also not simply repetitive as, say, in *Vexations* of Satie, but is somewhere in between it, a very dull lusterless point, it seems to me it's not good.

—Conversation with Gwen Deely and Jim Theobald (1976)

There [in *Sonatas and Interludes for Prepared Piano*] I had a written structure so that I knew the length of the phrases of the piece from the beginning to the end. I placed objects on the strings, deciding their position according to the sounds that resulted. So, it was as though I was walking along the beach finding shells that I liked, rather than looking at the ones that didn't interest me. Having those preparations of the piano and playing with them on the keyboard in an improvisatory way, I found melodies and combinations of sounds that worked with the given structure.

—Interview with Bill Shoemaker (1985)

[The piece deals with the] nine permanent emotions of the Indian tradition. Coomaraswamy insisted that certain ideas were true and that these ideas were to be found in both the Occident and the Orient. My first reaction was to express this idea as far as I could in discourse. So I wrote *Sonatas and Interludes*. In it there are some pieces with bell-like sounds that suggest Europe, and others with a drumlike resonance that suggest the East. The last piece is clearly European. It was the signature of a composer from the West.

—Interview with Joan Peyser (1976)

In 1949 you went to Europe for a few months, and shortly after your return you began to use the I Ching in your composition. Had you encountered things in Europe that led you in this direction?

No, it was rather my study of Zen Buddhism. At first, my inclination was to make music about the ideas that I had encountered in the Orient. The *String Quartet* [1950] is about the Indian view of the seasons, which is creation, preservation, destruction, and quiescence; also the Indian idea of the nine permanent emotions, with tranquillity at the center. But then I thought, instead of talking about it, to do it; instead of discussing it, to do it. And that would be done by making the music nonintentional, and starting from an empty mind. At first I did this by means of the Magic Square.

The third movement of the *String Quartet* uses a canon for a single line {half-way through it repeats itself, going backwards to the beginning altered somewhat by the exigencies of the rhythmic structure}, and it's a kind of music which doesn't depend on one's likes and dislikes; it's the following willy-nilly of a ball which is rolling in front of you. But there are at least two pieces that are in transition: the *Sixteen Dances* and the *Concerto for Prepared Piano and Chamber Orchestra*. Both of those use a chart like the Magic Square. They established moves on it which distinguished, as I recall, one phrase from another. It can be used compositionally to make differences by changing the move that's made on the chart. Instead of having numbers, as the Magic Square would, the chart of course had single sounds, intervals, and aggregates. The aggregates and intervals are made on either one instrument or several.

—Interview with Cole Gagne and Tracy Caras (1980)

[Pierre] Boulez had been working with a similar diagram at the time, but he put numbers into the squares whereas I put in aggregates of sounds. They had no relation to harmony. They had no necessary direction. Each was a musical fact, without any implication at all. If one moves in this way one produces a continuity of sound that has nothing to do with harmony and is freed, at the same time, from the imposition of one's own taste.

—Interview with Joan Peyser (1976)

It was in the course of doing such work that Christian Wolff brought me a copy of the *I Ching* that his father had just published. I saw immediately that that chart was better than the Magic Square. So I began writing the *Music of Changes* and later the *Imaginary Landscape No. 4* for twelve radios. The reason I wrote *that* was because Henry Cowell had said that I had not freed myself from my tastes in the *Music of Changes*. It was my intention to do that, so I wrote the

music for radios feeling sure that no one would be able to discern my taste in that. However, they criticized that too because it was so soft. So I just kept on going in spite of hell and high water.

—Interview with Cole Gagne and Tracy Caras (1980)

Normally a musician writes in measures, and then assigns to the unit of those measures a metronomic figure. So we have *andante* and *largo* and all those things. In a piece called the *Music of Changes*, which I composed for the *Book of Changes*, all the things I could discern in a piece of music were subjected to chance operations. Among the things I noticed and subjected to chance operation was tempo. If you look at the *Music of Changes* you see that every few measures, at every structural point, things were speeding up or slowing down or remaining constant. How much these things varied was chance-determined. David Tudor learned a form of mathematics which he didn't know before in order to translate those tempo indications into actual time. It was a very difficult process and very confusing for him.

—Interview with Michael Kirby and Richard Schechner (1965)

What I did was to develop rhythmic structure from a fixed tempo to changes of tempo. I had not yet moved to a renunciation of absolutely all structure.

—Interview with Joan Peyser (1976)

After that I altered my way of composing: I didn't write in tempos but always in time. By the time I was teaching at the New School this was one of the facts of my work, and they {the students} caught on readily because it gives one enormous facility in the field of time to know by means of a clock when something's got to start.

—Interview with Michael Kirby and Richard Schechner (1965)

I find that a work like the String Quartet [1950], or a lot of the prepared piano music, generates much more tranquillity, much more of a meditative state of myself, than something like Variations II or 26 '1.1499" [for string player, 1955].

It's because the *String Quartet* is about becoming quiet. As Ramakrishna said, "If people had a choice between going to Heaven and hearing a lecture on heaven, they would choose the lecture." If you're going to be peaceful, instead

of being pushed toward peacefulness by a lecture on peacefulness—which the *String Quartet* is, you see—you have to somehow be peaceful no matter what, which is to say in a situation which itself is not peaceful. That’s why the later works are not. If you want to be tranquil in a tranquil situation, then what are you going to do when the situation is not tranquil, is the question. This was made clear to me by the hexagram on grace in the *I Ching*, which is the hexagram on beauty. It says that art is like a light on top of a mountain, shining into the darkness, and that’s why art cannot solve serious problems, because the serious problems take place in the darkness. That’s why, if there is going to be a tranquillity which is of use to you, it will be a tranquillity that leaves you tranquil in a situation which is not tranquil.

—Interview with Cole Gagne and Tracy Caras (1975)

How did you come to write the Suite for Toy Piano?

My works just before that had been for prepared piano. I had written the *Three Dances* and the *Book of Music* for two prepared pianos, and I had also written the *Sonatas and Interludes*, so that I was familiar both with percussion music and with the complex nature of the prepared piano, and I wanted to find a way of writing for unprepared or normal instruments. And I thought the place to begin would be with the simplest aspect of the piano, namely the white keys, and so I wrote the *Suite for Toy Piano*. So many of the black keys on toy pianos are merely painted on and don’t refer to different pitches, and the instrument itself is generally a white key instrument with a small range. I tried to write in such a way that these pitches, which were the most conventional, would become new to my ears.

I was still working within a rhythmic structure. Schönberg had impressed on me the importance of tonality and harmony as a structural means to divide a whole into parts, and when I decided to make a music that would include noises, I couldn’t have recourse to tonality, because the noises aren’t part of it; so I needed a different kind of structure. And I made a rhythmic structure {generally a structure having a total number of measures that had a square root; this enabled me to give the same proportions to the large parts within a whole that I gave to the phrases within a unit of the whole} which was as open to noises as it was to the pitched tones. With the *Suite for Toy Piano* I wanted to approach each sound as though it were as fresh as a prepared piano sound. I wanted to discover again, as though they were completely unfamiliar, the most familiar sounds. Actually, the *Suite for Toy Piano* can be played on any keyboard instrument. I like the sound of a toy piano very much. It sounds like a gamelan of some kind.

—Interview with Tom Darter (1982)

I think perhaps my own best piece, at least the one I like the most, is the silent piece [4'33", 1952]. It has three movements and in all of the movements there are no sounds. I wanted my work to be free of my own likes and dislikes, because I think music should be free of the feelings and ideas of the composer. I have felt and hoped to have led other people to feel that the sounds of their environment constitute a music which is more interesting than the music which they would hear if they went into a concert hall.

—Interview with Jeff Goldberg (1974)

They missed the point. There's no such thing as silence. What they thought was silence [in my 4'33"], because they didn't know how to listen, was full of accidental sounds. You could hear the wind stirring outside during the first movement [in the premiere]. During the second, raindrops began pattering the roof, and during the third the people themselves made all kinds of interesting sounds as they talked or walked out.

—Profile by John Kobler (1968)

I had friends whose friendship I valued and whose friendship I lost because of that. They thought that calling something you hadn't done, so to speak, *music* was a form of pulling the wool over their eyes, I guess.

—Conversation with Ellsworth Snyder (1985)

Most composers like some of their own pieces better than others, or feel some are more important than others. Which piece or pieces of yours would you consider the most important?

Well, the most important piece is my silent piece.

That's very interesting. A lot of people would agree with that.

Uh huh.

But you feel that way as well.

Oh yes. I always think of it before I write the next piece.

Really? Tell me how you came to do that piece?

I had thought of it already in 1948 and gave a lecture which is not published, and which won't be, called "A Composer's Confessions." It was given at Vassar College in the course of a festival involving artists and thinkers in all fields. Among those was Paul Weiss, who taught philosophy at Yale University. I was just then in the flush of my early contact with Oriental philosophy. It was out of

that that my interest in silence naturally developed: I mean it's almost transparent. If you have, as you do in India, nine permanent emotions and the center one is the one without color—the others are white or black—and tranquillity is in the center and freedom from likes and dislikes, it stands to reason, the absence of activity which is also characteristically Buddhist . . . well, if you want the wheel to stop, and the wheel is the Four Noble Truths . . . the first is Life is Activity, sometimes translated as Life is Pain . . . if the wheel is to be brought to a stop, the activity must stop.

The marvelous thing about it is when activity comes to a stop, what is immediately seen is that the rest of the world has not stopped. There is no place without activity. Oh, there are so many ways to say it. Say I die as a person. I continue to live as a landscape for smaller animals. I just never stop. Just put me in the ground and I become part and parcel of another life, another activity. So the only difference between activity and inactivity is the mind. And the mind that becomes free of desire. Joyce would agree here, free of desire and loathing—that's why he said he was so involved with comedy, because tragedy is not so free from these two. So when the mind has become in that way free, even though there continues to be some kind of activity, it can be said to be inactivity. And that's what I have been doing, and that's why critics are so annoyed with my work. Because they see that I am denying the things to which they are devoted.

What other works of yours do you feel have also been very important?

All the others.

All of the others, but the silent piece stands above all the rest.

It's more radical. I think the pieces since the silent piece in a sense are more radical than the ones that precede it, though I had an inclination toward silence that you can discern in very early pieces written in the 1930s. One of my early teachers always complained that I had no sooner started than I stopped. You can see that in the *Duet for Two Flutes*, or those early piano pieces that were written in the thirties. Then I'm always introducing silence right near the beginning, when any composer in his right mind would be making things thicker and thicker, I was getting thinner and thinner.

—Interview with Stephen Montague (1982)

In 34'46.776" *for 2 Pianists*, instead of specifying the piano preparation, I not only specified it only roughly with regard to categories of materials like plastic, rubber, metal and so forth, leaving the decisions free to the performer; but another element entered into the musical composition which was *x*, in other words, something not thought of at all. So that it gave a freedom to the individual performer.

This giving of freedom to the individual performer began to interest me more and more. And given to a musician like David Tudor, of course, it provided

results that were extraordinarily beautiful. When this freedom is given to people who are not disciplined and who do not start—as I’ve said in so many of my writings—from zero (by zero I mean the absence of likes and dislikes) who are not, in other words, changed individuals, but who remain people with particular likes and dislikes, then, of course, the giving of freedom is of no interest whatsoever.

But when it is given to disciplined people, then you see—as we have seen, I believe, in our performances with David Behrman, with Gordon Mumma, with David Tudor, with Alvin Lucier, with Lowell Cross, sometimes all of us together, or in a piece that included many of those whom I’ve just named, together with Marcel and Teeny Duchamp and myself in Toronto, a piece called *Reunion*—in that case you give an instance of a society which has changed, not an individual who has changed but a group of individuals, and you show, as I’ve wanted to do, the practicality of anarchy.

—Interview with Hans G Helms (1972)

Progress may be the idea of *dominating* nature; but in the arts, it may be *listening* to nature. In the forties, I conceived the idea of a piece with *no sounds in it*, but I thought it would be incomprehensible in the European context. Five years later, I was inspired to do it by seeing the paintings of Robert Rauschenberg—one of which was a canvas with no paint on it.

I try to keep my curiosity and my awareness with regard to what’s happening open and I try to arrange my composing means so that I won’t have any knowledge of what might happen.

—Overheard by Michael Nyman (1973)

In a lecture in 1937 [reprinted in Silence], you said, “The principle of form will be our only constant connection with the past.” You went on to identify this connection as “the principle of organization, or man’s common ability to think.” Later you associate form with the “morphology of a continuity” and “expressive content.” Would you trace your developing view of form?

I’m now more involved in *disorganization* and a state of mind which in Zen is called *no-mindedness*.

Those statements, given in 1937, are given as a sort of landmark to let the reader know from where I set out. There are certain things in that lecture that I would agree with and some that I would not. I imagine that when I used the word *form* then, that I meant what I later called *structure* (the divisibility of the whole into parts). Later I used *form* in the same sense that people generally use the word *content* (that aspect of composition which is best able to be free, spontaneous, heartfelt, and so on).

That attitude towards form is sort of in the middle between my present thought and my early thought. Now I don't bother to use the word *form*, since I am involved in making processes, the nature of which I don't foresee. How can I speak of *form*?

—Conversation with Roger Reynolds (1961)

In 1952 we had a duration structure with compartments which had been arrived at by chance operations. But in my more recent work [early sixties] I'm concerned rather with what I call process—setting a process going which has no necessary beginning, no middle, no end, and no sections. Beginnings and endings can be given things, but I try to obscure that fact, rather than do anything like what I used to do, which was to measure it. The notion of measurement and the notion of structure are not notions with which I am presently concerned. I try to discover what one needs to do in art by observations from my daily life. I think daily life is excellent and that art introduces us to it and to its excellences the more it begins to be like it.

Is there a difference between a group of people deciding to go to the beach and watching what happens on the beach, and a group of people deciding to go to an Event or an Activity and watching or participating in it?

If a person assumes that the beach is theater and experiences it in those terms I don't see that there's much difference. It is possible for him to take that attitude. This is very useful because you often find yourself, in your daily life, in irritating circumstances. They won't be irritating if you see them in terms of theater.

In other words, if you remove yourself from them.

Can we say remove, or: use your faculties in such a way that you are truly at the center? We've been speaking of the central factor being each person in the audience.

Let's take a hypothetical but possible event. I'm involved in an auto wreck in which I'm not hurt but in which my best friend is killed. Well, I imagine that's a few steps above irritating—but if I look at it as theater, as happening to another but not to me, I can learn from the experience, respond to it but not be in it; then perhaps I can remove the irritants.

I didn't mean by putting the person at the center that he wasn't in it, I meant rather to show him that he was at the very center of it.

I don't see how this can remove the irritation then.

Do you know the Zen story of the mother who has just lost her only son? She is sitting by the road weeping and the monk comes along and asks her why she's weeping, and she says she's lost her only son, and he hits her on the head and says, "There, that'll give you something to cry about." Isn't there something of that same insistence in Artaud, in the business of the plague and of cruelty?

Doesn't he want people to see themselves not in a pleasant world but in something that is the clue to all things that we normally try to protect ourselves from?

Sure. My only quarrel is whether one really enjoys it or not. When the mother gets hit over the head she has two things to cry about.

Another thing about structure. Isn't the difference between the beach and the theater that the beach is not rehearsed and the theater is? The thing that bothered me about the Happenings I've seen is that they are obviously rehearsed but badly done. Either they shouldn't have been rehearsed, or they shouldn't have gone half way. In one Happening there was a man choking another and it became very theatrical for me in a bad way, because I knew that they weren't really choking each other . . .

And you know what the word "theatrical" should mean . . .

Convincingly. Either they should have done it well or not at all.

I couldn't be in greater agreement. If there are intentions, then there should be every effort made to realize those intentions. Otherwise carelessness takes over. However, if one is able to act in a way that doesn't have intention in it, then there is no need for rehearsal. This is what I'm working on now: to do something without benefit of measurement, without benefit of the sense that now that this is finished we can go on to the next thing.

Let me give you one example. In those two boxes over there are some ninety loops on tape. They vary from small loops that are just long enough for a tape machine, to ones which are, say, forty feet long. We gave a performance [of *Rozart Mix*], last week, at Brandeis, with six performers—the number that turned up at the time that the set-up was made—and thirteen tape machines. The performance simply consisted of putting the loops on the various machines and taking them off. Doing this, a complex stage situation developed because we had to set up stands around which the tapes would go, and these things were overlapping. The number of loops made it fairly certain that no intention was involved in putting on one rather than another loop. The number of people and the number of machines also created a situation that was somewhat free of intentions. Another way is by making use of electronic circuits to involve the performers in manipulating the amplifiers. Somebody might be working at a microphone or a cartridge point when another person is at the amplifier altering it. Both people are prevented from successfully putting through any intentions.

But those cases depend upon the use of a machine which will short-circuit human intention.

If you have a number of people, then a nonknowledge on the part of each of what the other is going to do would be useful. Even if one of them was full of intentions, if none of them knew what the others' intentions were . . .

Even though each individual thing may be very structured, the combination would . . .

. . . tend in a nonintentional, unstructured direction, and would resemble what I referred to as daily life. If you go down the street in the city you can see that people are moving about with intention but you don't know what those

intentions are. Many, many things happen which can be viewed in purposeless ways.

—Interview with Michael Kirby and Richard Schechner (1965)

My recent work has all been such that it has this indeterminate quality with respect to, certainly, its length. I tend, given the practicality of it in social terms to make it long. I like, for instance, to start a piece without the audience's knowing that it has started. That can be done in several ways. And to conclude it without their knowing that it has stopped. That appeals to me very much.

—Conversation with David Sylvester and Roger Smalley (1967)

I don't believe you ever incorporated any photographs of plywood in your . . .

Oh, I did. I wrote a piece for carillon. Yes. I went to a girls' school with Merce [Cunningham] in southwestern Virginia [in the mid 1960s], and they had a carillon in the school; and the carillonneur said, "Have you music for carillon?" And I said, "Yes I do, but I didn't bring it with me." He said, "Well that's a pity because I would have played it." So I said, "Well, wait a minute," and thinking of Marcel [Duchamp] I went around the theater. There was lots of time—during a dance rehearsal they don't need me—and I looked for a carillon piece, like a found object, you see. And I saw pieces of plywood: they were plywood blocks just the size of organ music, and the carillon is a form of organ music. So I took one. First I asked him how many bells his carillon had. He told me. So then I took that block off and drew staves on it that covered the range of his instrument and I said, "Would you be able to play this?" He looked at it, and then back at me and smiled, and said, "Yes." So within the hour I had written ten pieces on ten pieces of plywood. I had five pieces of plywood, and I wrote a staff on each side. And I gave it to him. I said, "Please play as long as you like this piece, and then remain silent as long as you think it took you to play it. And then play the next one and so on. Play all ten with silences between each." So that afternoon—this all happened in one day—that afternoon he played the ten pieces for carillon [*Music for Carillon No. 5*], and we stood outdoors and listened; and it was perfectly beautiful.

—Conversation with David Shapiro (1985)

Would you tell us about Variations VII and its performance?

It was done in New York, sponsored by EAT (Experiments in Art and Technology). That was several years ago, in 1967, I think. The air, you see, is filled

with sounds which are inaudible, but which become audible if we have receiving sets. So the idea of *Variations VII* is simply to go fishing, so to speak, in a situation you are in, and pick up as many things as you can, that are already in the air.

Is this similar to LaMonte Young's butterfly piece? He said that butterflies made a sound, though it is inaudible to human ears, but it really is music too.

No, mine was more like fishing things that were already there.

What were the fishes you caught?

Well, there were ordinary radios, there were Geiger counters to collect cosmic things, there were radios to pick up what the police were saying, there were telephone lines open to different parts of the city. There were as many different ways of receiving vibrations and making them audible as we could grasp with the techniques at hand.

—Interview by Max Nyffeler (1970)

How did you come to make a piece like HPSCHD?

When I was at the University of Cincinnati a year ago, [Lejaren] Hiller called me from Urbana and said he could arrange for me to do a piece using computer facilities and would like to know if I was interested in doing it and what it would be if I did something with computer. The original notion was that another person, Gary Grossman, would do the programming, since I don't know how to program and didn't intend to learn how. It turned out when I arrived at the University of Illinois, Grossman was too busy to do the programming. So, Jerry Hiller did the programming for me, and, since he's had so much experience in the field {and is himself a composer}, the piece has become a collaboration between us. The original idea, I thought, was more or less tailor-made for a computer: that is to say, an enormous project—enormous in the sense of having so many details in it that, were one to sit down with pen, ink, and paper, it would be a project exceeding the time one could spend at a desk—one that would be suitable for a computer. The original idea came from a notion I had about Mozart's music and how it differed from Bach's music. In the case of Bach, if one looked at a few measures and at the different voices, they would all be observing more or less the same scalar movement; that is, each voice would be using the same scale. Whereas, in the case of Mozart, if one looked at just a small amount of music, one would see the chromatic scale, the diatonic scale, and a use of chords melodically, like a scale, but made up of larger steps. I thought to extend this "moving-away-from-unity" and "moving-toward-multiplicity" and, taking advantage of the computer facility, to multiply the details of the tones and durations of a piece of music. So this piece divides the five octaves into all divisions: from five tones per octave to fifty-six tones per octave. Then, having observed large chordal/melodic steps, the diatonic and chromatic, even smaller steps were made, which would be microtonal with respect to each one of

the tones in any one of these octaves. This arose from the *I Ching* which uses the number “sixty-four” and from the binary function which is so implicit in the computer—zero to one. Multiplying sixty-four by two, you would get, for each one of these tones, one hundred twenty-nine possible pitches. We have very small steps—microtonal, small steps—chromatic, larger steps—diatonic, then, the very large steps consisting of leaps in all the divisions from five to fifty-six. This still doesn’t explain why it’s called *Harpsichord*. That happened as a result of a commission from Antoinette Vischer in Switzerland. She had for years wanted me to write a piece for harpsichord. I had been asked years before to write one for Sylvia Marlowe. I must admit I’ve never particularly liked the instrument. It sounded to me like a sewing machine. The fact that it had so little change in dynamics, and the quality of sound seemed to obscure the—I don’t know—life of the sound, the pitch of the sound, or what you wish.

We have tried—Jerry Hiller and I—to give a quality of fine division not only to the pitches but to the durations and also to the timbre, which will be, in general, imitative of harpsichord sound: an attack followed by a decay that has an inflection point. The decay is not a straight line but a line with a bend in it. It starts down and then continues at a different descending angle. Now, that inflection point can be moved and the angle changed and so give “micro-timbral” variations, and *that* we’ve related to the chart of the *I Ching*. the first “subroutine” we made for the computer was to substitute the manual tossing of coins—to obtain the numbers one to sixty-four. This subroutine was used in order to find at which point this inflection—this change of decay, this place in the sound—changes from note to note. It ought to be, in the end, not only micro-tonal and micro-durational, but micro-timbral. Each tape is a single, monophonic tape. The performance will introduce elements of indeterminacy, whereas the computer, in order to function, requires complete determination.

How are you introducing indeterminacy into the performance?

In the end there will be the tapes, each one of a different division of the octave. There will be fifty-one tapes, and there will be the seven solos for live harpsichord. They’ll probably all be amplified to be equal volume with the tapes. In effect, there will be a maximum of fifty-eight channels. The piece could be expressed by a performance of one to seven live harpsichords and one to fifty-one tapes, according to how large a performance one wishes to give. The solos are obviously all for the twelve-tone scale, one of them being the computer output for the twelve-tone scale made into notation for live performance. Another will be the *Dice Game* that has been attributed to Mozart, of which twenty passes of sixty-four measures each have been programmed by the computer. Two other solos start with the *Dice Game* but then substitute other pieces of Mozart, which are in other *tempi* but which have been translated into the notation of the dotted-half equals 64 M.M. But in one of those—a second pass of sixty-four measures, still using the *Dice Game*—you move instead to another piece of Mozart, still according to chance operations, and on to a third, fourth, fifth, sixth, seventh, and eighth. In each pass, I think twenty measures of new material comes

in. It gets more and more complex, naturally, departs farther from the original *Dice Game*, and both hands go together. Then, in a third version the hands go separately through this process: from the *Dice Game* of Mozart to other pieces of Mozart in other *tempi*. Then, we divided history from Mozart to the present time—that is, to Hiller’s work and my own work—into roughly twenty-five year periods, making an historical shift from the *Dice Game* through Beethoven, Chopin, Schumann, Gottschalk, Ives, Schönberg, and ending with a binary choice between a piano sonata by Jerry Hiller and my *Winter Music*. In all of this movement through history we’ve had, in some cases, to slightly change the music to fit into the five-octave gamut which we limited ourselves to, so that Chopin runs start up, but as they reach the limit of our gamut, we have them running back down the same way. That accounts for four: going through history “right-and-left-hands-together,” going through history “right-and-left-hands-separate”—that’s four—the computer’s output is five, the pure *Dice Game* is six, and the seventh is simply one page of directions permitting the harpsichordist to play any Mozart of her choice in either of two manners: as though she were at home without an audience, practicing and playing for her own pleasure; or as though she were in public, performing, or any combination of those. All of that material can be superimposed in any way. So it would produce a variety of performances. Parts can be omitted. The performance can consist of, say, a dozen people with a battery of tapes, shifting the tapes from machine to machine, and so on.

How long are the tapes?

The tapes are twenty minutes long. And so are the solos. The solos going through history, with those different *tempi* all translated into one tempo of dotted-half equals 64 M.M., produce complex relationships of thirteen to twenty-seven to twenty-four, and so on. The notation, which is proportional in space, results in one hundred twenty pages of manuscript for each of those solos. The *Dice Game* will be a sixty-page manuscript; or perhaps, it’s forty pages. Altogether, there will be five hundred eighty-one pages of manuscript for live performance and those fifty-one tapes.

One more thing that has interested me in this, and I hope it will interest more and more people who work with computers, is the large amount of time and painstaking work that goes into making a subroutine operable. For instance, teaching the computer to toss coins as I had been doing manually, following the mechanism of the *I Ching*—to produce that subroutine took six weeks. To produce this whole piece, which is not yet operating, has taken ten months, which is one month longer than I spent on the *Music of Changes*, or on *Williams Mix*, or any other piece that took me a long period of time. This work that goes into subroutines gives it the character that, I think, chords had for composers in the past. The notion that the chord belongs to one person and not to another tends to disappear, so that a routine, once constructed, is like an accomplishment on the part of society, rather than on the part of a single individual. And it can be slightly varied, just as chords can be altered, to produce quite other results than

were originally intended. The logic of a routine, once understood, generates other ideas than the one which is embodied in it. This will lead, more and more, to multiplication of music for everybody's use rather than for the private use of one person.

We often hear of the effect of technology on our lives, reducing work. For instance, people speak of the problem of leisure in the future. I find this in great contrast to the simple fact that we have worked for ten months on this piece without finishing it and, Lord knows, how many more months, or indeed, whether our work will be accomplished, or whether, when accomplished, we will not immediately think of some other way to make it. Leisure, just from this point of view, is not a problem. The question is, rather, "How is our energy? Do we have as much as we had? And how are we going to get more?"

I'm interested in your comment that your work here might introduce a possibility for music for everyone, i.e., a music for someone, or music for everyone, or whatever.

I'm just saying that more and more people will be using computers, and that more and more routines will exist, and that the possibility of making programs which utilize a routine made here, for instance, with one made there, with one made in some other place and adding others to it, will produce a music which has not yet been heard; and this can be enjoyed, surely by some, maybe by many. Oh, we've got another idea about this piece. A program is being made . . . One of the first projects that has to be fulfilled is the project of recording the piece which has been contracted for Nonesuch Records—*HPSCHD* on one side, and the microtonal quartet of Ben Johnston on the other side. We are now making a program called "KNOBS" for the listener that will produce twenty computer outputs, suggesting to the listener when and what dials of the stereo to turn. There will be twenty different ways of listening to the record, which ought to suggest that one would listen also in other ways. We will have the solo, which is the twelve-tone computer output, equally on both channels; on one channel, but not on the other channel at all, will be the *Mozart Dice Game*; on the other channel, then, will be the passage through history with the right and left hands separate; and each channel will have twenty-five of the computer tape outputs, probably even numbers on one channel and odd numbers on the other. Then, if you shift the volume and tone controls . . .

—Interview with Larry Austin (1968)

NOTES

1. [] = annotations in 1986 by Richard Kostelanetz; { } = 1986 annotations by John Cage.