our lives, much less an ornament to them, and that it will consequently change them much more profoundly.

If these changes are profound enough, we may eventually be compelled to redefine the terminology with which we express our thoughts about art. Indeed, it may become increasingly inappropriate to apply to a description of environmental situations the word “art” itself—a word that, however venerable and honored, is necessarily replete with imprecise, if not in fact obsolete, connotations.

In the best of all possible worlds, art would be unnecessary. Its offer of restorative, placative therapy would go begging a patient. The professional specialization involved in its making would be presumption. The generalities of its applicability would be an affront. The audience would be the artist and their life would be art.

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**The Studio as Compositional Tool**

BRIAN ENO

Brian Eno (1948–; see also chaps. 17 and 34) is a key figure in the shift from “composer” and “musician” to “producer” in contemporary electronic culture. Drawing lessons from a genealogy of visionary producers—Phil Spector, Joe Meek, George Martin, Teo Macero, Brian Wilson, Lee “Scratch” Perry, and others—Eno was struck early on by the extraordinary creative potential of the recording studio, its ability to construct new sonic worlds. Here, he offers a brief history of the “studio as instrument” and meditates on the ways in which this instrument has shaped modern music and sonic cognition.

The first thing about recording is that it makes repeatable what was otherwise transient and ephemeral. Music, until about 1900, was an event that was perceived in a particular situation, and that disappeared when it was finished. There was no way of actually hearing that piece again, identically, and there was no way of knowing whether your perception was telling you it was different or whether it was different the second time you heard it. The piece disappeared when it was finished, so it was something that only existed in time.

The effect of recording is that it takes music out of the time dimension and puts it in the space dimension. As soon as you do that, you’re in a position of being able to listen again and again to a performance, to become familiar with details you most certainly had missed the first time through, and to become very fond of details that weren’t intended by the composer or the musicians.

The effect of this on the composer is that he can think in terms of supplying material that would actually be too subtle for a first listening. Around about the 1920s—or maybe that’s too early, perhaps around the ‘30s—composers started thinking that their work was recordable, and they started making use of the special liberty of being recorded.

I think the first place this had a real effect was in jazz. Jazz is an improvised form, primarily, and the interesting thing about improvisations is that they become more interesting as you listen to them more times. What seemed like an almost
arbitrary collision of events comes to seem very meaningful on relistening. Actually, almost any arbitrary collision of events listened to enough times comes to seem very meaningful. (There's an interesting and useful bit of information for a composer, I can tell you.) I think recording created the jazz idiom, in a sense; jazz was, from 1925 onwards, a recorded medium, and from '35 onwards I guess—I'm not a jazz expert by any means—it was a medium that most people received via records. So they were listening to things that were once only improvisations for many hundreds of times, and they were hearing these details as being compositionally significant.

Now, let's talk about another aspect of recording, which I call the detachable aspect. As soon as you record something, you make it available for any situation that has a record player. You take it out of the ambience and locale in which it was made, and it can be transposed into any situation. This morning I was listening to a Thai lady singing; I can hear the sound of the St. Sophia Church in Belgrade or Max's Kansas City in my own apartment, and I can listen with a fair degree of conviction about what these sounds mean. As Marshall McLuhan said, it makes all music all present. So not only is the whole history of our music with us now, in some sense, on record, but the whole global musical culture is also available. That means that a composer is really in the position, if he listens to records a lot, of having a culture unbounded, both temporally and geographically, and therefore it's not at all surprising that composers should have ceased writing in a European classical tradition, and have branched out into all sorts of other experiments. Of course, that's not the only reason that they did, either.

So, to tape recording: till about the late '40s, recording was simply regarded as a device for transmitting a performance to an unknown audience, and the whole accent of recording technique was on making what was called a "more faithful" transmission of that experience. It began very simply, because the only control over the relative levels of sounds that went onto the machine was how far they were from the microphone-like device. The accent was on the performance, and the recording was a more or less perfect transmitter of that, through the cylinder and wax disc recording stages, until tape became the medium by which people were recording things.

The move to tape was very important, because as soon as something's on tape, it becomes a substance which is malleable and mutable and changeable and reversible in ways that discs aren't. It's hard to do anything very interesting with a disc—all you can do is play it at a different speed, probably; you can't actually cut a groove out and make a little loop of it. The effect of tape was that it really put music in a spatial dimension, making it possible to squeeze the music, or expand it.

Initially tape recording was a single track, all the information contained and already mixed together on that one track. Then in the mid-'50s experiments were starting with stereo, which was not significantly different. The only difference was that you had two microphones pointing to your ensemble, and you had some impression of a real acoustic—sound came to you from two different sources as you listened. Then came three-track recording: it allowed the option of adding another voice or putting a string section on, or something like that. Now this is a significant step, I think; its the first time it was acknowledged that the performance isn't the finished item, and that the work can be added to in the control room, or in the studio itself. For the first time composers—almost always pop composers, as very few classical composers were thinking in this form—were thinking, "Well, this is the music. What can I do with it? I've got this extra facility of one track." Tricky things start getting added. Then it went to four-track after that, and the usual layout for recording a band on four track at that time [...] From that impulse two things happened: you got an additive approach to recording, the idea that composition is the process of adding more, which was very common in early '70s rock (this gave rise to the well-known and gladly departed orchestral rock tradition, and it also gave rise to heavy metal music—that sound can't be got on simpler equipment); it also gave rise to the particular area that I'm involved in: in-studio composition, where you no longer come to the studio with a conception of the finished piece. Instead, you come with actually rather a bare skeleton of the piece, or perhaps with nothing at all. I often start working with no starting point. Once you become familiar with studio facilities, or even if you're not, actually, you can begin to compose in relation to those facilities. You can begin to think in terms of putting something on, putting something else on, trying this on top of it, and so on, then taking some of the original things off, or taking a mixture of things off, and seeing what you're left with—actually constructing a piece in the studio.

In a compositional sense this takes the making of music away from any traditional way that composers worked, as far as I'm concerned, and one becomes empirical in a way that the classical composer never was. You're working directly with sound, and there's no transmission loss between you and the sound—you handle it. It puts the composer in the identical position of the painter—he's working directly with a material, working directly onto a substance, and he always retains the options to chop and change, to paint a bit out, add a piece, etc.

Compare that to the transmission intervals in a classical sequence: the composer writes a piece of music in a language that might not be adequate to his ideas—he has to say this note or this one, when he might mean this one just in between, or nearly this one here. He has to specify things in terms of a number of available instruments. He has to, in fact, use a language that, like all languages, will shape what he wants to do. Of course, any good composer understands that, and works within that framework of limitations. Finally he has something on the page, and by a process this arrives at a conductor. The conductor looks at that, and if he isn't in contact with the composer, his job is to make an interpretation of it on the basis of what he thinks the composer meant, or whatever it is he'd like to do. There's very likely another transmission loss here—there won't be an identity between what he supposes and what the composer supposes. Then the conductor has the job of getting a group of probably intransigent musicians to follow his instructions, to realize this image of the music he has. Those of you who work with classical musicians know what a dreadful task this is, not to be wished on anyone.

So they come up with something. One can see there's not necessarily an identity between what the composer—or the conductor—thought, and what they did, so that's three transmission losses. I'd argue there is another one in the performance of the piece: since you're not making a record, you're not working in terms of a controlled acoustic, and you're not working in a medium that is quite so predictable as a record. If I make a record, I assume it's going to be the same every time it's played. So I think there is a difference in kind between the kind of
composition I do and the kind a classical composer does. This is evidenced by the fact that I can neither read nor write music, and I can’t play any instruments really well, either. You can’t imagine a situation prior to this where anyone like me could have been a composer. It couldn’t have happened. How could I do it without tape and without technology?

One thing I said about the traditional composer was that he worked with a finite set of possibilities; that is, he knew what an orchestra was composed of, and what those things sounded like, within a range. If you carry on the painting analogy, it’s like he was working with a palette, with a number of colors which were and weren’t mixable. Of course, you can mix clarinets and strings to get different sounds, but you’re still dealing with a range that extends from here to here. It’s nothing like the range of sounds that’s possible once electronics enter the picture. The composer was also dealing with a finite set of relationships between sounds; the instruments are only so loud, and that’s what you’re dealing with, unless you stick one out in a field and one up close to your ear. It was out of the question that he could use something, for example, as the Beach Boys once did—making the sound of someone chewing celery the loudest thing on a track.

Of course, everyone is constrained in one way or another, and you work within your constraints. It doesn’t mean that suddenly the world is open, and we’re going to do much better music, because we’re not constrained in certain ways. We’re going to do different music because we’re not constrained in certain ways—we operate under a different set of constraints […]

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Bettered by the Borrower: The Ethics of Musical Debt

JOHN OSWALD

Since the early 1980s, Canadian multi-media artist John Oswald (1953–) has played saxophone in the free improvising trio CCMC and recorded with improvisers Henry Kaiser, Jim O’Rourke, John Zorn, and others. Yet he is best known for his practice of “plunderphonics”: the sampling and radical re-editing of pop recordings. Inspired by the cut-up methods of William S. Burroughs and James Tenney’s 1961 sampling composition Collage #1 (“Blue Suede”), Oswald began experimenting with musical cut-ups in the early 1970s and issuing these cut-up compositions on cassette via his own Mystery Tapes label. In 1999, Oswald released the CD Plunderphonic, which presented inventive and humorous remixes of recordings by Dolly Parton, Michael Jackson, Bing Crosby, The Beatles, Glenn Gould, Public Enemy, James Brown, and others. The cover featured a collaged photo of Michael Jackson as a nude woman. Though the CD was given away for free and all the samples were fully credited, Oswald was threatened with a lawsuit by the Canadian Recording Industry Association for infringing the copyright of their clients CBS Records and Michael Jackson. He was forced to destroy all remaining copies of the CD and was prohibited from distributing or reproducing it. Oswald continued to make legal plunderphonics compositions, filling commissions by Hal Willner, the Berlin Opera, the Kronos Quartet, the Grateful Dead, and others. In 2002, the Seeland label released the 69 Plunderphonics 96 box set, which included the original Plunderphonic CD and a number of Oswald’s other plunderphonics experiments. In this article, written shortly before the release of the Plunderphonic CD, Oswald meditates on the nature of music in the age of analog and digital reproduction.

Musical instruments produce sounds. Composers produce music. Musical instruments reproduce music. Tape recorders, radios, disc players, etc., reproduce sound. A device such as a wind-up music box produces sound and reproduces