"Every room has its own melody"

"I AM SITTING IN A ROOM" (1970)

What's your attitude toward a performance that consists of playing a tape?

Well, all of us who have made pieces with electronics started with tape because it enables you to play with sounds in ways that no other medium does, but you soon get tired of that because live performances are more interesting than taped ones. Tape led us to discover things about sound that had hitherto been unknown and prepared us to go on and do more interesting things without it, but we always kept tape as a way to store sounds to bring into a live performance.

Now in "I AM SITTING IN A ROOM" I didn't choose to use tape, I had to, because in order to recycle sounds into a space, I had to have them accessible in some form. Tape, then, wasn't a medium in which to compose sounds, it was a conveyor, a means to record them and play them back one after another in chronological order. Without tape I wouldn't have been able to do the piece.

When you worked on materials for the piece, there was never a moment until all those generations had been spliced together that the piece was complete.

Yes, because the form is linear and cumulative; it changes from generation to generation until it reaches the point of diminishing returns. And it's funny because if I had consulted an engineer, he or she would probably have found a way to get the end result in one process, one fast process, or one generation. There are ways to bypass erase heads on tape recorders or make large loops which could get the end result very quickly, but I was interested in the process, the step-by-step, slow process of the disintegration of the speech and the reinforcement of the resonant frequencies. Actually, when Mary [Lucier] and I visited the Polaroid Company in Cambridge—Mary, as you know, did a visual analog to the tape by subjecting a Polaroid snapshot to a similar reproductive process—the art director, when he saw the end result, said, "I could do that in one step." He just didn't understand that what we found interesting was the gradual process itself.

Often, people don't understand the process. They think that the same speech is dubbed from one recorder to another and each time the quality of the copy degenerates a little bit. But it's not that at all, it's playing the speech back into the space. The signal goes through the air again and again; it's not processed entirely electronically, it's also processed acoustically.

You've discarded one of the goals of electronic information storage. By reproducing the thing acoustically so many times, all the parameters that manufacturers strive to achieve in their tape recorders, such as linear frequency response, are bypassed.

Actually, I used two Nagras in the original version. I recorded fifteen generations of the same text and you don't hear much distortion or disintegration of the tape matter. In fact, the machines did a marvelous job of maintaining it.

What I meant to say was that an engineer would probably say you've done a poor job of reproducing the sound. Of course what you had in mind from the start was to get out of the machines, to submit the material to a purposely non-neutral medium on its way to being re-recorded.

Yes, the space acts as a filter; it filters out all of the frequencies except the resonant ones. It has to do with the architecture, the physical dimensions and acoustic characteristics of the space.

As you know, every musical sound has a particular wavelength; the higher the pitch, the shorter the wavelength. Actually, there's no such thing as "high" notes or "low" notes, we simply borrowed those terms from the visual world to describe something we didn't understand. A musical sound as it is produced on an instrument, in a column of air or a vibrating string, causes oscillations at a certain rate of speed. For example, the *A* that an orchestra tunes to vibrates at four hundred and forty times per second and can therefore be considered "faster" than the middle *C* on the piano that vibrates at about two hundred and sixty-two times per second. But as those sounds move out into space they can be observed as various-sized wavelengths, so you can see how directly the dimensions of a room relate to musical sounds. If the dimensions of a room are in a simple relationship to a sound that is played in it, that sound will be reinforced, that is, it will be amplified by the reflections from the walls. If, however, the sound doesn't "fit" the room, so to speak, it will be reflected out of phase with itself and tend to filter itself out. So by playing sounds into a room over and over again, you reinforce some of them more and more each time and eliminate others. It's a form of amplification by repetition. Thinking of sounds as measurable wavelengths, instead of as high or low musical notes, has changed my whole idea of music from a metaphor to a fact and, in a real way, has connected me to architecture.

My first impulse was to use various musical instruments playing a wide variety of sounds, but I tossed that idea out because it felt too "composerly." Instead I decided to use speech; it's common to just about everybody and is a marvelous sound source. It has a reasonable frequency spectrum, noise, stops and starts, different dynamic levels, complex shapes. It's ideal for testing the resonant characteristics of a space because it puts so much in all at one time. It's also extremely personal. And since I've been acting in George Manupelli's *Dr. Chicago* films, I've started paying attention to the characteristics of my speech which are original to my personality and don't sound like anybody else's; you know I'm a stutterer. So instead of trying to invent interesting speech patterns, I discovered that I have interesting speech patterns anyway; I don't have to invent them. Of course I have invented, when you think about it. A person who stutters or who has a lisp invents that or makes it up; it's not put on him from an external source. And while not everyone stutters, everyone has a certain amount of anxiety about speech. I've met many people who think they stutter. Bob Ashley, for instance, thinks he stutters. I wouldn't say so, but if he thinks he does, perhaps a lot of people think they do, and in that case, I feel that I'm in touch with people.

I am not as interested in the resonant characteristics of spaces in a scientific way as much as I am in opening that secret door to the sound situation that you experience in a room. For example, I made a preliminary version of "I AM SITTING IN A ROOM" in the Brandeis University Electronic Music Studio, a small, bright, somewhat antiseptic room in which I never enjoyed being very much. It was filled with electronic equipment, and one wall consisted of several large glass windows. The resonant frequencies got reinforced very quickly after the fifth or sixth generation, resulting in harsh, strident sounds. But the version I did at 454 High Street, in Middletown, took a longer time because it was a softer, friendlier room with a wall-to-wall carpet and drapes on the windows. When I first moved into the apartment I never dreamed that I would come to enjoy wall-to-wall carpeting, but I soon learned that if you do have it, people enjoy sitting on the floor. After some of the evenings we've had there, people have even gone to sleep on the floor, which they would never have felt like doing in the Brandeis Studio. Anyway, the carpet and drapes cut down on the production of the resonant frequencies so they took longer to achieve, but it gave us a more beautiful result. Didn't we get a different set of intervals in the Brandeis Studio than we got in this room? Do you remember what they were?

We got two sets of fifths in both of them but they were much more complex in this version.

Did you notice that tunes seem to start? Every room has its own melody, hiding there until it is made audible. You know, I feel as though we're in the same situation as composers were when they first began perceiving overtones. Musicians were always aware of their effects, I think, but timbre was mysterious until someone could demonstrate their existence. Now we're just beginning to compose with architecture in mind, and I'm very pleased to be in on these first experiments.

Is it an extension of the idea of personal relevance that you chose the particular text you did?

Well, the text that I wrote and used in the Middletown recording was personal to me, but was also meant for anyone else who wanted to use it. I guess I was suggesting that everyone's speech has irregularities. I also said in the finished score that other texts may be used. Perhaps that was a mistake because I don't want what goes into the space to be too poetic. I want it to be plain so that the space becomes audible without distractions; that's why I decided to describe the recording process so that the audience could more easily understand what's going on. I guess you could say that the score is built into the performance.

I'm interested in how far your idea about the piece extends into the mechanics of achieving it. In other words, if someone uses one of the other procedures you mentioned, a loop for example, can you accept that as really the same piece?

Well, the piece is subject to many versions; I heard of a twenty-four hour one made in a chapel in Oberlin, Ohio. Now I've been asked to make a version for the Pepsi Pavilion at Expo '70 in Osaka. The Pavilion is a large dome with interesting acoustics, and David Tudor and Gordon Mumma designed the sound system. It has loudspeakers deployed all over the space, arrays of microphones, and a flexible mixing console. I'm planning to use it to pick up and record the voices of the people walking through the Pavilion, and then to recycle them back into the space from many separate loudspeakers. But I must admit that I prefer the monophonic version; it more clearly reveals the features of the processes that I find fascinating. First of all, there is the superimposition of two very simple repetitive processes, tape recording and talking, but the mixture of these two ordinary activities in an acoustic space, with amplification by repetition, yields an extraordinary result, the evocation of the resonant frequencies of the space. Even though the form is repetitive as far as the recording and recycling procedure is concerned, the listener hears something quite different, and that is the climactic point at which the speech goes from intelligibility to unintelligibility, or from words to music. What's beautiful is that this point is different for each listener; it's kind of

a sliding fulcrum on a moveable time scale. The rate of transformation isn't constant either. For the first few generations it moves at a seemingly constant pace, then, in one or two generations, the movement speeds up, then slows down again. It seems to operate on its own set of rules. It's very mysterious.

When Mary did the visual part, she took a Polaroid snapshot of the chair that I sat in when I made the tape and subjected it to a copying process in which she copied the original, copied that copy, and so on. And because it was virtually impossible to align the copying camera and the pictures absolutely accurately, a slight error in size crept in, so that every time she made a copy, it made the image slightly enlarged. But of course the size of the picture stayed the same so the image began to move off the picture. There was a dark shadow behind the lamp which grew on each reproduction, until finally the fifty-second one is completely black; the shadow behind the lamp grew until it took up the whole image. Some dirt got on the reproductions too, and what you think you see at the end is a star map. And indeed, a friend of mine who was at one of the performances said the last slide looked just like "Job's Coffin," which is apparently a part of the stars.