



Gossip is Philosophy

Kevin Kelly talks to the prototypical Renaissance 2.0 artist about why music has ceased to be the center of our cultural life, why art doesn't make any difference anymore, and why Brian Eno offers no resistance to seduction.

By Kevin Kelly

If anyone could be said to embody the spirit of the artist in the digital age, it's Brian Eno. The 47-year-old holds a degree in fine arts, is the father of a genre of pop music (ambient), produces albums for rock stars, and regularly exhibits multimedia artwork in tony museums. Underlying Eno's worldwide cultural prominence is a spectacularly unusual intelligence. The Brits call him Professor Eno: he was recently named Honorary Doctor of Technology at the University of Plymouth and appointed Visiting Professor at the Royal College of Art in London. Although he shuns the term, Eno is a Renaissance man, an artist gracefully hacking the new media of LPs, TVs, PCs, CDs, MIDI, photos, and e-mail. He is as comfortable (and brilliant) collaborating on albums with David Bowie, U2, or Laurie Anderson as he is giving a lecture on perfume (he's an expert), haircuts, or "The Studio as a Compositional Tool."

Eno exploits new technology without letting it ensnare him. He knows exactly where to hold a tool so that he can forget he has hold of it. This confluence (indifference to and intimacy with technology) enables Eno to pioneer so many cross-technology arts. As an observer of modern life, his gift is debunking the conventional. He applies his irreverence equally to himself and others, describing his own 1992 solo album, Nerve Net, as "paella: a self-contradictory mess; off-balance, postcool, postroot, uncentered where-am-I? music."

Wired executive editor Kevin Kelly interviewed Eno over a period of months via face-to-face conversations in California, the phone, and e-mail. Like many of Eno's projects, it was remixed, reassembled, and tweaked to make it a self-contradictory mess, off-balance, postcool, and very much where-we-are.

Wired: Somewhere along the line, art seemed to lose its significance. No offense to you, but who cares about painting?

Eno: I'm acutely aware of being involved in something that ought to be making more of a difference than it is. But art has not ceased to affect us; it's just that the process we call art is happening elsewhere, in areas that might be called by other names. I always think of medieval heraldry: so intensely relevant for hundreds of years, and now a total mystery to nearly all of us. The traditional sites for art activity seem to be losing their power, while new sites for art are becoming powerful. We have been looking for art in the wrong places.

Let's say I was to give you a round-trip ticket to the past, when art really made a difference. Where would you go?

The intellectual Arab world at its height - somewhere between, say, the beginning of the 11th century and the middle of the 13th - would have been absolutely amazing to experience.

Why there and then? Why not the Renaissance a little later?

I've never been that thrilled by the Renaissance, to tell you the truth. I can imagine the excitement of having been there, but it seems to me that the Renaissance had a great deal to do with leaving things out of the picture. It was about ignoring part of our psyche - the part that's a bit messy and barbarian. There was also a sense of perfectibility, of the possibility of certainty - a sense that has become a real albatross to us.

But there are analogies between the height of the Arab world and today. At that time, there was a big shift from one type of consciousness to another. Old systems decayed and broke up, and, painfully, new ones were born. The equilibration between science and alchemy, and philosophy and religion, would have been thrilling to behold.

Now, am I allowed to move forward as well, into the future?

It's a different ticket, but I can grant that as well. How far in the future do you want to go?

Oh, only about 50 years.

Doesn't that seem like a waste of magic? Fifty years - you might get there yourself. You just can't wait, is that the problem?

Yeah, I can't wait. I want to know what happens to Africa.

Africa?

Africa is everything that something like classical music isn't. Classical - perhaps I should say "orchestral" - music is so digital, so cut up, rhythmically, pitchwise and in terms of the roles of the musicians. It's all in little boxes. The reason you get child prodigies in chess, arithmetic, and classical composition is that they are all worlds of discontinuous, parceled-up possibilities. And the fact that orchestras play the same thing over and over bothers me. Classical music is music without Africa. It represents old-fashioned hierarchical structures, ranking, all the levels of control. Orchestral music represents everything I don't want from the Renaissance: extremely slow feedback loops.

If you're a composer writing that kind of music, you don't get to hear what your work sounds like for several years. Thus, the orchestral composer is open to all the problems and conceits of the architect, liable to be trapped in a form that is inherently nonimprovisational, nonempirical. I shouldn't be so absurdly doctrinaire, but I have to say that I wouldn't give a rat's ass if I never heard another piece of such music. It provides almost nothing useful for me.

But what is tremendously exciting to me is the collision of vernacular Western music with African music. So much that I love about music comes from that collision. African music underlies practically everything I do - even ambient, since it arose directly out of wanting to see what happened if you "unlocked" the sounds in a piece of music, gave them their freedom, and didn't tie them all to the same clock. That kind of free float - these peculiar mixtures of independence and interdependence, and the oscillation between them - is a characteristic of West African drumming patterns. I want to go into the future to see this sensibility I find in African culture, to see it freed from the catastrophic situation that Africa's in at the moment. I don't know how they're going to get freed from that, but I desperately want to see this next stage when African culture begins once again to strongly impact ours.

Do you have any guesses about what that reunited culture would look like?

Yes. Do you know what I hate about computers? The problem with computers is that there is not enough Africa in them. This is why I can't use them for very long. Do you know what a nerd is? A nerd is a human being without enough Africa in him or her. I know this sounds sort of inversely racist to say, but I think the African connection is so important. You know why music was the center of our lives

for such a long time? Because it was a way of allowing Africa in. In 50 years, it might not be Africa; it might be Brazil. But I want so desperately for that sensibility to flood into these other areas, like computers.

Whenever I hear a neat dichotomy between the fuzzy logic of Africa versus the digital logic of a white tribe, I always find it interesting to triangulate and introduce the Asians. Where do the Asians fit into this?

It could be that any strong infusion from another place would help greatly. The African one is just the one I understand well. But the Near East can show what happens. For instance, harmony is primarily a Western invention. There is no equivalent to harmonic interest in Arabic music. In the West, the orchestra was invented to play harmonies. But in the Near East, the whole orchestra plays the same thing. So Arabs take the orchestra, which was basically a machine for making harmony, and make it a machine for making texture, which is an Asian preoccupation. It plays one voice, always. But it's a voice that can have different and changing textures. So this is a perfect example of using a Western tool and linking it with what I think is an Asian sensibility, the interest in texture. And, bingo! There you have it, this huge texture-making machine, the orchestra.

So, how does one Africanize, or Brazilianize, or otherwise liberate a computer? Get mad with it. I ask myself, What is pissing me off about this thing? What's pissing me off is that it uses so little of my body. You're just sitting there, and it's quite boring. You've got this stupid little mouse that requires one hand, and your eyes. That's it. What about the rest of you? No African would stand for a computer like that. It's imprisoning.

So, we need to make whole-body computers that get the heart pumping, through which we can dance out text and pictures and messages? Why haven't we done that yet?

History is changed by people who get pissed off. Only neo-vegetables enjoy using computers the way they are at the moment. If you want to make computers that really work, create a design team composed only of healthy, active women with lots else to do in their lives and give them carte blanche. Do not under any circumstances consult anyone who (a) is fascinated by computer games (b) tends to describe silly things as "totally cool" (c) has nothing better to do except fiddle with these damn things night after night.

What? And give up all those totally cool buttons?!

I've been telling synthesizer manufacturers for years that the issue is not increasing the number of internal options. The issue is increasing rapport, making a thing that relates to you physically in a better way. Of course the easy course is to add options, since absolutely no conceptual rethink is required. But the relationship between user and machine might be better achieved by reducing options.

If I could give you a black box that could do anything, what would you have it do?

I would love to have a box onto which I could offload choice making. A thing that makes choices about its outputs, and says to itself, This is a good output, reinforce that, or replay it, or feed it back in. I would love to have this machine stand for me. I could program this box to be my particular taste and interest in things.

Why do you want to do that? You have you.

Yes, I have me. But I want to be able to sell systems for making my music as well as selling pieces of music. In the future, you won't buy artists' works; you'll buy software that makes original pieces of "their" works, or that recreates their way of looking at things. You could buy a Shostakovich box, or you could buy a Brahms box. You might want some Shostakovich slow-movement-like music to be generated. So then you use that box. Or you could buy a Brian Eno box. So then I would need to put in this box a device that represents my taste for choosing pieces.

I guess the only thing weirder than hearing your own music being broadcast on the radios of strangers is hearing music that you might have written being broadcast!

Yes, music that I might have written but didn't!

Will you still like the idea of these surrogate Brian Enos when they start generating your best work?

Sure! Naturally, it's a modifiable box, you know. Say you like Brahms and Brian Eno. You could get the two of them to collaborate on something, see what happens if you allow them to hybridize. The possibilities for this are fabulous.

What's left for us to do then?

Cheat. And lie.

Some people listening to your music might think that it is already being written by one of your black boxes.

For years, I have been using rules to write music, but without computers. For instance, I've used systems of multiple tape loops that are allowed to reconfigure in various ways, while all I do is supply the original musical sounds or elements and then the system keeps throwing out new patterns of them. It is a kaleidoscopic music machine that keeps making new variations and new clumps.

My rules were designed to try to make a kind of music I couldn't predict. That's to say, I wanted to construct "machines" (in a purely conceptual sense - not physical things) that would make music for me. The whole idea was summarized in the famous saying (which I must have shouted from the ramparts a thousand times): "Process not product!" The task of artists was to "imitate nature in its manner of operation" as John Cage put it - to think of ways of dealing with sound that were guided by an instinct for beautiful "processes" rather than by a taste for nice music.

By the early '70s, I had made and experienced a great deal of systems music, as all this had come to be known. I wanted to make music that was not only systemically interesting, but also that I felt like hearing again. So, increasingly, my attention went into the sonic material that I was feeding into my "restructuring machines." This became my area: I extended the composing act into the act of constructing sound itself.

This wasn't an idea by any means original to me - I picked it up from people like Phil Spector and Shadow Morton and Jimi Hendrix. They were all people from the world of pop, a world that had hardly penetrated the relatively insular landscape of "systems music," which still regarded the palette available to a composer as a series of little disconnected islands of discrete and describable sounds - "viola," "clarinet," "tam-tam" - rather than as a place where you faced the compositional problem that every rock musician was used to dealing with: what sound should I invent?

Can you imagine what music will be like 20 years from now?

What people are going to be selling more of in the future is not pieces of music, but systems by which people can customize listening experiences for themselves. Change some of the parameters and see what you get. So, in that sense, musicians would be offering unfinished pieces of music - pieces of raw material, but highly evolved raw material, that has a strong flavor to it already. I can also feel something evolving on the cusp between "music," "game," and "demonstration" - I imagine a musical experience equivalent to watching John Conway's computer game of Life or playing SimEarth, for example, in which you are at once thrilled by the patterns and the knowledge of how they are made and the metaphorical resonances of such a system. Such an experience falls in a nice new place - between art and science and playing. This is where I expect artists to be working more and more in the future.

Could we call this new style "interactive music?"

In a blinding flash of inspiration, the other day I realized that "interactive" anything is the wrong word. Interactive makes you imagine people sitting with their hands on controls, some kind of gamelike thing. The right word is "unfinished." Think of cultural products, or art works, or the people who use them even, as being unfinished. Permanently unfinished. We come from a cultural heritage that says things have a "nature," and that this nature is fixed and describable. We find more and more that this idea is insupportable - the "nature" of something is not by any means singular, and depends on where and when you find it, and what you want it for. The functional identity of things is a product of our interaction with them. And our own identities are products of our interaction with everything else. Now a lot of cultures far more "primitive" than ours take this entirely for granted - surely it is the whole basis of animism that the universe is a living, changing, changeable place. Does this make clearer why I welcome that African thing? It's not nostalgia or admiration of the exotic - it's saying, Here is a bundle of ideas that we would do well to learn from.

Finishing implies interactive: your job is to complete something for that moment in time. A very clear example of this is hypertext. It's not pleasant to use - because it happens on computer screens - but it is a far-reaching revolution in thinking. The transition from the idea of text as a line to the idea of text as a web is just about as big a change of consciousness as we are capable of. I can imagine the hypertext consciousness spreading to things we take in, not only things we read. I am very keen on this unfinished idea because it co-opts things like screen savers and games and models and even archives, which are basically unfinished pieces of work.

So a screen saver would be the visual equivalent of an Eno music machine?

I've been working on my own mutations of an After Dark screen saver called Stained Glass. If you set up the initial conditions slightly differently, you see a completely different sequence of events. All your interaction with the program is right at the beginning, when you set it up. But I think this should certainly be called interactive, as the whole process of what then happens depends on what you've set up at the beginning.

Besides being in an unfinished state, do you have any other notions of what music will be like in 20 years?

In the last 15 years, music has ceased to be the center of people's cultural life. We both come from a generation in which music was where it all got acted out. The other arts were somewhat in the rear. Music has had its day. A lot of music now doesn't really have an independent existence separate from the places it's played in. For instance, a lot of rave music and ambient and trance and so on has very much to do with clubs and lots of people being together and so on. It's very context-linked. And quite often on records it sounds rather dull. I read recently that a survey revealed that the average CD was listened to two and a quarter times.

So, where has the culture recentered itself? Where is it getting acted out?

Not in any one place in particular; it's going to be in a variety of places. Theme parks are a relatively new cultural form that is going to become more and more a place for artists to look. A theme park, of course, is a multimedia experience wherein you can use any sense you like.

My guess is that the cultural center might settle onto MUDs. They are online theme parks. Not-quite-virtual realities that can be done on a screen, without goggles and gloves. They will have all the richness and emotional power and generational identity that music gave us. A vast visual MUD - where you can explore a world that you can also partly make, if you care to - will become the center for a new youth culture.

I absolutely agree. I think that prediction's right on. And I'll make another one as well: More Court TV! Court TV gets dismissed as mere voyeurism, but voyeurism is never mere: you're only voyeuristic about things that you are very interested in. You're not voyeuristic about things that bore you. I think what Court TV indicates is that people are fascinated by these new moral problems that are coming up.

Each one of those big trials - William Kennedy Smith, the Menendez brothers, Lorena Bobbitt, and now O.J. Simpson - represents critical moral issues. What are the relationships between people at the moment? Are moral relationships the same as legal ones? Or do they overlap? Or are they different? I think people are fascinated by these problems, and I'm glad they are. That's another big future as well. Today, gossip is philosophy.

Breeding art

What kind of advice would you give to a musician now starting off, figuring that she or he may come to a peak in 10 years?

Oddly enough, I rarely talk to young musicians, but I talk to many young painters, because I teach in art schools. I ask them: Why do you think that what you do ends at the edges of this canvas? Think of the frame. What frame are you working in? Not just that bit of wood round the edge, but the room you're in, the light you're in, the time and place you're in. How can you redesign it? I would say that to musicians, too. I see them spending a lot of time working on the internal details of what they're doing and far less time working on the ways of positioning it in the world. By "positioning it" I don't only mean thinking of ways of getting it to a record company, but thinking of where it could go, and where it fits in the cultural picture - what else does it relate to?

One of the ways of rethinking the frame is to evolve art. I have in mind an exhibit I saw of Karl Sims's genetically evolved computer graphic images. They were stunning! One after another, they would come up, grown by his machine. And you would see pictures that neither you nor nature could have imagined. A really good music machine could do the same thing.

That's exactly what I hope for. Interestingly, systems and rules in music allow you to come up with things that your sense of taste would never have allowed you to do. But then your sense of taste expands to accommodate them! For instance, I'm sitting here now looking at something that my Stained Glass machine just made on my monitor. It has color combinations in it that are so weird. I would never dream of putting these things together. But, soon they start to look pretty good, and then they start to look really good.

My theory is that almost anything that can be evolved will seem beautiful.

Absolutely right. This is the reason that that damn Stained Glass screen saver thing works so beautifully. Because it's the only one that has any evolutionary qualities to it. Most attempts to mechanically manufacture music are apt to fail because they are modeled to create sameness, whereas what interests us is difference. Having said that, I'm quite keen on the idea of evolutionary music because it doesn't attempt to base itself on some sort of absolute theory about what makes good music. We can still say we don't really know what makes music nice, but we know when we like it. So we'll feed some into a processor and see if it can sort of breed some new versions of it that we haven't heard before.

I have discovered three uses for artificial evolution as a tool. One is to bring you to somewhere you would not have thought of - to evolve a pattern, or an organism you couldn't dream of. The second use is to generate the details that you would not ordinarily have time to even conceive doing - to mutate out a pattern in ways that you just do not have time to do alone. And the third, and most powerful, is to create new spaces to explore.

If I could suggest a reason for wanting to make music machines, the reason would be to do these things. Not to replicate music, but to invent new experiences completely.

You've seen the software Photoshop, right? It not only gives you tools that bridge painting and photography, it also contains a program that lets you mutate and evolve textures. It's like the invention of oil paint and horticulture combined! But so far there is no one, not even bad artists, attempting to create major art with it.

I've become rather engrossed with Photoshop in my own work. My first reaction is the same as yours: "My god - with these tools, the whole look of design should have changed. Why hasn't it?" The answer is generally that, as with all computer-based things, the technology filters out most of the interesting people, and forces them to wait. It takes immense amounts of time to trawl through the dreadful manuals and engage in conversations with the addled numbskulls who get enthusiastic about this crap. Only nitwits make it through (with enormous exceptions, of course), since only they have that kind of time to spare.

Surfing on entropy

You seem to have a fondness for engineering. Why aren't you afraid of machines?

I'm lazy; that's why I like machines. They do things I would not have thought of. I can put things into them, and then I can see something happen there beyond what I would have had the time, the taste, or the endurance to have produced myself. I usually don't want to slavishly make something in detail. I want to produce the conditions from which it and many its could come into existence. I think of myself as a machine builder in a way. Making a record for me is inventing a way of making music. And once I've tried it a few times, I want to invent another way. The thrill for me is to think of new ways of doing it, and new places to do it, and new sites in which music might happen, and new ingredients that might be used in it, and so on. So, machines are very much part of what I do.

Do you think of yourself as a machine?

I try to, but I'm not very successful at it!

In a lot of the art community, "mechanical" is a dirty word. You seem to have sort of flipped it around, using "mechanical" as a good, useful, and positive word.

"Machine" has come to have a dirty connotation because it's come to mean systems that do predictable, boring, and repetitive things. But the machines that I'm talking about do things we didn't expect. The lesson of complexity theory: allow some simple systems to interact - watch the variety evolve.

Has computer science influenced you any?

Cybernetician stafford Beer had a great phrase that I lived by for years: Instead of trying to specify the system in full detail, specify it only somewhat. You then ride on the dynamics of the system in the direction you want to go. He was talking about heuristics, as opposed to algorithms. Algorithms are a precise set of instructions, such as take the first on the left, walk 121 yards, take the second on the right, da da da da. A heuristic, on the other hand, is a general and vague set of instructions. What I'm looking for is to make heuristic machines that you can ride on.

Doesn't that make things out of control?

People tend to think that it's total control or no control. But the interesting place is in the middle of that.

Right. We have no word for that state of in-between control. We have some words like "management," or "herding," or "husbandry." All these are words for co-control.

I call it "surfing." When you surf, there is a powerful complicated system, but you're riding on it, you're going somewhere on it, and you can make some choices about it.

I think I know what you mean. Artificial life researchers talk about surfing the wave of increasing complexity. A very complex system gets close to a certain edge between rigid control and utter chaos - that's when the whole thing can surf to the next level of complexity. They see this in evolutionary systems. Some go as far as to say that's what life does: surf on entropy.

I like that. Metaphors involving the sea are very powerful to me. You have this interesting conflict - a sense of direction, a need to get somewhere, but in a medium that has its own, probably different, sense of direction. You can use the piggyback power of that medium, but you have to keep paying attention, making your own adjustments. Unless you really do want to go with the flow.

Leaving things alone

You once went around asking various bands to pretend they were an African robot factory and you had them make the sounds they imagined hearing in such a place. Did anything ever come of that?

Yes. Some of the tracks on my album Nerve Net. That's a technique I now use when I'm producing. I try to imagine us in a playing situation of some kind. The most important thing you can say to people when they're working is to forget about music. Really. I can't stand people thinking about music in the studio. People with musical instruments should be banned from recording studios because they so often center the process around history. They know all the tricks to make things that sound like music. But what I want to do is to make an experience of some kind. And we happen to have these tools to do it with, which happen to be called musical instruments, or recording studios, or whatever. If you can really get this message across, of making an experience instead of music, it's extremely liberating to people.

There are different ways of doing this. On the new work I've been doing with David Bowie, I wrote some "roles" and "scenarios" for the musicians - there were six of us - and we each played out our individual roles. The interesting catch was that no one knew what role anyone else was playing. One scenario, for example, suggested: You are a player in a Neo-M-Base improvising collective. It is 1999, the eve of the millennium. The world is holding its breath, and things are tense internationally. You are playing atonal, ice-like sheets of sound that hang limpid in the air, making a shifting background tint behind the music. You think of yourself as the tonal geology of the music - the harmonic underpinning from which everything else grows. When you are featured, you cascade through glacial arpeggios - incredibly slow and grand, or tumbling with intricate internal confusion. Between these cascades, you fire out short staccato bursts of knotty tonality. You love the old albums of The Mahavishnu Orchestra.

I can hear the music now!

The other thing I say is, Think about landscapes. Forget that we're making a song. Think we're making the sound of a landscape. So I paint a scene. I say we're on the outskirts of a big industrial city, an old city with lots of smokestack industries. We're just in the country. It's dark, but we can still see the flames and steam coming out of those things to our left, and to the right there's just darkness. Then when I say, OK, let's make the soundtrack for that movie. People start playing in a completely different way and find resources of playing they didn't know about at all. For instance, in Laurie Anderson's studio, we would spend a lot of our listening time staring out of the window over the water, watching huge boats drift noiselessly into the harbor. For a few days, we followed a rule that everything we made had to make sense with that view. It was liberating in that it allowed us to accept some quite "unmusical" things - because they worked with the view.

Since you're asking musicians to forget about the history of music, why don't you just cut to the chase and work with nonmusicians?

Nonmusicians often respond to it much better. Because a nonmusician is thrilled to be doing music and is quite happy to sit there and plunk one note all day. And is very alert to the effect of that. Nonmusicians really listen sometimes, because that's the only thing they have available to them. Musicians very often don't listen; they work from the program, and the program says move your fingers fast or whatever. Of course, as a now-experienced maker of records, I'm as susceptible to this inattention and working-to-formula as anyone else.

It seems as if a tone-deaf hacker might do just as well as a concert violinist in the setting that you're proposing.

There's an axis between musicians and non-musicians, and I tend to pick people right across the axis. Nonmusicians have a certain freshness. On the other hand, of course, a really good musician will not only listen but will be able to isolate and develop whatever is peculiar and interesting about what he or she is doing. A really good musician is not embarrassed to play something simple, and will play it well. Ideally, what you want to have are systems for switching you between the very different roles of creative-person-who-wants-to-try-lots-of-clever-new-tricks and listener-who-wants-a-moving-experience. In fact, pop music is extremely spongelike in terms of the talents it uses. Pop music can absorb so many peculiar talents, ranging from the completely nonmusical poseur who just uses music as a kind of springboard for a sense of style, to people who just love putting all that complicated stuff together, brick by brick, on their computers, to people like me who like playing conceptual games and being surprised. I mean, calling it "music" is really sort of a mistake. It's drama with noise.

What is your role when you are in a studio?

Funnily enough, a lot of what I find myself - surreptitiously - doing as a producer is thinking of elaborate diversionary tactics designed to make us leave things alone - at least long enough to listen to them as "audience." I find that when you're listening with a view to doing further work, you don't generally hear the totality of something but just the little gaps where you could squeeze in something else. Audiences, I find, nearly always appreciate more space and emptiness in a work than the creators of those works would like to tolerate. I noticed this first when working with tape recorders in the early days - that, having made something, I preferred hearing it at half its original speed: twice as empty.

Is that what you call yourself these days, a producer? What is your job?

[Laughs.] I have often wondered! As a producer, I'm not just saying, Oh, let's get a good bass drum sound. I'm saying, OK, look, this thing you're doing now is hinting at a certain universe of things that I believe are connected. A frame maker is another way of describing my role: "OK, let's put a descriptive frame around this, look at everything that we've included inside our frame, and see how those things relate to one another. And what if we extend the frame to include all these other possibilities?" Of course, at the time you do it, it looks like you're including more marginal things in it. For example, when I first started making records, it was unusual for someone to come into the studio without a prewritten piece of music, to sit there, as I did, and make it up with whatever was there. Now it's how nearly everybody works. People hardly ever go into a studio with completely prewritten material now. Those kinds of innovations always look marginal at the time, but in fact often become central later on.

Would the frame-identifying role be relevant to all types of artists?

Yes. An artist is now a curator. An artist is now much more seen as a connector of things, a person who scans the enormous field of possible places for artistic attention, and says, What I am going to do is draw your attention to this sequence of things. If you read art history up until 25 or 30 years ago, you'd find there was this supposition of succession: from Verrocchio, through Giotto, Primaticcio, Titian, and so on, as if a crown passes down through the generations. But in the 20th century, instead of that straight kingly line, there's suddenly a broad field of things that get called art, including vernacular things, things from other cultures, things using new technologies like photo and film. It's difficult to make any simple linear connection through them.

Now, the response of early modern art history was to say, Oh, OK. All we do is broaden the line to include more of the things we now find ourselves regarding as art. So there's still a line, but it's much broader. But what postmodernist thinking is suggesting is that there isn't one line, there's just a field, a field through which different people negotiate differently. Thus there is no longer such a thing as "art history" but there are multiple "art stories." Your story might involve foot-binding, Indonesian medicine rituals, and late Haydn string quartets, something like that. You have made what seems to you a meaningful pattern in this field of possibilities. You've drawn your own line. This is why the curator, the editor, the compiler, and the anthologist have become such big figures. They are all people whose job it is to digest things, and to connect them together.

Do you worry about everybody being a curator and nobody creating anything?

To create meanings - or perhaps "new readings," which is what curators try to do - is to create. Period. Making something new does not necessarily involve bringing something physical into existence - it can be something mental such as a metaphor or a theory. More and more curatorship becomes inseparable from the so-called art part. Since there's no longer a golden line through the fine arts, you are acting curatorially all the time by just making a choice to be in one particular place in the field rather than another.

In the traditional classical view, art objects are containers of some kind of aesthetic value. This value was put into them by the artist, who got it from God or from the Muse or from the universal unconscious, and then it radiated back out to those who beheld it. It was thus that missionaries played gramophone records of Bach to Africans in the expectation that it would civilize them, as though they would somehow be enriched by the flood of goodness washing over them. We now see the arrogance of this assumption, but I think few people understand what is really wrong about it, aside from its political incorrectness. What's wrong about it is that cultural objects have no notable identity outside of that which we confer upon them. This is a controversial and volatile statement. Their value is entirely a product of the interaction that we have with them. Duchamp's urinal was an exercise in this. Things become artworks not because they contain value, but because we're prepared to see them as artworks, to allow ourselves to have art experiences from them, before them, to frame them in contexts that confer value on them.

Sometimes I get the sense that you could just as easily have been a scientist. What do you think artists are doing that is different from science?

Interesting question. I think that art is not dangerous.

You say art is not dangerous?

The whole point of art, as far as I'm concerned, is that art doesn't make any difference. And that's why it's important. Take film: you can have quite extreme emotional experiences watching a movie, but they stop as soon as you walk out of the cinema. You can see people being hurt, but even though you feel those things strongly, you know they're not real. You know they've been put on for you. And you know that you've agreed to participate in them. Artists deal in this rather nebulous area I call "the rehearsal of empathy." You're rehearsing a repertoire of feelings that you might have about things, of ways of reacting to things, of how it would feel to be in this situation. How it would feel to be in that person's place? What would I have done? Such questions are the most essential human questions because they deal with how we negotiate as mental beings through a complicated universe. A lot of what's learned is quite uncodifiable, because it isn't the same for everyone. In fact, nothing's ever the same for anyone - and those very individuated reactions don't fit well into a scientific frame. Just as complexity theory has helped us understand that linear systems are a very special and limited case, so in some senses we see that the whole of science must deal with special and limited cases. But experiences of culture prepare us for acts of improvisation by getting us used to the idea of enjoying uncertainty.

Even your extremely logical denial is structured in a scientific way!

I've been involved with people in the sciences all my professional life because they have a lot of metaphors that I find useful. Take the book Fuzzy Logic by Bart Kosko. That's a great metaphor. You don't even have to read the whole book to be able to use that idea. Same with complexity. The idea of the cusp between chaos and stasis is such a useful idea to artists.

Designing music

How is technology changing music?

It's making it a lot easier to leave out the tracks I don't like! Before we had the record, music was an entirely ephemeral art. You were lucky if in your lifetime you heard a piece of music, especially a concert piece of music, more than half a dozen times. It would be an enormous thing for someone to

hear, say, Beethoven's Fifth six times in a lifetime. So, what happened with recording is that suddenly you could hear exactly the same piece of music a thousand times, anywhere you chose to listen to it. And this of course gave rise to a whole lot of new possibilities within music. I think the growth of jazz, especially improvised jazz, was entirely due to recordings, because you can make sense of something on several hearings - even things that sound extremely weird and random on first hearing. I did an experiment myself last year in which I recorded a short piece of traffic noise on a street. It's about three and a half minutes long, and I just kept listening to it to see if I could come to hear it as a piece of music. So, after listening to this recording many times, I'd say, Oh yes, there's that car to the right, and there's that door slamming to the left, and I would hear that person whistling, and there's that baby coming by in the pram. After several weeks, I found I loved it like a piece of music.

This future signals the breakdown of the singularity of the musical event. We can begin to see this in pop music, which is sort of fast and dirty. In the past, you would release a single, and then you'd release an album and the single would be on it. And then people started getting a bit more adventurous: they would release a different version on the single than on the album. Now people release an unbelievable number of things. They'll release six different versions of the single, then somebody else will do 12 different remixes of it, then it will come out another way a year later, then someone will change it 'round a couple of years after that. So, you don't have any sense of a specific identity for this piece of music. It becomes a description of a listening space that can be explored in different ways. We're back to hypertext again. I am sure this is going to be a very big part of the future.

There seems to be another trend. Music has moved from being something you heard occasionally to something that has infiltrated every waking moment of our lives. We get it on the news, in cars and elevators, at sports games and in stores, where we work, and on our bedroom clock radios. What will happen when music becomes ubiquitous 24 hours a day?

Of course, it may sacrifice some emotional power, but I sometimes imagine it may start to gain a kind of linguistic power - universality, specificity. As it becomes ubiquitous, people will want music purpose-designed much more. Just as you choose to arrange things and colors in your house in a particular way, I think you will choose music like that. Imagine that you order an evening of music over the Net. You say, "We're having a dinner, people should be able to talk over the music, I'm fond of Pachelbel's Canon and Joni Mitchell and Miles Davis. Can you put together three hours for me?" Whereupon the brain of the system looks through its ever-evolving "taste-clumps" - the product of continuous customer research - and says, "Someone who likes those things is quite likely to also enjoy some of the quieter moments of Hector Zazou, Jane Siberry, and Jon Hassell." It will compile a combination of all those. This is an autocurator. You could even tell it how experimental you wanted it to be: "Really surprise me - pull out a few long shots."

There is a book called Elevator Music that calls elevator music and Muzak "furniture music" - utilitarian fixtures of our environment. It says more is going on in that kind of music than most people think.

Yes! I'm always thrilled when someone suddenly says, Hey! you can take this seriously as well. It's like a new piece of the world that suddenly opens up for you.

So what kind of cultural margins do you think we should be taking seriously now? I'm trying to take videogames and videogame music seriously. Videogame music is not music that I would listen to as on a CD, but automatically evolved video music would be a million times better than having to hear that idiot music that repeats itself over and over again. The number of hours that people listen to Mario Brothers music is probably greater than the total number of hours that people listen to Beethoven.

That's probably true.

The total number of hours that people are listening to game music probably exceeds all hours spent listening to classical music, so it's very important that there be some kind of mechanical music worth listening to. I see a place for machine music as somewhere between the handcrafted music sold on albums, and pure, canned, inane, repetitious stuff. Ideally, what we want in a videogame or an

interactive experience is automatic music that's adjusting in real time to what we're doing. The music is changing depending on what's happening on the screen.

Automatic music becomes interesting when it does something we didn't expect. Yet mere "didn't expect" isn't good enough - we have to already have a framework of expectations against which to be surprised. That framework can be simple - such as one's sense of wonder when the tape loops in Steve Reich's "It's Gonna Rain" mysteriously recombine to produce something apparently quite different from what they are. That's a surprise of synergy. Another kind of surprise is that of extension - such as when Dorothy Love Coates collapses down to that beautiful, heartbreaking low note in "Lord Don't Forget about Me," just when you thought she could never go any lower. That kind of surprise is difficult to get from a machine, because it depends so much on our empathy with another human, and on our belief that this music represents some feeling that a human is having or could have.

Of course, a lot of the remixing of musical tracks - which is so fashionable now - has an automatic music feel about it: spin a few samples and see what they do together.

The other thing about all this remixing is, who keeps track of the intellectual property rights as bits of music are passed from studio to studio?

Intellectual rights is the hottest area going, and certainly not only in music. There are so many uniquely new problems. For example, I think of producing as the act of creating a sonic and conceptual overview of the record. And this type of creation is a whole new category for which there is no current copyright arrangement. When you're using sophisticated tools with very strong personalities, is the designer of the tools in some sense responsible for what finally comes out? Should that designer benefit? When a new tool or technology comes into existence, and suddenly 50 people at the same time see the same obvious idea, is it right that the one who gets to the publisher or patent office first should get all the material benefits of that idea? If not, how else do we share it?

I'm impressed with Bruce Sterling, the science fiction writer. He's loaded much of his nonfiction writing onto the Net. He says, in effect, This is copyrighted, but you can make a copy of it for noncommercial reasons; go ahead, he says, spread it around. He calls it Literary Freeware. He encourages people to make a copy of a book of his that is still in print.

I've always thought one of the most fantastic things about the Grateful Dead was that instead of sending heavies down into the crowd to smash people over the head and take their cassette recorders, they offered them a nice board to plug into so at least they got a decent recording.

I'm curious about the economic motives of artists in these technological times. At the first hearing, ambient music sounds like music that was made because it could be made. When you were first making ambient music, did you expect anybody to buy it?

Yes! As with everything I do, I expected it to be tremendously successful. [Laughs.]

What led you to believe anybody else wanted to listen to that kind of music, as it was so mechanical and not fashionable?

I'll tell you what it was. It was based on an observation that my tastes aren't that different from other people's. I always know that if I like something now, enough other people are going to like it soon enough. For instance, when I got into female body builders, every guy I knew was saying, Oh god! It's gross! I said, Oh yeah, this is just the last wall of resistance before they finally admit that they think these women are enormously sexy. Sure enough, they do now. I just admit to my tastes sooner. I don't have any embarrassment about what I like. It doesn't threaten what I've liked before even when it appears completely inconsistent with it. I don't mind the tension, and I don't think I have to compromise my whole theory of life to accept this thing. If I'm attracted to something, I immediately surrender to it. I offer no resistance to being seduced. Because I offer no resistance, I think that I sometimes touch things more quickly than other people do.

A Selection of Brian Eno's Solo Albums,

Hear Come the Warm Jets, 1973
Discreet Music, 1975
Before & After Science, 1977
Ambient 1: Music for Airports, 1978
Desert Island Selection, 1986
Nerve Net, 1992
Brian Eno Box I and Box II sets, 1993

A complete catalog of Eno's works, the liner notes from his albums, and an Eno FAQ can all be found at the Eno WWW project at <http://www.nwu.edu/music/eno/>.

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