

Music

Music

Classical Music

“I like Dizzy Gillespie but I like this, too [i.e., classical music]. This is *good* for you. Put this next to a flower and it will *grow!*” — counterman in a Berkeley coffee shop, Mar., 1997.

Every student of the theory of evolution should attempt, at least once, to come up with an explanation for why there should be such a thing as music at all, in particular, music of the depth and complexity and beauty of the Western classical composers.

As far as evolutionary time scales are concerned, such music appeared overnight — in the snap of a finger — and to what purpose? Does the possession of such music increase the survivability of the human species?

“As neither the enjoyment nor the capacity of producing musical notes are faculties of the least direct use to man in reference to his ordinary habits of life, they must be ranked amongst the most mysterious with which he is endowed.” — Charles Darwin, quoted in Dubal, David, *The Essential Canon of Classical Music*, North Point Press, N.Y., 2001, epigraph

Or is it rather, as a friend put it, that such music is simply a side-effect of having brains as well-developed as ours? But can such extraordinary structures occur as mere side-effects?

What were those who would have been great composers doing before classical music appeared, i.e., before, say, the 13th century a.d.? If genius is not the result of training, then such minds must have occurred throughout the ages. What did you do if you were Johann Sebastian Bach and had no musical instruments and no written music?

Music *is* what metaphysics always tries to be. The truth of this is clear to any student of existentialism who has heard the closing theme of each episode of the Masterpiece Theater production of *Tinker, Tailor, Soldier, Spy*. At least for some music lovers, music reveals the essence of things, reveals the inner nature of the world, and at least at present, no one has the slightest idea how it does this.

“...music is distinguished from all the other arts by the fact that it is not a copy of the phenomenon, or, more accurately, the adequate objectivity of the will, but is the direct copy of the will itself, and therefore exhibits itself as the metaphysical to everything physical in the world, and as the thing-in-itself to every phenomenon.” — Schopenhauer, Arthur, *The World as Idea*, Third Book, Second Aspect, III, in *Schopenhauer: Selections*, ed., Parker, DeWitt H., Charles Scribners' Sons, N.Y., 1928, p. 184.

Baroque: music from the age of hanging, drawing and quartering.

If a composer or musician does not have extensive experience working in popular established forms, e.g., polkas and other ethnic music, popular songs, marches, jazz, he will probably tend to overestimate the accomplishments of periods such as the baroque. He will assume that composition then was as difficult as it is now, when each new piece of serious music (indeed, each new work in any of the arts) is expected to start an entire new movement. He will think it nothing

short of astounding when he reads that some baroque composers could write a sextet almost as rapidly as some people could write a letter, or that a composer produced dozens of operas in addition to numerous other works. But in the eighteenth century there was a great deal of boilerplate, to use a phrase from the advertising world, already in the air and available for the taking. Composition then was much more akin to jazz improvisation, with its collection of idioms, riffs, standard phrases and forms, than to the academic research project it became in the second half of the twentieth century. Also not to be forgotten is that, incredible as it may seem, composers then actually attempted to please people, or at least their patrons, by creating something beautiful.

Here's to you, Vivaldi! The elitists like to say that you wrote the same piece 600 times. And yet any one of these no-talent fops would give their right arm to be able to write something as good as the last movement of your Flute Concerto No. 2 in G Minor ("La notte"), or, yes, even your *Four Seasons*, much less do it in anything near the time it took you. Oh, sure, they use your music to sell Volvos and to keep yuppie minds numbed at the office, but that is not your fault. I say this: Johann Sebastian Bach, who saw fit to transcribe many of your works, did not waste his time on second-raters. I say this: long after the syntactic posturings that academics call the music of the future, have been forgotten, your glorious music will be delighting music lovers the world over.

Intellectuals and artists know (though they may not like to admit it to each other) that for them the religion of accomplishment has replaced the moribund Christian religion. Immortality is salvation, and this makes the business of creating intellectual and artistic works a heavy business indeed, because if you don't achieve immortality, your life and all your efforts were worthless, and worst of all, you didn't realize it. The kind of work that this religion produces was only too evident in the twentieth century. Nevertheless, if for no other reason than curiosity, we must ask if it is not possible for, say, a composer to in fact do what intellectuals and artists like to believe that at least some of the great thinkers and artists of the past did, namely, write music solely to please themselves. (No one who has his eye on immortality does this, regardless of what they tell you.) Imagine being a composer *without fear*, a composer who spends next to no time worrying about his ultimate worth or his rank among other composers of his time. Imagine a composer for whom *any* sound is a candidate for use in a composition, and yet who feels under no obligation whatsoever to use all the sounds that attract his attention. Imagine a composer who sets out only to please himself (which in no way prohibits his also pleasing others), while at the same time maintaining a strong critical faculty toward his own works and others, yet a critical faculty that is not accompanied by self-contempt in the case of one of his own works. In short, imagine a composer who creates music in the same spirit as many woodworkers create furniture and cabinetry, a composer for whom the judgement of Those Who Know is a matter of indifference except as it enhances his efforts. Do any such composers exist today?

"...the most difficult thing is the *free* usage of what is *our own*." — Hölderlin, Friedrich, quoted in *Hymns and Fragments by Friedrich Hölderlin*, tr. and intr. by Sieburth, Richard, Princeton University Press, Princeton, N.J., 1984, p. 14.

“Competitions are for horses, not artists.” — Bartok

When people talk of the use of the computer in the composing of music, they usually assume this carries with it an obligation to create musical sounds that have never been heard before. (Else why use the computer?) But nothing could be more misguided. The computer simply enables us to accomplish mental and artistic tasks which we were unable to accomplish with the unaided mind. The really interesting experiment to make is to use the computer to write music for traditional instruments (or traditional sounds): fugues beyond the imagination even of Bach, passages that surpass the technical competence of any human performer (cf. some of Conlan Nancarrow’s player piano pieces). And this applies to jazz as well as to classical music.

Composing without hearing all the notes: It is safe to say that, for all composers — and I am referring here to composers of classical or so-called “serious” music — the process is something like this:

- (1) Decide on type of piece to be written, and then on its structure;
- (2) Hear the notes, either in your head, or as played on the piano or on the computer keyboard;
- (3) Write down what you hear, or have the computer do it if the keyboard is connected the appropriate software;

It is relatively easy to write melodies this way. But suppose, having composed a melody, you now want to write the harmony. But not only do you not know the rules of harmony, you cannot play more than one note at a time on the instrument you have at your disposal. Does this mean you should give up? Not at all — *if* you know the *kind* of harmony you would like to write: in other words, *if* you have heard music in the past having that type of harmony, and you can get your hands on the score. Because then you can simply copy the notes into your own score after making appropriate adjustments in key, placement in the measure, instrumentation, etc. The computer can, of course, make this process easy.

A music teacher who was teaching junior high school students a little about composition, in particular, about composition using the computer, told me, in the summer of 2002, that the only disadvantage of the new technology was that it enabled his students to compose far beyond their natural abilities and knowledge!

“Instant Composer”, or, How to write a string quartet if you know next-to-nothing about writing music:

- (1) Decide on form, e.g., four movements, and on what, roughly, is to be expressed in each movement;
- (2) Find a composer who is willing and able to translate your ideas into notes. In other words, a composer who is willing and able to work with you somewhat as follows:

You begin by saying, “OK, the first movement is basically sad, melancholy, the opening notes should say, ‘Life is without promise or hope; it goes on and on like this,’ where the ‘like this’ is expressed by the succeeding music. Maybe the opening notes might be something along the lines of —” Here you sing or whistle a few bars. “The movement just expands on this initial pessimistic feeling, ‘giving more detail’ as to the kind of pessimism being expressed. In other words, something like —” And you sing or whistle a few more bars.

Your composer associate plays the notes you have given him, maybe asks, “What next? Something like this?” And you correct him, the two of you proceeding this way until you both agree you have an outline of the first movement.

Now you may prefer to complete a similar outline of each of the other three movements, but in any case when you decide to work on the harmony he will play a few notes of harmony to your original theme. You might reply, “No, no, too optimistic. Make it darker. There, that’s better.” And so you proceed.

If you have extensive experience *listening* to string quartet music, and if, of course, you know intuitively what feelings a piece of music, even just a few bars, expresses (though you may be completely incapable of putting your knowledge into words), then the above process can produce a string quartet — probably not anything that can lay claim to greatness, but a real string quartet nonetheless.

In thinking about composing music, an activity that seems like a kind of miracle to those who are not good at reading music, we must remember to separate the music from its written representation. I think music teachers would be pleasantly surprised at what students would tell them if the students were asked simply to imagine a piece of music in their minds. “Don’t worry if you can write it down or not, much less play any of it. Don’t even worry what instruments are involved. Just try to hear something in your mind that you think would be kind of interesting if it could be actually performed.”

In this computer age, we can do even more than what was described in the previous paragraphs. Suppose that a representative sample of the works of each of the major composers — scores and recordings — were accessible on the computer, along with one of the music composing and editing programs that are now currently available. Then, in effect, we would be able to “compose by ear alone” — we would be able to begin with a copy of a passage in a composer’s works, make modifications to it, and then incorporate the result in the score we are writing. The modifications might be, e.g., telling the music editing program, “Change the melodic line in the following passage to be ..., and then harmonize the result exactly as in the original.” (or “with the following modifications to the harmony...”). This does not seem wishful thinking, given that it is written several years after the introduction of *CPU Bach*, the remarkable program that, beginning with a subject (melody) supplied by the user, creates a fugue based on it that sounds remarkably like one that Bach himself might have written.

The phrase “play by ear” means that one is able to produce music on a musical instrument without knowing the names of the notes or the chords one is playing; “compose by ear” means that one is able to produce a score without knowing the notes in the score — to play the entire orchestra by ear, instead of just a single instrument.

Worthwhile research project: do histograms of sequences of notes in baroque music, beginning perhaps on a composer-by-composer basis, i.e., record the frequency of individual notes, then of two-note sequences, then of three-note sequences, etc.

Classical music is “seamless”, yet few works are produced at a single sitting. There must have been times when the composer put the work down to go to the bathroom, or have lunch, or simply to lean back in his chair and blow a fart. Will it someday be possible, say through detailed study of biographical information, plus computer analysis, to determine where the seams caused by these events actually occur in a work?

A composer friend replied to this question that, even though the phrase “writing music” may suggest a process similar to that of writing a letter, most musical compositions are not so much written as constructed (or, in the case of some of Mozart’s, simply copied from the score which God or his subconscious had given him). Thus, it makes as little sense, in most cases, to speak of “seams” in music as it would be to speak of seams in the plans for a building.

Most of us have perfect pitch relative to color: upon being shown a color and told its name, we can then name that color, and shades of it, the next time we see it. In fact, it is difficult for people who are not color-blind to imagine how someone could *not* be able to do this. Why is this faculty so rare when it comes to sound? People who do not have perfect sound pitch can sometimes develop relative pitch, meaning that, if someone plays or whistles the starting note of a melody which they know, they can reproduce the rest of it (by whistling or singing or playing on an instrument) starting with that note. But, in the case of whistling or singing, they will be unable to name any of the notes, even though they may know how to play an instrument and read music. A more advanced form of this ability is that of being able to reproduce, by whistling, any simple melody on first hearing, but, again, without being able to name any of the notes, even though the person is educated musically.

Are there people who possess only *relative* color perception? If so, what is that like?

Many classical music lovers have probably observed that their memory for themes in frequently-heard musical works is much better than their memory for the titles associated with these works. (It is as though such people hungered only for the products, but had no memory for the brand names.) If they hear the first few notes of one of these themes, they can sing or whistle several subsequent measures, even though they cannot remember the title of the work. This often seems to be the case, e.g., with Bach’s Brandenburg concertos and Beethoven’s symphonies and piano concertos, each of which the listener may have heard literally hundreds of times during his lifetime. We may be inclined to attribute this phenomenon to an underdeveloped connection between the right and left halves of the brain, except that these same people often have little trouble recognizing the titles of works they hear far less frequently, e.g., Respighi’s *The Pines of Rome*, Saint-Saens’ Organ Symphony, Berlioz’ *Symphonie Fantastique*.

If you listen to a recording of, say, the Brandenburg Concerto No. 1 with the stereo balance control improperly set, so that one of the horn parts is noticeably loud, you suddenly realize that music, too, is just another instance of *men at work*. You hear the horn part as an individual part quite clearly — notes, then a pause (the player probably counting in his head, “*one*, two, three four, *two*, two, three, four...”), then more notes, the part working in very well with the whole, oh yes, no mistakes, I am doing my job, *tah-tah-tah* (two, three, four), *tah-tah-tah*. You imagine his foot next to his chair leg, tapping, then still, then erratically tapping, then still. He has been hired

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to play on this recording, he has practiced his part (when? afternoons? when neighbors were not home to complain? or did he go to a studio each day?), *tah-tah-tah* (turn the page). He has a mortgage to pay off, a union card in his wallet, began playing at the age of seven, father an amateur violinist, mother a piano teacher, he a born musician, or rather, a born orchestra musician. No mistakes, every note right, all the entrances right (foot tapping); he empties his spit valve quietly, *shakes* the saliva out, doesn't blow it out, because this is a recording. Will take the train home after work and play with the kids (...two, three, four...).

What every musician knows or else should know: a difficult passage is simply an easy passage played fast.

The playing of *any* melody can be taught via a sequence of approximations in which, at each approximation, only the "next most important" notes are played. Thus the student plays a sequence of gradually more difficult outlines or silhouettes of the melody, the last of which is the melody itself. One benefit of such a method is that the student learns to appreciate structure, i.e., learns that not even in music is everything equally important.

Is practicing really necessary in the computer age? Musicians spend countless hours each year in attempting to improve their technique at playing an instrument. But this is manual labor! Machines can do manual labor. What does a musician gain from practicing other than the increased ability to play music? Suppose a pill were developed so that anyone who took it would instantly have the manual dexterity (though not necessarily the taste and artistic insight) of the best pianist of the age. Would musicians be happy or sad? Would they continue to believe that practicing deepens their understanding of music? If practicing is the only way to achieve this, then why don't composers spend most of their time practicing?

Surely the time spent practicing were better spent programming precisely how the musician wanted the piece to be played. And this programming has been possible ever since the invention of the player piano. Why this persistent homage to manual labor? One answer is that the upper class (which is the main source of income for musicians) needs the grand social occasions that concerts afford. And so much the better if the occasion includes the spectacle of a very difficult task being performed by people with great prestige. The Marin County ladies thrill to the sight of the handsome young virtuoso. But suppose it were revealed that all the performances of such a virtuoso had, in fact, been performed by a machine hidden inside the piano, and that his real artistry had been in his ability to seem to be creating the sounds himself.

It is important to distinguish between not making mistakes and playing music. I know a young cellist who makes occasional mistakes in concert performances — plays out of tune on a few notes, for example — but I am not particularly bothered by this, because she is clearly a musician in touch with the music at all times, and when she makes a mistake, I merely think to myself, the music failed to get through briefly, that's all. I know a pianist, on the other hand, who seems to feel that getting through an entire piece without making a single mistake is the whole point of the enterprise. But it is not. A machine can do that.

A dedicated musician might argue that only if the musician communicates directly, immediately, through physical contact with his instrument, can the essence of the music be communi-

cated. But what about a composer who spends his time merely putting notes on paper (that is, writing a kind of computer program)? Surely he feels he is communicating the essence of his music.

Far better that musicians spend their time composing, even if only improvising, than in the mindless repetition of manual labor that is practicing. Far better that we turn away from the relentless production of virtuosos, which is the main function of the music schools of our time, and instead begin promoting the outrageous idea that a performer who can't create music of his own, is really only a kind of automaton, and will sooner or later be replaced by a machine. Why is it wrong to ask that every music student after, say, his fifth year of playing his instrument, be able to create a competent improvisation on any two notes that he or she is given?

Suggestion for composers' competition: each year, a succession of three notes is given. Contestants must create a short work, say, lasting less than 15 minutes, based on the three notes.

A conductor was rehearsing a work which he knew was written by a gifted son of the upper class, and furthermore was written to please that same audience, perhaps with confident anticipation of receiving one of the annual prizes which that class awards for "exceptional originality and excellence", the work being just dissonant and dull enough so that its audience would know they were getting their money's worth of high culture. The conductor, knowing all this, and hating himself for conducting the work and for the fact that he would stand there afterward and receive the applause, said to his musicians, after asking them to repeat a certain passage, "OK, come on now, but this time make it *smell*."

If ever there was a model of specialization, it is the symphony orchestra, in which each player is given instructions on what he or she is to play and how to play it, and nothing else. Imagine a youngster standing behind the curtain and watching, say, his uncle, playing third violin just a few feet from him in an orchestra concert. He sees the uncle raise his instrument, saw back and forth for awhile, then lower the instrument, all the while keeping his eye fixed on the pages in front of him and on the man way off in the distance who seems to be in charge. Then he raises his instrument again, saws back and forth just a little, then lowers it again. Now he sits for a long time, doing nothing except reading and watching. Then, suddenly — this time it seems the man in charge pointed at him — he raises his instrument, saws vigorously along with everyone else, then suddenly stops and does nothing again.

"The orchestra ... mirrored certain features of the factory in its internal structure. At first the symphony orchestra was leaderless, or the leadership was casually passed around among the players. Later the players, exactly like workers in a factory or bureaucratic office, were divided into departments (instrumental sections), each contributing to the overall output (the music), each coordinated from above by a manager (the conductor) or even, eventually, a straw boss farther down the management hierarchy (the first violinist or section head). The institution sold its product to a mass market — eventually adding phonograph records to its output. The music factory had been born." — Toffler, Alvin, *The Third Wave*, Bantam Books, N.Y., 1980, p. 32.

We have to ask if any interesting changes would take place in performances if every musician played from a copy of the complete score. A minor advantage would be that this would eliminate the need for the tedious counting of measures of rest which is known so well to orchestra musicians. Is it simply a question of expense? What about the expense of transcribing, and publishing, all those individual parts? How would the behavior of conductors change if every musician had before him or her the same notes as the conductor?

(The main objection to this idea that musicians have raised is the constant page turning that would be required.)

Certainly by now someone should have done a serious study of the cause of coughing during classical music concerts. Observe, in yourself, when you don't have a cold or a cough, how often you cough during the day. Almost never! Then why are people in concert halls suddenly afflicted with these excesses of phlegm? Nervousness? Hardly. I think the reason is that suddenly this group of overachievers finds itself in circumstances where none of their skills at making and keeping money, not to mention demonstrating their prestige, are of the slightest interest to anyone. All eyes and ears are on a group of people whose only ability lies in making certain kinds of sound. Well, thinks the overachiever (without actually putting it into words for himself), I too can make a certain kind of sound. Just wait till the next pause in the music. There. Did you hear that? That's me. I am here too.

Classical music. (Or, as many students will agree, *calculus music.*)

I once played a piece of classical music for a woman who never listened to this type of music. Her immediate response was: "Rich people's music!" We may dismiss this as simply a matter of association, or we may start recalling our own responses to various types of music and ask if each type does not indeed carry its own particular morality — classical with its call to great accomplishment, to the life of the mind and the finest things (religious or of the upper class); jazz and blues with their call to sex and making trouble for the Establishment; folk with its call to remembering, rock 'n' roll and country and western with their call to the life of the loser.

The two reasons that adults invariably give for why they hate the music of teenagers is its sound and its "immorality". Asked to explain what they mean by the latter term, they will often reply with words to the effect that it promotes "rebelliousness". But at least in middle- and upper-class achievement-oriented homes, the adults know this is not an undesirable trait in itself: all of the world's great thinkers, and many of its most successful businessmen, were rebellious. What these adults really fear is the call to the loser's life which is present in this music.

When we are young and read in Plato's *Republic* that music was censored by the Guardians so that it wouldn't corrupt the souls of the young, we smile at such moral prudery, since it is perfectly obvious that one can always think and decide about things even when music is playing. But when we realize that many of the poor *live* in their music, and that this music is nothing less than day-in day-out propaganda for the loser's life, for being perennially a victim of the powerful, with no resources except anger and self-pity, then we begin to think that Plato was right after all.

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If you have any doubts about the moral force of music, try to imagine, say, a gang of bank robbers driving to their next job with Bach's *Chromatic Fantasy and Fugue* playing on the car radio.

It is questionable whether classical is, in fact, rich people's music. In many years of walking through wealthy neighborhoods, I have heard classical played only two or three times. Usually no music at all can be heard (even though windows are open) or else it is the blandest form of pop or, once in a while, the latest straight-from-the-assembly-line rock n roll.

I suspect that, in most upper class homes where classical music is played at all, it is merely a form of decoration. This has certainly been true of the upper class homes I have spent any time in. On the other hand, for some of us, there are classical pieces which always seem to carry with them a question, namely, "What kind of a house would go with this music?"

Why is it that so few women have a deep appreciation of classical music? In my lifetime, I have known perhaps three women who would listen to classical music when there was no one to observe them doing so. The rest could only love the music in concerts, where they could be seen enjoying this highly prestigious art form among other members of the upper class. This was true even of women who at one time or another had studied a musical instrument. I once had a relationship with a Marin County woman who had classical music playing in all rooms of her house, including her bedroom, 24 hours a day. Yet the only time I ever heard her exclaim over a piece of music, or even *notice* a piece of music, was during a San Francisco Symphony concert. Such women — not terribly bright, certainly not deep, but very well off — are apparently the main audience for the Bay Area's last remaining classical music station, the unforgivably bland and mediocre KDFC. Hence the programming — call it "Marin classical" (or "Yuppie Muzak"): Vivaldi's *The Four Seasons*, the Bach Brandenburg Concertos, Handel's *Water Music Suite*, lots of Mozart, a little Beethoven, a fair amount of Schubert, Smetana's *The Moldau*, Shostakovich's movie music, Prokofiev's two works: the *Lieutenant Kije Suite* and the *Overture to Romeo and Juliet*...

For the vast majority of educated women, music is an accomplishment, an adornment, like good manners. But no one seeks nourishment for the soul in good manners.

A cause for profound despair is the appalling ignorance of, and indifference to, classical music among college students, even at the best universities. Try as I may, I cannot suppress the conviction that people who do not enjoy good music are only half human.

Unquestionably, certain music (and books) can only be enjoyed at a certain age. Chamber music, for example, is old people's music. It is for a time of life when one begins thinking about country houses and grandchildren. It should be composed as solace, companionship, for an old person reading by the fire on a cold rainy day in a little cottage in the country. Who can seriously

imagine a teenager who is not studying a musical instrument, becoming excited over a string quartet? Similarly, Montaigne and Proust are old people's authors. No young person should be forced to read them, and no old person should go through old age without reserving some of his leisure for them. They are books meant to be read by people who have earned the right to be able to *take their time* in reading a book.

Music can make a place seem bigger than it is: a traveler to England once told me that he was amazed at how small the country seemed; then he realized that the reason was that his conception of its size came almost entirely from the music of Handel. (Similarly, if we learn about a country solely from books, when we first visit it the country seems a pale *representation* of what we had imagined.)

Probably the single most bizarre difference between the 20th and 21st centuries, and previous centuries, as far as classical music is concerned, is in the fact that it was and is routine for a music lover in these last two centuries to hear recordings of a given piece of music many dozens — many hundreds — of times over the course of his or her lifetime. In earlier centuries, apart from music heard played regularly on the piano and perhaps on a few stringed instruments at home, classical music was heard only *in concerts*. No more than a few a year for a non-musician. So to talk about a piece of symphonic music meant talking about it from the memory of a performance. An astounding difference from the present day.

Two questions for musicologists: (1) Did Western harmony arise from the echos in the cathedrals? (2) How would Western harmony be different if people had a different number of fingers than ten? (See essay by Charles Ives.)

Project for sociologists: verify or prove false: a driver pulled over for speeding who has classical music playing on his car radio has significantly less chance of actually getting a ticket, than one who has rock music playing.

Atonal Music

Anyone can find reasons to justify his dislike of a work, or school, of art. In the case of atonal music, we have all heard these reasons: "It has no melody", "It's just random", "It doesn't express any emotion", "It's unimportant — just a footnote to 20th century music", etc. But these reasons are not fundamentally interesting. My purpose here is instead to record some thoughts ((1) - (5), below) that have occurred to me along the way of trying to understand atonal, and, in particular, twelve-tone music.

A few preliminary remarks:

First, it is absolutely essential that we hear the music performed by someone who knows what they are doing. I wasted years trying to understand Schoenberg's piano music by listening to Glenn Gould's performance of it (*Arnold Schoenberg: The Complete Music for Solo Piano*, Columbia LP MS 7098), a performance that is essentially an attempt to play Schoenberg without

feeling. (Gould may yet turn out to be the most overrated pianist of his time. We keep forgetting that eccentricity and virtuosity do not necessarily imply genius.¹) To hear the job done right, we need to listen to someone like Maurizio Pollini (*Schoenberg: The Piano Music*, Deutsche Grammophon, 423-249-2).

Second, it is a disgrace that no CD is currently available that provides an introduction to atonal and, in particular, to twelve-tone music. (For that matter, it is a disgrace that no set of CDs is available that provides a detailed history of classical music, with explanations and auditory demonstrations of the various forms — in other words, a set of CDs that is the auditory version of any good printed history of Western music.) Books such as Webern's *The Path to the New Music* are available, and at least one CD of Schoenberg's works includes extensive notes and partial scores showing principal themes (*Second Viennese School: Schoenberg, Berg, Webern* (four disks), LaSalle Quartet, Deutsche Grammophon 419-994-2), but very few classical music lovers can readily hear, in their mind's ear, the music in a score they have before them, and for these, an introductory CD would be invaluable — an introduction ala Leonard Bernstein, with the themes played, and the significant developments, retrogrades, inversions, cancrizans, explained and played also, so that the listener would have no need to decipher a score.

Third, in these academic-ridden times, we must remember that in attempting to understand a work of art, anything goes, including the most outrageous disregard of the composer's conception of his work. It is all right to "cheat", i.e., to use means that the composer might have disapproved of (see, e.g., (1) and (5) below). Included in the category of cheating is the use of envy as a motivating factor. Think: some people understand this music, you don't! They have something you do not! But why should *you* be kept out?

Ways to Understand Atonal Music

Here are a few ways I have found helpful in understanding atonal and, in particular, twelve-tone music. Elaboration of each way follows.

(1) Ask yourself: what kind of a film would this be appropriate background music for? What would be taking place, and where, and who would the characters be? (Thus atonal music might be described as background music for films that have yet to be made.) Apart from any film, what associations does this music call up in my mind?

(2) Ask yourself, how would I have to feel to want to compose music like this? In other words, why did the composers go through all the trouble in the first place?

(3) "Find an opening": find a phrase, a passage, no matter how short, which makes you say, "This is interesting!", "This means something to me!", "This moves me," "This is beautiful!" Then widen the opening by finding other similar phrases and passages.

(4) Memorize a little of the "geography" of the music: the name of the piece, the date of its composition, and for each phrase you feel you understand, the number of the movement. Read as

1. Gould once described Bach's *Chromatic Fantasy and Fugue* as "an abomination". What is an abomination is not this great work, but Gould's performance of it — as the reader can determine for him- or herself, on *The Glenn Gould Edition*, Sony Classical. There is certainly a place for the mechanical thumping that once brought Gould world fame as the great new interpreter of Bach: for example, consider the Fugue, BWV 951, on the same CD. But he was apparently incapable of recognizing the sublime beauty of the Fugue part of the *Chromatic Fantasy and Fugue*, which may be the reason why he only recorded the Fantasy. To experience this work as it was meant to be performed, the reader must listen to Alfred Brendel on *Bach: Alfred Brendel*, Philips 415 252-2.

much about the structure, in the accompanying notes, as you can before excessive yawning sets in.

(5) Learn to love the dryness, the abstractness, for its own sake.

(1) Ask yourself, “What kind of a film would this be appropriate background music for?...”

In the days when non-representational painting was first gaining public attention, it was often argued that this type of painting could not be art because art requires that the audience be familiar with the symbols which the artist uses. The same argument was used against atonal music, where it was asserted that the audience must be familiar with, i.e., have past experience with, the harmonies and types of melody which the composer uses, otherwise his music will be “meaningless”. Thus, it was said, atonal music (including here atonal electronic music) will always have at best only a marginal audience. But if nowhere else, atonal music lives in film and video background music, e.g., for science-fiction films, and this will be the means by which it eventually gains an audience for itself *as music*, since over a period of, say, fifty or a hundred years, this audience will come to associate various types of phrases (“patches of sound”) with definite types of emotion, namely, those that occurred on the screen.

How does Webern’s *Six Pieces for Orchestra*, op. 6, or his *Symphony*, op. 21, differ from the background music for any one of a number of films about troubled souls? Is there any literary person who couldn’t supply a dozen story plots, or at least scenes, to accompany this music? (Some atonal works are more appropriately called “movie background music” than others: certainly György Ligeti’s *Atmosphères* and *Lontano* belong in this category, as Ligeti found out to his intense annoyance when Stanley Kubrik co-opted the former in 1968 for his film *2001*. Or consider Lars Johan Werle’s background music for Bergman’s *Persona*. Without the film, many listeners would describe it as too abstract, too nearly atonal; with the film it is “understandable”.)

We can also turn the whole matter around, and start to use atonal music as background music in our own lives, e.g., when we are working. Anything goes. (Try to imagine a house in which atonal music was playing on the stereo throughout the day. What would the interior of the house look like? What would be the personalities of the occupants?)

A good guideline for listening to atonal music might be: “Don’t listen to the notes: listen to what the notes say.”

On the other hand:

(There are knowledgeable musicians and composers who, I am sure, would be appalled by this background music idea. “Music is not meant to be an illustration of events, and there is the danger that a score could be heard as movie music without the movie.” — Adolphe, Bruce, *Of Mozart, Parrots and Cherry Blossoms in the Wind*, Limelight Editions, N.Y., 1999, pp. 42-43.)

A question related to that concerning films is, “What does this music make me think of?”, “What scenes (apart from those in films) does it bring to mind?” We can convert Schoenberg’s atonal piano music into lush romanticism — we can imagine a house in the French countryside, the family away on a Sunday trip, we there alone, thinking of black-and-white French films and the cobblestones in the rainy streets of the nearby village; we can feel the damp air in the house, watch the raindrops dribbling down the French doors, watch the small fire in the fireplace. We can imagine that there are rumors of war, that solitary intellectuals in wool sit in coffee shops, thinking about socialism, oatmeal, wool. Somewhere, slick 1920’s women are making up to Le Corbusier, attracted to him by their inability to understand his work and by his ugliness. Smell of wine and Egyptian cigarets in small restaurants, a woman saying, “What shall we do next?”;

news in the paper of a suicide in a prominent local family. The acid taste of loneliness. Image of a red glass ball.

Looking ahead, the thought might occur to us that the more that classical music advances, the closer it comes to being sound effects.

In passing, let me say that the use of mental associations to appreciate a work of art can, and should, also be applied to wine tasting. We are not required to limit ourselves to the wine-maker's parameters — dryness, sweetness (sugar), oak, tannin, fruit, length in the palate, corners... We can instead ask ourselves, "What images does this wine call to my mind?" And our answers may be, e.g., "A country path next to a stone wall in the French countryside. Fall day, cold, misty. Thick brown grass beyond the wall, smelling like wet straw. A bird flickering by once in a while. A small cottage a few yards off the path, almost hidden in bushes and trees. A fire in the fireplace there. Someone preparing something. Lichens on the stones in the wall. A person with a headache standing on the path. A brief smell of manure in the cold air. The wine tastes like the old stones in the foundation of the cottage."

Once we have the emotion, we begin to notice how the music goes, its structure. "Look how this succession of notes is repeated here..."

We must not overlook the use of the tactile in order to understand this music. We can ask, "What does this music *feel* like?" referring here to feeling in the tips of our fingers. The first movement of one of Carter's string quartets may suggest a rough stone surface, say, of a stone wall, in a New England countryside on a cloudy cold fall day, on the day after you have been rejected by someone whose love you were ardently pursuing. In addition, you have a bad cold.

(2) Ask yourself, "How would I have to feel to want to compose music like that?..."

Our business is to find out why the composer went through all the trouble in the first place. It was *not* to exercise certain abstract rules for composition. No one composes music (or writes novels or poetry) out of grammarian impulses. All music has its source in feeling (a radical assertion, I realize, but one that I have found no evidence to contradict). "Rules" and "laws" of music are simply means of reproducing more of the same kind of music.

"There is no theory. You merely have to listen. Pleasure is the law." — Debussy, quoted in Adolphe, Bruce, *Of Mozart, Parrots and Cherry Blossoms*, Limelight Editions, N.Y., p. 98.

"Robert Craft: What is theory in musical composition?"

Igor Stravinsky: Hindsight. It doesn't exist. There are compositions from which it is deduced. Or, if that isn't quite true, it has a by-product existence that is powerless to create or even to justify. Nevertheless, composition involves a deep intuition of 'theory'." — Stravinsky, Igor, and Craft, Robert, *Conversations with Igor Stravinsky*, Doubleday & Company, Inc., Garden City, N.Y., 1959, pp. 12-13.

To put the matter another way: the question is not, What are the rules governing a particular type of composition? The question is, What is the criterion for choosing the *next* rule to apply at each stage of the composing process? Is it esthetic? Is it in any way based on sound? Does it have anything to do with the overall feeling, mood, "space", that the composition is setting forth? The answers to these questions determine the real nature of the rules.

So, let us ask what was going on in the world in the period — say, 1900-1925 — when the twelve-tone system was being developed. And not merely "the world" but Austria and Germany in particular. Answer: this was a period in which most persons of intelligence and artistic sensi-

tivity felt that the old values were dead and that there was nothing to replace them. Nietzsche had proclaimed the death of God, psychoanalysis was proclaiming the death of the rule of reason in the human mind, political events were proclaiming the death of monarchy (and, in Germany, of democracy), or at least the death of the belief that the old systems were viable forms of government for the future, and after the first World War, writers were starting to proclaim (and *express*) the death of meaning in human life. It was a terrible time for all but physicists and mathematicians, for whom it was an exciting time indeed, and it soon became obvious to all those on the artistic and humanities side that, if you were going to be important, then you had to have a theory (an assumption that lives on to this day in the posturings of literary theory, feminist theory, Marxist theory, post-deconstructionist theory, all promulgated by people who haven't the vaguest idea of what a scientific or mathematical theory is). It was a time of universal physics envy.

"Schoenberg and his pupil Alban Berg are the chief representatives in music of a movement called *expressionism*...The subject matter of expressionism is man as he exists in the modern world and is described by twentieth-century psychology: isolated, helpless in the grip of forces he does not understand, prey to inner conflict, tension, anxiety, fear, and all the elemental irrational drives of the subconscious, and in irritated rebellion against established order and accepted forms." — Grout, Donald Jay, *A History of Western Music*, W. W. Norton & Co., Inc., N.Y., 1973, p. 706.

How do you express living in a world in which there are *no values* (meaning: nothing to depend on, nothing that is beyond question)? Answer: by throwing out rules in your art which no one ever thought of throwing out before: in painting, throw out the rule that a painting has to be a *picture* of something (beginning of abstract painting); in poetry, throw out the rule that lines must have a regular meter and that they must rhyme (beginning of free verse); in the novel, throw out the rule that a novel must be a narrative, presented in grammatical sentences, with a plot (beginning of stream-of-consciousness style); in music, throw out the rule that a piece of music must be in a certain key, i.e., must be tonal (beginning of twelve-tone system). So, it is entirely possible that Schoenberg invented atonal music because it is music that gets rid of all "hope", whereas tonal music, no matter how somber, by its very nature always has "hope" (the consolation of tonality). Atonal music is *music without consolation*, and thus exactly expresses the hopelessness and despair that so many people felt in the 20th century. No other music does this.

"All three works [*Three Piano Pieces*, op. 11] show Schoenberg struggling to break free from the functions and hierarchies of the tonal system and the extended, balanced forms it implied, and seeking an inner language, where all certainty is lost and the ego enters into crisis." — Paolo Petazzi, *Schoenberg: The Piano Music*, Maurizio Pollini, Deutsche Grammophon, 423-249-2.

But "all certainty is lost and the ego enters a crisis" can apply to a composer's personal life as well.

"Theodor W. Adorno, the late German philosopher, sociologist and composition student of Alban Berg, has written that [Schoenberg's partly atonal] Quartet No. 2 was 'an echo of a crisis in personal life whose sorrow, hardly ever mastered, brought to Schoenberg's work its full creative weight.'

"The crisis is not revealed by any of Schoenberg's biographers. Its genesis took place in 1906, when Zemlinsky introduced Schoenberg to Richard Gerstl, a painter nine years younger than Schoenberg and a man so withdrawn that he did not sign the front of his paintings, nor did he ever exhibit. Alma Mahler has said that although she knew Gerstl well, she never saw anything of his work. Gerstl lived with the Schoenberg family during the summers of 1907 and 1908; under his guidance, Schoenberg began to paint.

“Gerstl began a love affair with Mathilde Schoenberg and revealed the pain of the ensuing relationship in a number of wild, Kokoschka-like works. Paintings of Arnold, Mathilde, and the couple with their children were followed by a naked self-portrait and finally by a portrayal of his face in a grotesque state of laughter. This was Gerstl’s last work, clearly the painting of a deeply disturbed man. In the fall of 1908, Mathilde left her husband to live with her lover. Several days later, Gerstl gathered his paintings together in a pile on the floor, set his studio on fire, plunged a kitchen knife into his heart, and hanged himself over the burning debris. (Gerstl’s family salvaged fifteen paintings and stored them in a cellar in Vienna where they were discovered in 1931.)

“Gerstl’s tortured relationship with Schoenberg, whom he adored, was similar to Schoenberg’s relationship with Mahler and consistent with the cult of suffering implicit in the Romantic agony that had been cultivated by Byron, Berlioz, and Wagner’s *Tristan*. Coincident with the Gerstl affair, Mahler left Vienna for New York. *It was during this highly traumatic time that Schoenberg tentatively entered the atonal world with the last movement of his Second Quartet.*” — Peyser, Joan, *20th Century Music*, Schirmer Books, N.Y., 1971, pp. 23, 25. (italics mine)

If we still have doubts that Schoenberg wrote music from the basis of feeling, I need only quote a few lines from “The Programme of String Quartet No. 1, Op. 7”, as recorded in the composer’s “Sketchbook No. 1, March 1904-1905”:

“I. 1. a) rebellion, defiance; b) longing; c) enthusiasm.

2. a) feeling of oppression, despair; fear of being engulfed, unaccustomed feelings of love[,] desire to be completely *subsumed* in.

b) consolation, soothing (she and he).

c) recrudescence; feeling of oppression[,] despair... — “Schoenberg, Berg, Webern, The String Quartets: A Documentary Study”, edited by Ursula v. Rauchhaupt, accompanying the 4-CD set *Second Viennese School: Schoenberg, Berg, Webern*, LaSalle Quartet, Deutsche Grammophon 419-994-2.

Yet another example is Berg’s twelve-tone work, *Lyric Suite*:

“...it was, in fact, a woman to whom the *Lyric Suite* was addressed, namely to Franz Werfel’s sister, Hanna Fuchs-Robertin, with whom, in the 1920s, Berg had a secret love affair...but it was not until 1976 that [the work’s] detailed program came to light, when Berg’s hand-written notes for Hanna Fuchs were discovered in a copy of the first edition of the score. From these it is clear that the six movements of this highly expressive twelve-tone work chart the course of this affair...” — Sandberger, Wolfgang, “The String Quartet as the Expression of a Composer’s Innermost Thoughts”, liner notes for *Intimate Letters*, Juilliard String Quartet, Sony Classical, SK 66 840.

So we have some reason to believe that twelve-tone music, *too*, is not the exercise in an abstract grammar that its founder, and his students, at times seemed to want us to believe it was. (Schoenberg was, after all, a professor, and therefore couldn’t risk speaking in plain terms even if he had wanted to — plain terms such as: “The only way I could express what I was feeling was by going to this new kind of music, and what enabled me to get a handle on it, and make more of it, was the system of rules I have come up with.”)

Of course, the leaders of a new movement in the arts have the right to couch their ideas in any terms they wish, including the most abstract and intimidating, and in a time when only those individuals and groups that had *a theory* seemed to have any value, it is perfectly understandable that the early practitioners of the twelve-tone method should attempt to gain followers by arguing for their *theory*. But let us be clear on this: grammar does not explain. We do not learn why Hamlet’s soliloquy is so powerful by being told that “‘To be or not to be’ is an infinitive followed by a

disjunctive conjunction followed by a negative followed by the same infinitive repeated.” We understand and love the music of Bach without knowing much if anything of its structural complexities. What we might call the Structural Fallacy can be expressed as: “It has this form, therefore this form must be the source of its power”.

But we must keep in mind that composers are in the business of applying rules in order to express what they want to express, and so it is natural that when they attempt to explain, or teach, a form of music, they begin with the rules, as, e.g., Webern does in *The Path to the New Music*, a series of lectures given at a residence in Germany in early 1932, 1933. It is much easier, and furthermore one can be more precise, in talking about the rules. But the rules teach us next to nothing about the semantics, just as the diagramming of sentences teaches us next to nothing about the meaning of a novel.

If you are still inclined to say that the rules come first, that we must “obey” the laws of music, then you must explain why just *these* rules and just *these* laws, when there are in fact an infinite number of possible rules and sets of rules governing music. What distinguishes good rules from bad? Can you give an example of each kind of rule?

The rules and laws of music are simply a means of creating more of the same kind of music. The reason that just these were evolved and have remained popular has to do with the evolution of certain types of feeling (in the broadest, highest, sense) in the culture.

Revolutionary composers are, in a sense, hampered by their zeal, by their knowledge that they are doing something that no one has ever done before. It is very easy for them to confuse the excitement of the enterprise with the excitement of the product of the enterprise. Similarly, it is easy for them to be deceived by what might be called the Extrapolative Fallacy: the assumption that because a certain quality in music, e.g., passages that are effectively without a key, is more and more prevalent, that this implies that soon all of music will have this quality.

Counterargument to (2) “Ask yourself...”

“It is sometimes thought that if one can first recognize the emotion or the sentiment represented by the music, then one can end up understanding the music. This is a serious misapprehension... Only when one understands how the music works (that is, consciously or unconsciously, feels at ease with the music) can one perceive the emotion...”

“How does one understand a new style? Not by studying music theory, but the way children learn language, by listening to their parents and siblings. Unlike language, music cannot convey information (like ‘meet me tomorrow for lunch’), so we have only to learn how the sounds are ordered, and not an elaborate vocabulary. We listen until the ordering becomes familiar, and we absorb the style and learn what to expect.”¹

(3) Find an opening

For me, the ice was first broken as far as Schoenberg is concerned by the opening measures of the first movement of the Piano Concerto as played by Emanuel Ax, and then by Maurizio Pollini’s playing of the sixth of the *Six Little Piano Pieces*, op. 19 (*Schoenberg: The Piano Music*, Maurizio Pollini, Deutsche Grammophon, 423-249-2), a piece that is only one minute, eight seconds in length! Later, *The Three Pieces for Chamber Orchestra* seemed to me, even on first listen-

1. Rosen, Charles, “Happy Birthday, Elliott Carter!”, *The New York Review of Books*, Mar. 12, 2009, p. 31.

ing, a remarkably intriguing, haunting work, despite its brevity (the first piece is 55 seconds, the second 36 seconds, the third 45 seconds!)

(4) Memorize a little of the geography

One of the main difficulties with understanding twelve-tone music is that it is so difficult to hear the rows. Yet only once have I seen text accompanying a CD or LP that presented these rows, so that persons who can follow a score when they are listening to the music, can get an idea of the recurrence of the variations on the row. (In passing, let me ask: Why isn't the same done in the program notes for ordinary concerts? Why aren't scores sold at the concerts? To those who reply they want no part of an art form that requires an instruction manual to understand it, I say, what about the efforts that art museums make to provide their patrons with just such "manual"s?)

Keep in mind that we can always see an abstract painting *in its entirety*, and thus get some idea of its structure. We can see, e.g., the "rhythms" in a Jackson Pollock painting. Not so in abstract or any other music. Or in a book, for that matter. Imagine trying to understand an abstract painting if you could only see one square inch of it at a time.

"Learning the geography" also includes memorizing a few phrases so that you can whistle or sing them ("sing along with Schoenberg"). Why shouldn't you hum an atonal tune as you work? Is it possible that the main reason why audiences feel so uncomfortable in listening to a performance of the music, and in applauding afterward — is that they have no shared experience in singing, or whistling, or humming, or playing this music? Is it possible that a concert performance of tonal music is equivalent to a "retelling of the old legends", whereas this is not the case for atonal music simply because the "legends" are all new?

(5) Learn to love the dryness

(5) Atonal music is music which is not tonal, and many of us, if we are honest, will admit that, even after years of effort, when we listen to this music we are sometimes like the health-conscious person who each morning tries to enjoy yet another breakfast of no butter and no bacon and no eggs — we try to enjoy, not the music, but what it is not.

Maybe we can turn the learning process on itself: "Oh, yes, this is the part that depressed me so often. And now, just listen to it! Perfectly understandable. What uplifting music it is!"

Report of Success of Applying the Five Ways

In the winter of 2002/2003, I finally made a breakthrough in my years-long attempt to understand atonal music. The occasion was Webern's *Variations for Piano*, op. 27, as performed by Maurizio Pollini¹. I felt that I could follow the initial tone row, and at least a few of the variations, even though I didn't have the score before me. (The row, however, seems to consist of merely eight notes, not the twelve required by Schoenberg's rule. It is immediately followed by the row played backwards ("crab canon").) But far more important was the last chord of the piece. With that single, barely audible major-sounding chord, which follows a series of repeated, quiet, low notes, the light dawned: I felt immediately that that chord rendered undeniable Webern's reputation as one of the great composers of the 20th century, and I suddenly felt that I

1. maurizio pollini edition, schoenberg: the solo piano music, Deutsche Grammophon Stereo 471-361-2

had gained a fundamental insight into his music. Fortunately, I was able to obtain a copy of the *complete webern*, a six-CD Deutsche Grammophon set produced by one of Webern's greatest admirers, namely, Pierre Boulez — an absolutely essential set of recordings for anyone who wants to understand Webern's music. This set includes Webern's vocal music, and on hearing some of these pieces, I felt that I — at some level at least — understood this composer.

It is important that I emphasize, for those struggling to understand atonal music, that the breakthrough, and my subsequent growing love for Webern's music, did *not* come about as a result of understanding the music “intellectually”, meaning, through study of the scores — study of the structure of the music and the techniques the composer uses, his adherence to or breaking of Schoenberg's rules, etc.¹ The breakthrough was definitely based on an emotional response to the music, and that kind of response is the basis for my continuing pleasure in this composer's music.

Let me mention also that following the initial listenings to the vocal music, I found that I was also able to appreciate (and admire) Boulez's *Improvisations sur Mallarmé*.

Skeptical Comments on Atonal Music

Who Likes Atonal Music, and Why?

On a few very rare occasions, I have met people with no talent for music, no unusual sensitivity or intelligence that I could detect, no particular interest in or knowledge of classical music, who claimed to be moved by atonal music.

I have asked myself, “What do these people have that I don't have?” My answer, slowly arrived at over the years, is not flattering but it is what I at present believe. They have the gift of being excited over the awareness of how exceptional they are if they like this music. “If I like this — *especially* since I don't understand it, and can't begin to say what is *good* about it — that will mean I am far more advanced than those boring suburbanites and others who hate this kind of music. It will be proof of how modern and open-minded I am! It will show that I am truly exceptional. How exciting this music really is!”

I contend that, apart from professionals, virtually no one in the audience for twelve-tone music can follow, by ear alone, and without having previously seen the score and an analysis of it, the rows or the development of the rows. Whereas, e.g., every lover of classical music can follow, by ear alone, the development of the themes of any work in the standard classical repertoire, e.g. Bach, Mozart, Beethoven, Brahms, ... So what those who claim to love twelve-tone music are listening to, and claiming to enjoy, is really a form of mood music (atmospheric music). They enjoy the spell that the music creates. The reader will reply that that is precisely what the majority of the audience enjoys at concerts presenting traditional classical music — the attending this important event with sophisticated members of the upper-middle class, the knowing that one's tastes are at the highest level. But in addition — on the side — there is also a genuine enjoyment of the music itself, as evidenced by the continued production and sale of CDs. Whereas I have never known anyone who bought and listened repeatedly to twelve-tone CDs.

1. “I have played [the *Variations for Piano*] for years never knowing exactly what the tone row was that determines the succession of pitches until I read Tarushkin's pages [in his *The Oxford History of Western Music*] and I can't say I am now in a better position to play, or listen to, the work.” — Rosen, Charles, “From the Troubadors to Sinatra: Part II”, review of Tarushkin's history, *The New York Review of Books*, Mar. 9, 2006, p. 46.

What I am saying is easily tested, of course, e.g., by playing one of the favorite works of a lover of twelve-tone music along with several other twelve-tone works in the same genre (solo piano, string quartet) and asking the person to recognize their favorite.

A clerk at one of the best classical music stores in the San Francisco Bay Area told me in January 2008 that less than 5% of the store's sales were of twelve-tone music or its derivatives.

A Melody Is Not a Sequence of Notes!

The title of this sub-section is a deliberate falsehood aimed at calling attention to, and challenging, the implication, in virtually all articles and books and liner notes on twelve-tone music, that the business of the listener is to follow a sequence of notes (the tone row) and then admire the cleverness of the composer's variations on it (in accordance with twelve-tone rules). This is certainly an intellectual music if there ever was one! It is true that books on tonal music set forth rules governing sequences of notes and chords (the rules of harmony) and do not talk about the expression of feeling, but that is because the musical culture makes such a discussion unnecessary: the composer knows what a range of feeling tonal music can express; he only needs to learn how to make the music do what he wants. But, outside of a tiny group of professionals, there is no such culture for twelve-tone music.

In tonal music, the rules governing its structure are as invisible to the listener as are the rules of grammar in a work of literature are to the reader. Awareness of the rules is precisely *not* the point!

Here as elsewhere, semantics must precede syntax. We ask composers to begin with what they want to achieve — a feeling, to use the crudest term — and then to find the rules to accomplish that. If they come to us with rules, and somehow expect us to admire their work because it implements the rules, our reply should be:

“We are not interested in rules. We are interested in what the rules accomplish in the vast realm of feeling. *The great freedom you claim to be searching for is freedom from putting grammars first.* Let the feelings choose the grammars they need. Tonal, atonal, a mixture of the two — twelve-tone, eleven-tone, ten-tone — it is not an either/or world! “Why tonality as such should be thrown out for good, I can't see,” [Charles] Ives once wrote. “Why it should always be present, I can't see.”¹ We must regard with appropriate skepticism the insistence, by proponents of each avant-garde genre of modern music, that theirs and only theirs is the future of music. ‘The cultish fanaticism of modern art turns out to be not unrelated to the politics of fascism: both attempt to remake the world in utopian forms.’²

“Each chord, each scale, each set of rules for composing music, expresses feelings in a range of feelings, even though we cannot, in words, describe with any precision what this range of feelings is. (Major keys/chords are ‘happy’, minor keys/chords are ‘sad’.) But we can ask listeners having roughly the same amount of experience listening to a genre of music what feelings come to mind when they hear a chord, a scale, a piece from that genre. Make the experiment with twelve-tone music: ask lifelong lovers of classical music what feelings come to mind when they listen to, say, Elliott Carter's string quartets. I believe their answers will be similar.

1. Ross, Alex, *The Rest Is Noise*, Farrar, Strauss and Giroux, N.Y., 2007, p. 132

2. *ibid.*, p. 34.

“And if you tell me that concern with feelings is hopelessly Romantic, hopeless 19th century, and that sensitivity to structure has replaced them, I reply that you don’t know what you are talking about, for even in the most abstract disciplines — e.g., mathematics and physics — feelings are at the center, because they are the guide for intuitions: without an esthetic sense, no mathematician or physicist can achieve great things. So, like it or not, feelings count!

“The insistence on the part of some twelve-tone composers that twelve-tone is the future of all serious music, is nothing more than an insistence on the kind of feeling that the music expresses — music reflecting the state that most artists found themselves in during and after the World War I: a state of boundless anxiety, meaninglessness, loss of all permanent value, and anger at this state of affairs — at minimum, an expression of life as experienced through an incurable case of the flu. All twelve-tone music expresses essentially this same limited range of emotions. If you doubt this, then write a twelve-tone love song [see Exercises 4 through 8, below].”

What Is Twelve-Tone Music a Call To?

Earlier in this essay I spoke of “classical with its call to great accomplishment, to the life of the mind and the highest things (religious or of the upper class); jazz and blues with their call to sex and making trouble for the Establishment; folk with its call to remembering, rock ‘n’ roll and country and western with their call to the life of the loser.”

So let us ask, “What is twelve-tone music a call to?” And my answer is that it is not a call, but rather merely an expression of the feelings listed at the end of the last paragraph of the previous sub-section.

Why Do Twelve-Tone Professionals Have So Little Interest in Explaining Their Music?

Whenever I come across a professional musician — performer or composer — specializing in twelve-tone music, I make a point of asking if they know of any CDs that introduce their music at least to lovers of traditional classical music. I explain that texts alone are not sufficient, because the vast majority of those who might have an interest in twelve-tone music cannot read scores — cannot hear in their mind’s ear the music that a score represents. I point out that most of the music for such a CD could be played on piano if it proved difficult to obtain permission to quote recorded performances by chamber and symphonic groups. In any case, such a CD would have, near its beginning, the playing of those passages from Wagner that are said to have been one of the main inspirations for twelve-tone, which was seen as the inevitable development of what was contained in the Wagner passages. The CD would try to get the listener to experience, through examples, not necessarily solely from the music of Wagner, the *transition in feeling* from late-19th-century tonal music, to highly chromatic tonal music, to music in which tonality was less and less discernible.

But without exception, the professionals have (1) said they knew of no such CDs, and (2) been utterly indifferent to the project of producing any, despite the relatively low cost of such a project.

The question is: Why this reluctance? I think it is safe to say that most public libraries have a CD introducing classical music; furthermore a number of top-rank conductors have seen fit to spend time and effort trying to introduce the young to classical music: the best-known example is Leonard Bernstein in his *Young People’s Concerts* (1958-1972), which are, at this writing, available on DVD. . In New York City, virtually year round, you can find lectures, with musical accompaniment by the lecturer at the piano and/or by outstanding chamber groups brought in for

the occasion, aimed at enhancing the audience's knowledge and appreciation of works by the great composers — an audience largely consisting of music lovers who are *not* professional musicians or teachers. Among the most gifted of these lecturers are Rob Kapilow, Bruce Adolphe, and David Dubal. Yet nothing like this exists for twelve-tone music in New York City or, as far as I know, anywhere else in the country. Why?

The professionals I have personally contacted have refused to answer questions about their music. In 2007, I asked an internationally-known performer of avant-garde piano music for some suggestions on understanding the music of Milton Babbitt. She replied that she was unable to because she didn't understand avant-garde music.

In the indifference of the professionals to making their music more accessible to others, I smell mystification, but also fear. Certainly mystification works in the classical music realm. "Either you understand it (and thus are among the exceptional few) or you don't, in which case there is nothing that we can do for you." Catnip to the musical upper-class! "The fact that this music is so difficult to understand just proves how deep it is. Of course, I *could* understand it if only I heard more of it. I will need to attend more concerts, and buy more CDs." But there is something else going on, and that is the secret fear among the professionals that, if they are honest in their introductory CDs, they will have to admit that the listener's primary job is to follow the algebra — the tone row and its development — or else to realize that the music is no more than background music and, in concerts, prestige-enhancement, for the audience, as I described above.

Tom Wolfe Sums It All Up

Tom Wolfe got to the heart of painting and architecture in the second half of the 20th century with two very funny books, *The Painted Word* and *From Bauhaus to Our House*. What he said about the pretensions of these art forms at the time applies equally to twelve-tone music.

"What I saw before me was the critic-in-chief of *The New York Times* saying: In looking at a painting today, 'to lack a persuasive theory is to lack something crucial.' I read it again. It didn't say 'something helpful' or 'enriching' or even 'extremely valuable.' No, the word was *crucial*.
"In short: frankly, these days, without a theory to go with it, I can't see a painting."¹

"In the great corporate towers [the "glass boxes" without ornament that were designed by Mies van der Rohe and his followers], the office workers shoved filing cabinets, desks, wastepaper baskets, potted plants, up against the floor-to-ceiling sheets of glass, anything to build a barrier against the panicked feeling that they were about to pitch headlong into the streets below. Above these jerry-built walls they strung up makeshift curtains that looked like laundry lines from the slums of Naples, anything to keep out the brain-boiling, poached-eye sunlight that came blazing in every afternoon ... And by night the custodial staff, the Miesling police, under strictest orders, invaded and pulled down these pathetic barricades thrown up against the pure vision of the white gods and the Silver Prince [van der Rohe]. Eventually, everyone gave up and learned, like the haute bourgeoisie above him, to *take it like a man*."²

1. Wolfe, Tom, *The Painted Word*, Bantam Books, N.Y., 1980, p. 4.

2. Wolfe, Tom, *From Bauhaus to Our House*, Farrar Straus Giroux, N.Y., p. 78. Italics mine.

A piano teacher told me that he had attended a lecture by a young composer who tried to explain the theory behind his music. Afterward, a graduate student (of music) in the audience remarked to the teacher that he was unimpressed by the composer's music because the theory behind it was not very deep and, besides, the composer wasn't a particularly good public speaker.

So, in the last analysis, it seems that if you want to understand twelve-tone music, you need to understand the theory behind it, and then you have to be willing and able to take it like a man.

Questions

Question 1: If we are to consider atonal music, in particular twelve-tone music, as merely background music, then why do we need Schoenberg's rules? Anyone with a musical background — music lessons as a child, a lifetime of listening to classical music, perhaps some experience as an amateur or semi-professional musician — could probably, with the help of a professional musician, come up with ideas for, and approximations to, background music for, say, a particular kind of depression — without knowing anything about the tone-row rules! Certainly, if he has seen sufficiently many films, he could do this for a film that was described to him.

Question 2: If, in all honesty, the average music listener really does need the score so he can see the tone row, etc., shouldn't that be said up front, and the score provided to each member of the concert audience, and in each CD of the music?

Question 3: If the twelve tones of the chromatic scale are to be regarded as simply another scale in which music can be composed, why should the rule be imposed that no note can be repeated in a row, since no such rule is imposed in composition in other scales. Why is it not possible to have atonal music in which notes repeat more often than once in every twelve?

Question 4: In a twelve-tone row, what is the difference between a single note, and a single note played twice or more in succession? Is this kind of repetition considered the same as the repetition, within twelve succeeding notes, of the same note? If so, when is the interval between the successive soundings of the note considered so short that the soundings are regarded to be the sounding of a single note?

Question 5: How many notes does it take to establish a key? Many jazz musicians would, I am sure, argue that given any two notes, they could whistle or play a jazz improvisation on them that would have a key. Thus it would seem to be not the two notes that establish the key, but the notes that come after them. And yet, there are many successions of far more than two notes that clearly do not have a key.

“In theory, it is questionable whether atonality is really possible, since any combination of sounds can be referred to a fundamental root; some theorists contend that the effect of atonality results from progressions in which the fundamentals are so difficult to define, or are obscured by such complex dissonances, or change so rapidly, or succeed one another in a manner so unlike that of traditional harmony, that the ear is unable to grasp the tonal relationships that may exist.” — Grout, Donald Jay, *A History of Western Music*, W. W. Norton & Co., Inc., N.Y., 1973, p. 703.

How many notes does it take to establish an atonal “tune”? Probably not just one. How about two? But see the remarks above regarding improvisation. How about three? Or four? Or...?

Certainly it is possible for some people to whistle an atonal tune without their having the slightest idea of the names of the notes, much less the names of the intervals between them. And yet they are able to keep the tune sounding atonal.

Suppose there were a brain disease in which a person could only hear intervals, not the notes at each end. All second intervals would sound the same, all third intervals, etc. We can easily get an idea of what that would be like by “normalizing” any composition to intervals all beginning on the same note. Under these rules, would every piece of atonal music “sound” as tonal as any piece of tonal music?

Question 6: What would the vocal music of Webern and Boulez sound like if the notes were increased or decreased by one or more octaves so as to reduce the pitches to the narrowest range possible? For that matter, would ordinary vocal music sound more “atonal-like” if we “randomly” shifted some of the notes an octave in either direction?

Question 7: To what extent is all classical music merely “background music”? Maybe twelve-tone music is *nothing more* than the background music of the despair, among the non-scientific intellectuals, of the first half of the twentieth century. Perhaps all classical music is just background music for the age it is written in. Thus, if the machine described in the “Psychology” chapter is ever invented, and applied (with suitable calibration) to persons listening to music, it might reveal that 19th century music is an expression of a collage of sensory and intellectual experiences: sound of horses’ hooves, leaves rustling in a forest, crowds on city streets; smell of horse manure, coffee, food, tobacco smoke, perfume; feel of the pavement under a person’s feet, feel of clothes, feeling of daily melancholy; view of distant mountains... Perhaps even Brahms brings us the barnyard smells of his time. And why can’t we regard Beethoven’s music as the background music of his titanic struggles with the world?

And why shouldn’t we have music about the things we hate? For example, suffering from the flu for weeks on end during cold, rainy weather as we wait for the announcement that we have been laid off from our job... Imagine that one day in your youth, you came down with a severe case of the flu that never went away. Every day you wake up with a headache, severe sniffles and sneezing, exhaustion. Furthermore, you have been convinced, since your youth, that there is no God, there is no being you can go to for guidance as to how you should live your life, no being you can go to for consolation, nothing you can hold on to. Now suppose you become a composer. How would you express all this? Isn’t it reasonable that you might search for a form of music which seemed to be without anything to hold on to, e.g., a key? That somehow maybe atonal music was precisely what expressed a world without meaning or hope in which every day you woke up with the flu?

Question 8: Suppose several lovers of classical music were asked to categorize successions of, say, three or more notes by the feeling they suggest. Initially, the categories might be merely, say, “Happy” and “Sad”. Then each category could be refined as each person saw fit: under “Sad” we might have “Melancholy”, “Grief”, “Despair”, etc., and under “Melancholy”, “Fall Melancholy”, “Winter Melancholy”, etc. But it would not be necessary to apply a name to each category: only to decide which successions of notes belonged in the same category. Now the question is, how would the categories of each person correlate with those of the other persons?

Question 9: How do the intervals between successive notes in atonal music compare with the corresponding intervals in tonal music? Specifically, how does a histogram — a frequency-of-occurrence graph — of intervals for a given atonal composer's works, differs from the corresponding histogram for one or more tonal composers' works?

Exercises

Exercise 1: Begin to collect the initial portions of well-known themes from classical, popular, and jazz that do not repeat a note.

Exercise 2: With the aid of the piano or other instrument, attempt to convert well-known themes, songs, etc., into their twelve-tone "equivalents". Suggestion: start with "Joy to the World".

Can at least some of the rules governing the twelve-tone row be applied to tonal music? Try doing this.

Exercise 3: Some 20th century music can be viewed as a distortion of traditional music, just as some modern art can be viewed as a distortion of traditional art.

"The pathos [in Schoenberg's Violin Concerto, Opus 36] is last century's, the language in essence must be last century's too; harmonize the second movement in a purely Brahmsian manner — you have only to move a few notes over a bit — and the theme is happily restored to its true habitat." — Stravinsky, Igor, in Peyser, Joan, *20th Century Music*, Schirmer Books, N.Y., 1980, p. 132.

Attempt to "reverse engineer" — to "English" — some modern music, e.g., some of the twelve-tone composers', to "get back" the traditional "equivalent". In other words, take a theme, or succession of notes, in a work by one of these composers, and change as few notes as possible to make it sound as though it came from a nineteenth-century work.

Attempt to go the other way, namely, take a theme from a nineteenth-century work and change as few notes as possible to make it sound "atonal".

An improvisation in jazz can be viewed as a distortion of the original melody. We must ask ourselves if there is a systematic way to think about music along these lines. That is, just as there are rules governing traditional harmony which leave ample room for composers' ingenuity, can rules be discovered which provide guidelines for the "proper" distortion of a given type, or piece, of music?

The following challenges to twelve-tone composers perhaps get at the essence of this genre of music, and its limitations:

Exercise 4: Write a twelve-tone love song.

Exercise 5: Write a twelve-tone polka.

Exercise 6: Write a twelve-tone march.

Exercise 7: Write a twelve-tone piece that expresses triumph.

Exercise 8: Write a twelve-tone national anthem.

Discussion Topics

Discuss: In order to understand twelve-tone music, you must be in a different state of mind — perhaps a Zen-like, non-self-conscious state of mind — than you are when you listen to and understand traditional music. So the real effort of learning to understand this music lies in learning to enter that state of mind — just as it may not be possible to understand what some painters mean when they speak of “pure color”, “pure form”, if we are in our normal self-conscious state. Understanding *the idea* may not be enough.

Discuss: It is possible that there is a physiological reason why it is so difficult, at least for the vast majority of classical music lovers, to feel comfortable with atonal, and, in particular, twelve-tone, music. Or is the reason simply that it takes a long time to change one’s musical culture, just as it takes a long time (for most people) to become fluent in a foreign language? If the reason is physiological, we won’t know for many years to come, since this cannot be proved with existing theory and measuring equipment. When and if it is proved, it will be the first time that musicians can legitimately speak of the “laws” of music.

Discuss: The only successful composer of twelve-tone music was Alban Berg — “successful” in the sense of reaching a large audience — and the reason was that he knew when not to use the technique. He knew how to present atonal music from the standpoint of tonal music, just as a novelist may describe chaotic events through the words of an articulate narrator.

Additional Thoughts on Atonal Music

You understand a composer when you can imitate his style. More precisely, you understand a composer when you can whistle or hum or play sequences of notes that sound “like” him. By no means does that require that you be able to explain, in music theoretical terms, what you are doing. At the time of this writing, I can whistle sequences of notes that, I believe, sound “like” Webern, but I haven’t the slightest idea of what I am doing.

I said above that atonal — including twelve-tone — music expresses the world of no-values that was experienced by artists in the first part of the 20th century, and it does this by removing the consolation of tonality. Another way it does this is by removing the consolation of *structure*. To the listener who is not an expert on this form of music there is no audible structure to these works. I am sure that experts will tell me that if the listener has the score and a competent exegesis of it in front of him, he will see that there is a great deal of structure in the work. But the vast majority of listeners do not have these aids at hand. And so the music is static: it presents its world and, through the absence of audible structure, offers no hope for the future.

And yet, it doesn’t seem to be difficult to impose a Mozartian structure on a sequence of notes that have no obvious key. One can vary the sequence, one can develop it, one can employ “repetitions” that are not repetitions of phrases but have roughly the same sequence of intervals at different pitches. I encourage the reader to try this by whistling the notes.

(End of “Atonal Music”)

Why is it that the music of the 1700’s is so appealing to the upper class that in any large city or metropolitan area, there are at least one or two radio stations playing it virtually round the clock, yet the poetry of the same period has no appeal whatsoever to this same class?

The function that epic poetry served in ancient times, namely, that of keeping alive the legends of the culture, is carried on in modern times not by poetry but by classical music.

We should listen to classical music in the presence of the smells in which it was originally written and played: horse-manure, straw, wood-smoke...

Why is it that classical music stations in the same listener area never play the same piece at the same time, especially considering the small repertoire of classics out of which these stations construct their daily programs? The programming manager of one station told me that the stations make no deliberate attempt to avoid this; it just seems to work out that way. He said he could recall only two occasions in his career, which spanned several decades, when he did in fact hear the same piece being played simultaneously on two different stations.

What would happen to a person who voluntarily listened to the same piece of classical music over and over, day and night, in an otherwise soundproof room? If this experience eventually brought on a kind of insanity, what kind would it be?

Repeated listenings to the same pieces of classical music make us wish that modern conductors weren’t so determined always to play the piece the way the composer intended. Think of all the different *possible* orchestrations there are for any work you admire: think of the work played on nothing but tubas, piccolos, and snare drums. And we need not limit ourselves to the recognized instruments of the orchestra: we can introduce sounds from everyday life.

The best observation on music and mathematics I ever heard: “Mathematics is music for the mind, music is mathematics for the soul.”

But this applies primarily to the music of Bach. I guarantee you that the person who first made the observation was not thinking of rock n roll or rap or salsa or any of the other losers’ music that floods the airwaves and the music stores. Yet the nature of these popular musical forms is no less mathematical, in the sense of being based on rules governing chord progressions and harmony, than is the music of Bach and, indeed, all great classical music.

No, the observation almost certainly arose from a much more emotional source (whether or not the originator was aware of it) than the mathematical nature of the two disciplines, namely, from the fact that the feelings we often have when we listen to the music of Bach and the feelings

Music

we often have when we are studying mathematics (outside the classroom, or at least free of the intimidation and fear and self-contempt which the classroom seeks to instill in us) — that these two sets of feelings are similar. They both call us to the highest things, to the best our culture has to offer — to the immortal.

Music is to all the arts as mathematics is to all the intellectual disciplines.

It is frequently remarked that mathematicians tend to be gifted musically, e.g., play a musical instrument or have an unusually deep appreciation for music. But *music* here invariably means classical music. The inference is then made that this proves that classical music is somehow mathematical, and that mathematics is somehow like classical music. I prefer a less exalted explanation, namely, that classical music expresses the same kind of melancholy that many a mathematician experiences throughout his life: the yearning after the unachievable, the days, months, years of almost continual frustration and failure in attempting to solve difficult problems, the constant sense of failing powers, the dreadful childhood that drove him into this lonely, austere pursuit. The music is a consolation, and has nothing to do with numbers.

What is the equivalent, in mathematics, of playing by ear in music?

Just as we speak of applied mathematics, so may we speak of applied music, e.g., program music, marches, etc.

A kind of numerical “fugue”, or, rather, series of numerical fugues:

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	...
0		1		2		3		4		5		6	...						
0				1				2	...										
...																			

Each row contains all the numbers 0, 1, 2, 3, ..., only they become successively farther apart: specifically, a multiple of three farther apart in each succeeding row. (The fugue “melody” (0, 1, 2, 3, ...) becomes “slower and slower” without ever stopping.)

Has the fugue concept in music ever been studied from a mathematical point of view? The computer makes such a study far more interesting than it might have been in the past. We can begin by talking about the set of all possible fugues, subject to some limitation in the number of notes per measure, and the range of pitches. Do we have any idea of what we are likely to find in the set of all possible fugues?

A fugue possesses a kind of self-symmetry: when the fugue melody is shifted some number of measures to the right, it harmonizes with the portion of the original fugue melody beginning at that point. And when the fugue melody is shifted some number of measures to the right of that point, it harmonizes with the previous two parts. And so forth. Now for sufficiently trivial melodies, this is not an interesting phenomenon. But it definitely is an interesting phenomenon as the melodies grow more and more complex

In the fifties, there was occasional talk of bringing jazz into the concert hall, but a far more interesting idea is that of bringing classical music into the nightclub. A first-rate jazz club like *Yoshi's* in Oakland, Calif., in which only non-alcoholic drinks are served — although there is an excellent Japanese restaurant on the premises which serves saki and a variety of beers — is ideally suited for performances by solo instruments, as well as by duets, trios, ..., up to octets at the least. Classical music, like drama, always flourishes when access to live performances is made as easy as possible.

What does classical music mean? What does it express? Our problem so far has been that we have wanted too grandiose an answer to this question. The truth is that classical music expresses the odd things, the peripheral things in life — what no one pays much attention to except in the doing. That is why people always say that the answer to the question is “elusive”. For example, classical music may express the opening and closing of a door, over and over again, by a kid. Or the leisurely, absent-minded scratching of one’s behind. Or ants running up and down a tree. Or a room that has just been left empty by a lot of kids and adults who have gone outside to play. Or someone picking their nose. Or a hedge near a curb on a beautiful shaded street. Or someone standing against the mast of a sailboat as the boat races through the waves on a windy, sunny day. Or a stomach growling.

I want to hug
Monica Huggett¹

Jazz

The following observations are based on casual listening to the FM jazz stations in the San Francisco Bay Area, plus occasional visits to local jazz clubs, and on conversations with several local jazz musicians. The ideas set forth may seem tame to members of the jazz avant-garde, yet I feel there is no reason why we should continue to believe that the only choices are the present extremes, namely, on the one hand a technically competent, unoriginal type of jazz which, however, does have an audience, and, on the other hand, an obsessively experimental, endlessly “freer”, type of jazz which, unfortunately, has virtually no audience.

1. English conductor and violinist

With very few exceptions, jazz in our time ('90's) is geriatric music. Television and FM stations that appeal to the upper class — i.e., stations for whom doing the right thing is the very essence of art — pride themselves on the programming of concerts by aging jazz musicians who haven't had an original idea in thirty years.

We old-timers who remember (and participated in the margins of) one of the great decades of jazz, namely the fifties, can hardly contain ourselves in times like these. What we want is *wrongness*, not the soothing of the bourgeoisie; we want a return of the importance of improvisation, which means the return of music that must be listened to, not music that may as well have been designed for airports and dentist's offices. There is nothing more boring than playing in key and in tune. (If I had a band, I would put up the following sign: "Most of the wrong notes we play are intentional; the rest are errors.")

"If you don't make a mistake, you're making a mistake." — Braxton, Anthony, quoted in Setterberg, Fred, "Nice Work If You Can Get It," *Express*, Berkeley, Calif., Apr. 25, 1997, p. 1 ff.

"Once when Father was asked: "How can you stand it to hear old John Bell bellow off-key the way he does at camp-meetings?" his answer was: "Old John is a supreme musician...Don't pay too much attention to the sounds. If you do, you may miss the music. You won't get a heroic ride to Heaven on pretty little sounds.""" — Ives, Charles, quoted in Peyser, Joan, *20th Century Music*, Schirmer Books, N.Y., 1980, p. 150.

So the question is, what can be done to make jazz good and wrong? One answer is, by thinking about improvisation.

Improvisation

What is a good improvisation? It is one that has a beginning, a middle, an end. Furthermore, it doesn't merely "say something", it brings important *News*.

Ways of Improvising

The first order of business is to recognize that there are several ways of improvising, not necessarily mutually exclusive, but each yielding a different result because each arises from a different source.

(1) Chord-based improvisation

This is the traditional way: the musician "makes the changes" in the phrase of years ago, and hopes that something interesting emerges.

(2) Melody-based improvisation

Let us not forget that classical musicians of the 18th century improvised on *a theme*, not (or at least only secondarily) on a sequence of chords. Frederick the Great gave Bach *a theme* to improvise on, a theme from which Bach created *The Musical Offering*.

I don't know what percentage of jazz musicians improvise "to the melody" — i.e., play variations on the melody, which they listen to in their mind's ear — and what percentage improvise to the chords, but I suspect the latter percentage is by far the larger. One reason may be that, in any group with a piano or guitar, the chords are always present, whereas it would be laughable if these instruments, in addition, were to keep the melody present by repeatedly playing it. Nevertheless every jazz musician must ask him- or herself the question: suppose two different pieces have the same chord progression, and are played at the same tempo; is there any reason why improvisations played on these pieces should not be interchangeable? Obviously, the answer is yes if we

require improvisations to be melody-based. It would be interesting to see how the improvisations of jazz musicians changed if there were a way for them to have the melody played repeatedly and privately for them, say, through earphones, the melody being pre-recorded and each player being provided with electronic means for adjusting its key and tempo.

Using the melody as the basis of improvisation should not be confused with the melodic quality of some improvisations, e.g., those of Louis Armstrong (particularly in his youth), Paul Desmond, Dave Brubeck, Clifford Brown, John Lewis, to name a few. Of course, *all* improvisations are melodic: it is just that the melodies in the above cases tend to be of longer duration. We can look upon every improvisation in terms of the number of melodies it contains per thirty-two measures, say. In a typical improvisation by the above players, the number of melodies over this number of measures is small, less than five or so. In the case of other players it is larger, so that sometimes a melody only spans a measure or two, i.e., it only spans the “psychological present” of several seconds. But by no means are these improvisations necessarily inferior to the former. They produce a kind of jazz which exists “only in the present”; they are analogous to novels and TV series which contain so many plots and sub-plots that no matter where you begin or how limited your reading or viewing time, you are almost certain to get a few complete stories.

(3) “Semantics”-based improvisation

It is possible to improvise on the “feeling” of the melody — what we might call its “semantics”. This feeling — a certain kind of joy or sadness — is presumably what gave rise to the melody in the first place, and its character is recognizable *in the melody* by any sensitive jazz musician. It is the *essence* of the melody, and therefore it seems to me to be the best, the deepest, basis on which to improvise. It certainly passes the same-chords-different-melody test described in the previous section. In my experience, it is the most creative basis, meaning, among other things, the least likely to allow the performer to lapse into hackneyed phrases or looking-over-one’s-shoulder virtuosity.

The performer’s task in this form of improvisation is to elaborate on the essence of the melody (not on the melody itself or on the chords), to “expand” on it, to show at least one or two things that the melody “contains” (just as the block of stone contains the statue) — one or two things that the melody “leads to”, “implies”. A good way to implement this form of improvisation might be to memorize the lyrics of the tune, and then to attempt to elaborate, in the improvisation, on the feeling expressed by the lyrics.

The performer’s task here is emphatically *not* that of expressing his or her feelings!

The best example of this type of improvisation I know of is John Lewis’s solo on “Between the Devil and the Deep Blue Sea” (*The Modern Jazz Quartet*, Atlantic 1265). Another excellent example is Don Cherry’s solo on “Jayne” (*Something Else! The Music of Ornette Coleman*, Contemporary M 3551). Other examples include many of Charlie Parker’s and Paul Desmond’s solos.

(4) Improvisation by “turning off the mind”

Another approach is to withdraw from all thinking about the task at hand, all attempts at creating something interesting, all attempts at constructing an improvisation. There are several aids to accomplishing this: alcohol, certain drugs, a constantly blinking light, or concentration on the visualization of a pleasant scene, e.g., blazing white picket fences and clapboard houses, green stakes in a garden, white laundry blowing on the line, the smell of fresh paint, sunlight on sidewalks; the white walls of stucco houses, red flowers in a garden, boats knocking at a dock, the

peace of some summer afternoon when one or two men are working in their yards and women are sitting behind windows in dark, cool rooms, reading novels, and an occasional bird song and the movement of branches in the breeze are the only events taking place in the world. The technique is to concentrate on these things and at the same time to play “recklessly”, i.e., play what you feel like without thinking about it and without the slightest concern for the chords. Indeed, if anything, you try to play as “wrongly” as you can (in my experience this is often required to keep the scene before your eyes) — you deliberately try to make mistakes, letting the chords take care of themselves, you permit yourself to be confident that the chords will find a way to exert the proper control on what you play without your having to consciously worry about them.

When you are able to do this, it sometimes happens that you are able to hear the beat “shifted”, i.e., you hear the measures starting at different beats than they actually do, as in the Lambert-Hendricks-Ross version of “Take Me Out to the Ball Game”, in which “Take me” are sung to two descending introductory notes and then “Out to the ball game” is sung to the notes to which “Take me out to the” is normally sung, etc.

“Take me
Out to the ball game, take me
Out to the park. Buy me
Some peanuts and Cracker-jacks, I don’t
Care if we never get back! For it’s
Root, root, root, for the home team if they don’t
Win it’s a shame for it’s
One, two, three, strikes you’re out at the old ball game!”

The lyrics finish two notes short of where they normally finish.

People sometimes experience this phenomenon for a few moments when they turn on the radio in the middle of a familiar piece which they do not immediately recognize. When improvising in this state, you sometimes find yourself quite naturally playing in a different key from that of the music, or repeating short phrases in “arbitrarily” different keys, and sometimes playing in a different key and with the beat shifted, which, in my experience, always produces improvisations that are far more interesting than the usual ones.

It need hardly be mentioned that there is a definite rightness and wrongness to the above wrongness, even though many listeners would consider the entire improvisation to be that of a person with no ear for music. (Ornette Coleman once remarked that he knew he was onto something in his music when he found that he could mistakes.)

In passing, we may ask how it is that when we turn on the radio and hear a piece we do not immediately recognize, we very quickly learn to hear it in the “right” way — i.e., we do not hear it as a piece of music in which the meter has been shifted one or more beats, as in the “Take Me Out to the Ball Game” example above? (Every piece of music with a time signature of n beats to the measure is potentially n different pieces of music, one for each possible meter shift. A meter shift of $n + 1$ beats, of course, results in the original piece again.)

Along similar lines, we may ask: why is it that, when we hear harmonized music, we all hear it (apparently) as having the same “melody”? Why don’t some of us hear the second voice as the melody, some the third, some the bass, etc.

Are both these phenomena matters of learning, just as, according to Marshall McLuhan, there are primitive people who have to learn how to see the picture in a photograph?

(If parallel universes exist, are there some in which people listen to the same classics we do, except that they hear the piece as shifted one beat, in other universes shifted two beats, etc.? Or is it rather that to have music such as ours is to always hear it start on the same beat?)

(Why not use our audio technology to systematically investigate shifting of beats of recorded solos past their original locations relative to the chords?)

(5) Improvisation by “What interests me next?”

This may be another version of turning off the mind: in it, the technique is to discard all goals, all attempts to create an interesting musical structure, and instead to merely poke along pursuing what interests you, what seems least likely to bore you, with no thought for what has gone before or may come after. Some readers may describe this as the Miles Davis approach.

(6) Improvisation by “sentences”

This way of improvising became clear to me as a result of listening to the glorious trumpet solos of Sidney De Paris, in particular in those on “Wrought Iron Rag”, from the album *Marchin’ and Swingin’*, and “Are You From Dixie?” and others on the album *Wilbur De Paris and His “New” New Orleans Jazz Band*¹.

Here one concentrates deliberately on “saying something” in a succession of “sentences”. These sentences are clear in the solos by De Paris. What the somethings are cannot, of course, be precisely expressed in words, because then there would be no need for the music. But what a solo of this type says, is “*This!* and then *This!* which implies *This!* and that leads to directly to *This!* and now consider *This!*”, etc. Learning to recognize, and play, sentences of this type is excellent practice for any jazz musician.

(7) Improvisation by “rising above the key”

I am not sure precisely what this approach is in formal terms, but I know that it is achieved by beginning an improvisation with a desire to “rise above” the chords, to “leave them behind” though without ignoring them, to carry on the improvisation “somewhere else”, “in the shadow” of the chord pattern of the tune being played, to begin with a fresh slate. It may amount to little more than playing in a different key. In my experience, it does wonders to restore originality to playing that has grown stale in traversing the same old chords. It has “lemon juice”, it usually produces something interesting, possibly for no other reason than that it arises from a new way of hearing what one wants to play.

Another way of describing this approach is that in a typical, present-day improvisation, the soloist plays a melody that is very different from the melody of the tune he is improvising to (that is what improvising means), but he adheres to the chord pattern of the tune, he makes sure he lands on notes of the chords once in a while (if only to assure his listeners that he knows how to “make the changes”). In this new form of improvisation, he not only leaves behind the original melody, but he also leaves behind the original chord pattern, improvising instead to a chord pattern that is related to it (e.g., the same chord pattern in the key that is a fifth above the key of the original tune).

1. both albums have been reissued by Collectibles Jazz Classics and as of fall 2006 were available through www.oldies.com.

(8) Pre-composing

Sooner or later, of course, we must ask the fundamental question: what good is improvisation in the first place? Is it really all it's cracked up to be?

Improvisation is invariably romanticized, even by critics, as the following examples show:

"Jazz, Gene Lees argues, is both the most daring musical form and the perfect paradigm for the process of creativity." — "Meet Me at Jim & Andy's: Jazz Musicians and Their World" (rest of reference not known to me) "Aldous Huxley said that art is created in a state of relaxed tension. You must be relaxed enough to let the dreams flow, alert enough to know what to do with them, grab them out of the incorporeal air as they rush by and turn them into something that others can perceive and be moved by... Making jazz is a very naked thing to do.

"That anyone can do anything at all but stand there in paralyzed amazement when the chord changes are going by, that musicians can function with minimal premeditation and great creativity within the materials of a song's structure, is more remarkable than even the most expert practitioners themselves seem to appreciate. It requires both tremendous knowledge, whether intuitive or acquired, and the physical reflexes of an athlete. Jazz is not only one of the most remarkable achievements in the history of music, it is one of the most striking achievements in the history of human thought." — *New York Times Book Review*, Jan. 1991 (rest of reference not known to me)

The high esteem in which improvisation is held in jazz circles stems from a romantic view of the jazz musician as a man or woman who endures unimaginable suffering in private life, is addicted to drugs or alcohol and sex, but then, when the circumstances are right — good musicians, good crowd — is able to convert this misery into beauty — spontaneously! on the spot! so that, don't you see, all that misery was worth it after all! The romance of improvisation may be the reason why so many jazz musicians are, and were, drug addicts. They must constantly ask themselves, "Will I have it when I get up on the stand? Will I be OK when it counts?" In other words, it is all, or mostly, out of their hands. Contrast classical composition, the composer sitting down, taking pen or pencil or computer keyboard in hand: much more is in his or her control — at the very least, the time to complete the composing!

I say that there is a limit to how well *anyone*, even the best of the best, can compose in real time (to use the computer programmers' expression). The less time there is to think, the more the composer (improviser) must rely on clichés and eccentric variations on clichés, not to mention virtuosity — those bursts of notes which, in truth, no one can imitate, but are often not worth imitating. One of the primary goals of a jazz musician should be to get beyond the romance of the spontaneous. He should face the fact that any form of composition, whether in music or any other art, which prohibits revision runs a poor second to one that does. (No music that is based on improvisation — not even one with as long a tradition, and as elaborate a set of rules, as the music of India — has ever come remotely close to achieving what Western classical music has, with its notes thought out and written down and often revised before being played.) The entire value and interest of improvisation in jazz lies in the fact that the music arises out of the circumstances of the performance — the time, place, the musicians and the audience —, not that it is unpremeditated.

In the fifties and sixties there were rumors that the improvisations of some musicians, e.g., John Lewis, were pre-composed, the implication being that if this were so, the solos were somehow less good. But a good piece of music is good regardless if it was created spontaneously or if it is the result of hours of work. The only hope of ending the dull, mechanical, virtuoso exercises

which constitute modern improvisation and which are threatening to turn jazz into the world's most boring music, is to investigate what happens when we start composing jazz solos.

If I ever return to jazz, my goal will be to make my improvisations sound like Stravinsky's or Bartok's or Webern's might have. In fact — and here let me return briefly to the subject of spontaneous improvisation — I have found that one way to bring Dixieland out of its current petrified state is by attempting to improvise as Webern might have (“atonal Dixieland”) — to break out of tonality, which, at the least, will serve to markedly reduce the clichés that at present constitute the entire substance of this music. (The reader can prove for himself the effectiveness of this technique by whistling such improvisations ala Webern to standard Dixieland tunes). I cannot yet explain, in music theoretical terms, what I am doing but whatever it is, it fits Ornette Coleman's criterion for knowing if you're on to something, namely, when you can mistakes in it.¹ I would describe the technique as one of playing (or whistling) “in the shadow” of the chords of the tune being improvised to, as well as “in the shadow” of the tune itself. This approach can be thought of as simply the next step in the progression of stages of using one's musical imagination to transform a given tune and its chords (the whole idea behind improvisation!). We can think of the listener's task (and enjoyment) being that of seeing (hearing) “how far” the performer has been able to get from the original tune and chords. (Recall the expression from jazz lingo of yesteryear, “Man, he is *far out!*”) To be more precise:

The first step away from the given tune and chords — the simplest transformation — is that of merely ornamenting the melody. Here, the listener's task is easy, since it is easy for him to “see” (hear) the original tune in the ornamented version. He can easily see how the performer transformed the original tune to the ornamented version. In the second step — which is the one almost universally employed in contemporary jazz — the performer accomplishes his transformation by effectively abandoning the melody altogether, and creating a new, more complex melody based on the chords alone. Here, the listener's task is more difficult, because his task is to follow, to “understand”, the new melody while seeing (hearing) the same chord progression as the original tune had. The third step is *not* to abandon the chords as well as the tune, but to perform a transformation that creates a “shadow” of both the original tune and the chords in a quasi-atonal realm. The listener's pleasure comes when he can in effect say to himself, “Yes, by God, you really *can* get there from the original tune and chords. Who would have thought it?” The listener (whether he consciously realizes it or not) has learned something, in somewhat the same way as we learn something when we look at a cubist painting and learn that a guitar, say, can be transformed *that much* and produce a beautiful result.

In the case of my own improvisations ala Webern, I have no idea what the rules of the transformation are that I am using. (But for that matter, I doubt if anyone can describe, on any kind of rigorous basis, what the rules of the transformations are that produce solos in contemporary jazz.) In any case, my lifelong goal of creating a series of *interesting* improvisations on the old Dixieland classic, “China Boy”, now seems to be within reach. My intention is to write some of these down, and this will be done when I can find a musician, or a computer keyboard with score-writing facility, to take down what I whistle.

Finally, let me say that if the reader insists on sticking with the clichés of Dixieland, he can still make something new by always improvising in a key different from that of the tune being played.

1. “From realizing that I can make mistakes, I have come to realize there is an order to what I do.” — liner notes of LP *The Shape of Jazz to Come: Ornette Coleman* (Atlantic 1317).

I have digressed from a discussion of the value of pre-composing jazz solos, to a discussion of a new kind of improvisation. To return to my original subject: perhaps the last word on the subject of pre-composing vs. improvisation should be Paul Desmond's:

"You know the real solution to this problem of playing jazz and composing? The real solution is always to travel with a tape recorder. That way you can keep what's good, you can keep what you need to go farther. And that way you could produce more music in a lifetime of playing jazz than in five hundred years of writing music." — quoted in Shapiro, Nat, and Hentoff, Nat, *Hear Me Talkin' to Ya*, Dover Publications, Inc., N.Y., 1966, p. 394.

Great Jazz Solos

In a time when jazz improvisation is little more than slick virtuosity for know-nothing audiences, it is crucial that examples of truly great improvisation are not permanently forgotten. The following is a partial (and only a partial) list. Each performance has the crucial qualities described earlier in this chapter: a beginning, a middle, and an end, it "says something", it "delivers the News". The order is roughly chronological. My commentaries on some of these performances, written for a young jazz musician, will be found in my autobiography, *Genius Without Genius*, Vol. 4, in the section, "I Am a Tutor Again".

Louis Armstrong's solo on "Struttin' With Some Barbecue", *The Louis Armstrong Story — Vol. 1, Louis Armstrong and His Hot Five*, Columbia CL 851;

Bix Beiderbecke's solo on "Baby Won't You Please Come Home", *The Bix Beiderbecke Story, Vol. III — Whiteman Days*, Columbia CL 846;

Charlie Parker's solos on "Lady Be Good" and "Honeysuckle Rose", *Charlie Parker First Recordings!*, Onyx 221 [and, of course, other solos of his!];

Dave Brubeck's¹ solos on "Give a Little Whistle" and "Over the Rainbow", *Jazz at Storyville: The Dave Brubeck Trio and Quartet*, Fantasy 3-8, later remastered on CD by Fantasy;

Charlie Parker's solo on "Oh, Lady Be Good", *The Charlie Parker Story #3*, Verve, Clef Series, MGV-8002;

Jon Eardley's solo on "Yardbird Suite", *California Concerts or Jazz Goes to High School: Gerry Mulligan and his Quartet*, World-Pacific, PJ 1201;

Omer Simeon's and especially Sidney De Paris's solos on "Wrought Iron Rag", *Wilbur De Paris at Symphony Hall*, Atlantic 1253;

John Lewis' solo on "Two Degrees East, Three Degrees West", *The Modern Jazz Quartet at Music Inn Vol. 1 Guest Artist: Jimmy Giuffre*, Atlantic 1247;

John Lewis' solo on "Between the Devil and the Deep Blue Sea", *The Modern Jazz Quartet*, Atlantic 1265;

Erroll Garner's solo on "Avalon", *Erroll Garner*, CL 535;

Clifford Brown's solo on "Gertrude's Bounce", *Clifford Brown and Max Roach at Basin Street 1956*, Trip, Special Collectors Series, TLP-5511;

Clifford Brown's solo on "Tiny Capers", *Arranged by Montrose*, Pacific Jazz PJ-1214;

Chet Baker's solo on "Love Nest", *Quartet: Russ Freeman, Chet Baker*, Pacific Jazz 1232;

1. When I can decide which of Paul Desmond's numerous outstanding solos on the early albums he made with Brubeck, is better than the others, it will be added to this list.

Don Cherry's solo on "Jayne", *Something Else! The Music of Ornette Coleman*, Contemporary M 3551;

Johnny Griffin's and Thelonius Monk's solos on "Rhythm-a-ning", Riverside RLP 12-262, *Thelonius in Action: Thelonius Monk Quartet*.

Additional Thoughts on Improvisation

Here is the kind of improvisation I want to hear: group plays theme, does the usual dead stop for a few beats to introduce the first soloist, then we hear the sounds of a piece of machinery being disassembled in a garage: a hammer hitting metal, then pieces being dropped on the floor, something round like a hubcap rotating down on its rim, rubber squeaking, more pieces dropping — of course, it must be not just any piece of machinery, and not just any disassembly, but the right piece of machinery, disassembled in the right way.

Stockhausen once said that all music is fundamentally a matter of rhythm, since pitch, too, is a rhythm (frequency of vibration). The wonderful experiments in unusual rhythms, including different rhythms played simultaneously, which jazz musicians such as Don Ellis and Dave Brubeck made in the late fifties and early sixties, seem now to be forgotten, possibly because the sophisticated jazz audiences of those times no longer exist. Given the popularity of the music of composers such as Philip Glass, however, it is surprising that jazz musicians have not resumed their experimenting with rhythms. E.g., what happens when lagging the beat is carried to the extreme, i.e., a performer chooses a slower rhythm on which to improvise, while the rhythm section maintains the original beat? (There will be points at which the beats of each rhythm will coincide, and, if the piece is played often enough, there will be points where performer and rhythm section will be at the same place in the piece, as number theory tells us.)

Every jazz musician should remember that a musical instrument is simply a middleman between the music inside and the music the audience hears. There is no reason why a person with a peculiar skill at working certain types of plastic and metal control devices with his fingers should be singled out for special praise. What counts is the music, not the means — the difficulty — with which it is brought forth. It is a waste of time and effort to attempt to learn to play a given instrument in the keys that are difficult on that instrument. To do so is to spend your time paying homage to the age of manual labor. Far better to spend your time figuring out how to change the instrument so that it is easier to play in all keys (consider the artificial bridge for guitars, ukeleles, mandolins; also Irving Berlin's piano, which enabled him to play in any key using the same fingerings, namely, those for the key of C). If I started playing trumpet in public again, I would make a major effort to buy, or have made, a modified horn with adjustable tubing so that all keys could be played in the fingering of the easiest keys, i.e., in C, D, F, G, B-flat.

If my skill at improvising were to be judged tomorrow, I would want that judgement to be based on the improvisations I can whistle or sing, not on those I can play on recorder or that I used to play on trumpet, since for me whistling or singing comes as close as possible to removing the middleman from the process. It also tends to remove from one's improvisations a reliance on

“finger habits” — the idioms that one repeats again and again because they are easy to play on a given instrument. It will be surprising if, in the next few years, electronic apparatus does not become available which will convert a whistled or sung tone into a tone of the same pitch with the timbre of any of a variety of traditional instruments, e.g., trumpet, trombone, saxophone.

Jazz has always been virtuoso music, and yet if I were to start teaching the playing of it tomorrow, I would have my students, regardless of what instruments they played, take Count Basie as their first master, a man whose ability to do a great deal with the simplest possible means was deservedly legendary. I would have them see how interesting a blues solo they could play using only the octaves of one note; then two notes; then three, etc. Then using only one phrase, with variations in key permitted in order to fit the chords. Then two phrases, etc. Then using notes of no shorter duration than quarter-notes, then no shorter than eighth-notes, etc.

I would also have the student construct a catalog of all the idioms, riffs, standard phrases, in whatever school of jazz the student was studying — the boiler plate from which improvisations are constructed. (It is hard to believe this has not been done already.) A refinement of this project is the following. First, decide on a degree of resolution for the music to be considered, say, a 32nd of a beat: all notes and rests are to be plotted on this “grid”. Second, decide on a key to which all tunes (e.g., “How High the Moon”, “Embraceable You”) and all improvisations are to be normalized. Third, choose a jazz soloist, e.g., Charlie Parker. Fourth, construct, from all available recordings of improvisations by the soloist, histograms of all single notes, then of all successions of two notes, then of all successions of three notes, etc. (A histogram is a representation of the number of times that each of a set of events occurs.) Two successions of the same n notes having different rests between them are to be considered different. Such a project, though rather academic and tedious, might prove interesting in what it reveals about the “improvisational personality” of a soloist.

The resulting collection of histograms makes it possible to view a jazz soloist as a “stochastic process”, i.e., we can view the soloist as a generator of sequences of notes and rests, each sequence having a certain probability, and thus investigate the information content of the soloist’s improvisations. (See, e.g., Shannon, Claude E., and Weaver, Warren, *The Mathematical Theory of Communication*, University of Illinois Press, Urbana, Ill., 1963, pp. 39-45, as well as various popularizations and formal treatments of the theory of fractals and algorithmic information theory.)

Much of jazz improvisation is composed of pieces of “boiler plate” that are modified to some degree and then strung together. We can say (especially in the case of a simple genre like Dixieland) that each phrase represents a feeling or part of a feeling. So it is reasonable to think about collecting phrases into groups such that all the phrase in a group more or less represents the same feeling. Of course, we don’t presume to say what the feeling is.

If we make a set of histograms for each of a representative set of performers on a given instrument in a given school of jazz, we can then design a modified version of that instrument which will be optimized for playing jazz, i.e., some keys will produce, not one note, but a sequence of notes and rests, namely, one of the more common ones in the above histogram. Electric organs in

which an entire chord can be produced by the pressing of a single key, are a primitive example of this idea.

The concept of ordering all musical phrases on the basis of ease of playing on a given instrument, immediately suggests a new approach to teaching that instrument. In essence, as the student learns each phrase, he gets to play it wherever it occurs in a recording of the music. “The more you learn, the more you play”. In the case of difficult passages, he or she may begin by only playing the first note of each measure, then of each beat, etc. I have no idea how such an approach would compare with existing ones, but it certainly should be tried. It would also give the student a magnificent lesson in problem-solving in any discipline.

Exercise for composers (jazz and classical) who know a little about computer programming: select a type of composition, and a number of bits, and see if you can write a composition of that type whose description can be contained in that number of bits. The description might be simply a program that prints out the composition in ordinary musical staff notation, or, if only a few voices are involved, one that actually plays the composition using synthesized sound. If you are successful, decrease the number of bits and see if you can still find a way to represent the composition.

This is an exercise in the informational aspects of composition, where, in general, the greater the minimum number of bits required to represent a piece of music, the higher the information content of the music — but not necessarily the higher its musical value, since the greatest information content occurs when the notes are chosen at random. Recent studies have shown that, informationally, music is located between low information phenomena such as the repeated repetition of one phrase, and high information phenomena such as the random selection of notes. The new branch of mathematics known as “fractal geometry” has provided major insights into the relationship between music, order, and randomness.

A set of exercises for the particularly creative jazz musician: Choose, in advance, a maximum number of notes that you will allow yourself *in each measure*, then improvise under that limitation. Next, choose the maximum number of notes *in the whole improvisation* that you will allow yourself, with the number of notes per measure allowed to vary. Finally — and this is the ultimate challenge — allow yourself only *one note (of any pitch) for your entire improvisation*, your challenge as an artist being to select the best moment, and the best note to be played in that moment.

A musical instrument can be viewed mathematically as a mapping (rule of correspondence) between a set of positions of fingers and feet (and, in the case of wind instruments, embouchures), and notes in the musical scale. Thinking informationally, we may ask, “What is the minimal set of positions (and, possibly, embouchures) that is needed to produce a given range of notes?” For example, “What is the minimal set of keys that are needed to produce all the notes covered by the standard 88-key piano?” The answer is not, of course, 88, since we need only one key to establish each octave, then the same set of keys to establish all the notes within the octave.

“I saw a painting done on brown paper of bamboo, and what was beautiful about it to me was that it was perfectly poised between being just some brush strokes and being bamboo — I could make it go back and forth.” — Feynman, Richard, *Surely You're Joking, Mr. Feynman*, W. W. Norton & Co., N.Y., 1985, p. 265.

Just as it is a good exercise for painters to attempt *not* to see the picture in the picture, but instead to see merely a pattern of lines and colors, so is it a good exercise — as I think John Cage pointed out — for musicians to attempt *not* to hear the melody in the melody, or the harmony in the harmony, but instead to hear the music merely as sound. (Both exercises can be considered examples of removing the culture from an art object.)

What might not the average television viewer learn if he were able to perceive the images and sounds coming from his set simultaneously as electronic impulses — so that, for the first time in his life, he would be shocked by the madness of considering these images and sounds as “real”? The equivalent in film might be a film containing an image of the strip of film itself, including the holes for the projector sprockets, the former being run at a speed just fast enough so that the motion of the events presented would be obvious, and just slow enough so that one could see that the motion was an illusion resulting from a sequence of still pictures.

Wherever there is repetition, there is the possibility of music — at the least, by causing each repeated event to generate a note of a scale. Thus, we might get some interesting music by having each key on a computer keyboard generate a note of the diatonic scale when the key was struck. The question, of course, is whether some assignments of notes to keys are more interesting than others, for a given type of keyboard use, e.g., writing prose as opposed to, say, writing computer programs.

Jazz, like one's native language, is something one learns by doing, not by studying grammar books. Anyone who doubts this need only consider the number of outstanding jazz musicians who learned their art solely from records and by playing in bands. Jazz is an aural tradition; I doubt if any present musical notation can properly represent jazz as it is played (in particular, jazz solos). Written notes, as well as rules of harmony, are merely points of departure. Young jazz musicians whose training has emphasized the importance of classical Western music need to keep this in mind. There is no inherent virtue in giving names to what you already know — you do not become a better novelist by knowing how to do syntax diagrams of the sentences you use.

Maybe we miss an important point when we regard a jazz improvisation as something linear — something whose end we reach only when the improvisation stops! There are times when an improvisation seems to be merely a filling in, i.e., a refining, of an abstract musical “picture” which already exists (this idea becomes more understandable when we realize that often we are listening to a recorded improvisation which we have heard many times in the past). Here, the musical present of the soloist's playing is the entire piece of music — what has already been played as well as what the audience somehow intuitively is coming. (A Greek drama view of improvisation)

I play jazz best when no one is around. (But, of course, I can't prove that, since there are no witnesses.)

“... I was thinking of a plan
To dye one's whiskers green,
And always use so large a fan
That they could not be seen.”

— Carroll, Lewis, The White Knight's song, *Through the Looking Glass*

Whenever I know someone is listening, particularly someone who doesn't like jazz, and who suspects I am not playing it well anyway, I try to play “properly”, try to show that I really know what I'm doing, that I can hit the notes in each chord, and what emerges is as boring and dead as only the merely correct can be.

Exercise: Compose or improvise a great Dixieland solo. This is not a matter of technique. Bix Beiderbecke's beautiful solo on “Baby Won't You Please Come Home”¹ can be played by a second-year trumpet student. Perhaps you will compose the solo from the above-mentioned type of histogram of phrases. How would Charles Ives have played Dixieland? Begin by playing solos in different keys, e.g., a fifth up. Those solos can be standard, traditional, even uninspired, and yet their transposition into keys different from that in which the piano is playing, can make all the difference.

George Gershwin is often praised for having “united classical music and jazz”, but in fact he did nothing more than create orchestral compositions using certain jazz idioms of his time. The only successful uniting of the two forms I know of is Bill Russo's *Three Pieces for Blues Band and Orchestra*, and the reason it is successful is that here there is no attempt to make the orchestra “play jazz” or (even worse) for the blues band to “play classical”. Each does what it does best, so that the effect of the two together is far more dramatic than in Gershwin's case.

It is possible to conceive of music which one cannot play or write down, or even hear in one's mental ear, except for the briefest fragments.

“Heard melodies are sweet; but those unheard
Are sweeter...”

— Keats, John, “Ode on a Grecian Urn”

Some of the foregoing remarks suggest a new kind of jazz which I am convinced would be worth developing. This jazz is characterized by: (1) erratic, “angular”, “unpredictable” solo melodies, at times almost atonal sounding, but occasionally dropping into highly tonal forms ; (2) fre-

1. *The Bix Beiderbecke Story*, Vol. III, “Whitman Days”, Columbia LP CL 846.

quent, almost randomly-placed key changes; (3) the creative shifting (forward or backward) of the solo melody by one, two or more beats (a different matter, I must emphasize, from the traditional device of lagging the beat); (4) unusual time signatures ala, e.g., some early Brubeck, and the Don Ellis orchestra of the early Sixties; (5) occasional use of absurdly, almost comically exaggerated idioms of traditional kinds of jazz — aspects which have been “stretched to the limit” — e.g., lugubrious blues melodies; also insertion of extra beats, honks, moans, snorts. All these devices have the aim of throwing the listener off guard, of keeping him surprised. The following seem to me to contain fragments of these ideas:

(1) Lee Konitz’s solo, as part of a Gerry Mulligan quintet, on “I Can’t Believe That You’re In Love With Me” (*The Genius of Gerry Mulligan*, Pacific Jazz Records, PJ-8, 1960);

(2) Charlie Parker’s solos on “Lady Be Good” and “Honeysuckle Rose” (*Charlie Parker First Recordings!*, Onyx Records Inc., 160 West 71st St., N.Y.C., N.Y. 10023, 1974)

(3) Some of the serious music of Peter Schickele (creator of PDQ Bach);

(4) a live broadcast of a jazz group from Washington, D.C., which I heard, I believe, in the early eighties (I have no other information on the group);

(5) the music of Thelonius Monk;

(6) as a perfect *visual* analogue of the music I have in mind: French director-choreographer Phillippe DeCouflé’s set of surreal dances, “Codex” (on “Alive From Off Center”, 6:30 p.m., July 30, 1989, KCSM, Channel 60, San Mateo, Calif.).

Theme Music for Films and Television

One of the least talked about, yet most perfectly mastered, genres of music in the latter part of the 20th century was theme music for films and television. I am not speaking of film scores. I am speaking of music associated with a character in a film or a TV series.

Consider Ron Goodwin’s theme music for the Miss Marple films that star Margaret Rutherford. Now Miss Marple is a frumpy old lady of great determination and intelligence who has a habit of being a nuisance in the eyes of authority, e.g., chief inspectors of local police departments. Clearly, an appropriate instrument to represent an old lady is the harpsichord. But how to capture the stubbornly individualistic aspect of her character? How about (of all things) a rock n roll melody, in fact a rather simple-minded one, but with good old-fashioned *trills* judiciously placed throughout. Anyone who has heard this theme must agree that it is a stroke of genius.

Equal in perfection is David Horovitz’s theme for the *Rumpole of the Bailey* TV series¹. I cannot imagine any other piece of music better capturing the rumpled, old, profoundly comic character of the hero of the series than this one.

Other examples of the genre worth noting are: Nigel Hess’s music for the Inspector Maigret TV series, music that perfectly captures the essence of Paris (or at least our conception of the essence of Paris); I won’t say that you could throw away Paris and just keep this music, but I could almost say it; Christopher Gunning’s music for the Inspector Poirot TV series that perfectly captures (especially with Stan Sulzmann’s alto saxophone playing in the style of the time) the Moderne spirit of the 1930s, when the series takes place; Dennis Wilson’s ditsy string quartet music for *Fawlty Towers*, the bed-and-breakfast hotel run by Basil Fawlty (John Cleese) whose lawn sign each week seemed to suffer a strange permutation of its letters (“Farty Towels”, “Flowery Twats”, etc.); the geriatric string quintet music for the *Waiting for God* TV series, the com-

1. Few things in this life are perfect, but one of them is this series.

poser of which turns out to be, of all people, Franz Schubert, the music being the last movement of the Trout Quintet; Simon Park's sad little march for the brave, anonymous, doomed officers and men whose job it was to defuse German delayed-action bombs during the Blitz, as portrayed in the series *Danger UXB*; Johnny Pearson's theme for *All Creatures Great and Small*, perfectly expressing the basic joy in life which that series portrays; Patrick Gowers' melancholy, tense music for the *Sherlock Holmes* TV series starring Jeremy Brett; and Anne Dudley's natty '20's music for the TV series, *Jeeves and Wooster*.

Finally, I must mention Henry Mancini's music: "Lara's Theme", in his score for the Orson Welles' film *Touch of Evil*, which perfectly captures the faded beauty of the aging madam (played by Marlene Dietrich) who runs the brothel in the border town where the film takes place; Geoffrey Burgon's haunting music for the TV adaptation of John Le Carré's novel *Tinker, Tailor, Soldier, Spy*, which perfectly captures the cosmic, and at the same time the medieval, dimensions of the Cold War, The same composer's music for the 1981 TV series, *Brideshead Revisited*, captured perfectly the emotional mood of one of the best TV adaptations ever made of a novel. Colin Davis' haunting music for *The World at War* TV series, and Jay Ungar's theme "Ashokan Farewell" for Ken Burns' outstanding documentary, *The Civil War.*, also deserve mention.

Each of the above scores is an example of the job done right, of true mastery of an all-but-ignored genre that nevertheless deserves our admiration.

But not all TV theme music has been at this level. One of the examples of the job not done well is the music for the British detective series *Midsomer Murders*. The music, composed by Jim Parker, features the electronic instrument called the "theremin", and features an eerie, haunted-house theme that is absurdly inappropriate to a series that has nothing to do with haunted houses or the supernatural.

Additional Thoughts

One tune, many verses:
That is how it's done.
Many tunes, one verse is
Probably more fun.

Good beginning of an essay: "Although for me organ music has always been the sound of someone cleaning out the garage, nevertheless..."

Possible names for rock bands: "My Arm Is Caught"; "Cover the Roof".

A place that did not allow the playing of rock music would have to put up a sign, "Rock banned!"

Avant-garde classical music: Composers Being Bad!

Music

Criticism of Charles Ives: *Eccentricity is not enough!*

Long overdue composition: “Requiem for Forgotten Composers”

The next step beyond Cage’s *4’33”* is to electronically delete, from a live classical recording, all the music, so we can just hear the ambient sound, then sell it as, e.g., “Audience Sounds During the Performance of ...”

Project: Play the first movement of Beethoven’s Moonlight Sonata on steel drums or tuned sizzle cymbals.

Project: Write a series of compositions intended to accompany ordinary household duties, e.g., washing the dishes, putting away clothing, sweeping. (There is definitely a better and worse for this type of composition.)

Projects for Mark Morris: Get a bunch of kids aged, say, five to seven or so, and choreograph a dance for them to “The Gigue” from J. S. Bach’s Fugue in G Major, as played by Kevin Oldham on *Kevin Oldham: The Art of the Piano Transcription*, VAI Audio VAIA 1104.

Get a group of slim, beautiful college girls, dress them in amusing, outlandish costumes featuring broad, vaguely geometric patches of red, white, yellow, and maybe a touch of green and blue; at least a few of the girls must wear thigh-high candy-striped stockings — red candy stripes about an inch or so wide on white background — and have the girls dance with joyful abandon to some of the works of Bach.

Project: write a piece of classical music that ends with the ringing of a telephone.

Musicology:

First appearance of boogie-woogie (or at least of a walking bass) in the Western world: the Aria alla Francese in Alessandro Scarlatti’s “Tocatta in D Minor” (early 18th century) (*Alessandro and Domenico Scarlatti, Vocal and Instrumental Music*, The Musical Heritage Society, MHS 1443).

Source of the opening theme of Thelonius Monk’s “Brilliant Corners”: opening measures of Beethoven’s “Grosse Fuge”.

Source of theme of “Irene, Good Night”: fourth movement of Beethoven’s String Quartet No. 14 in C Sharp Minor, Opus 131.

Sources of hillbilly tune, “Little Rock Getaway”, played on radio stations in the early fifties: last movement of Brahms’ Piano Concerto No. 2 and Courante from Bach’s Partita No. 5 in G Major.

Music

Source of “I’m Always Chasing Rainbows”: Chopin’s *Fantasy in C Sharp Minor*

Source of popular song of the fifties, “Nature Boy”: second movement of Dvorák’s Piano Quintet

Source of part of “The World Is Waiting for the Sunrise”: Reynaldo Hahn’s, “Si Mes Vers Avaient des Ailes”

Who is keeping track of all our recorded music? The answer is: no one, at least not in any systematic manner. The layman — and even a few naive musicians — believes that, once a performance has been recorded, it somehow enters an immortal archive, even if the performance does not become popular. But that is not the case. At present, there isn’t even a book or computer data base that *lists* all the recordings that have been made, much less indicates where the originals are (if they still exist) and where they can be purchased (new or used). The fate of this vast treasure-house currently rests with the profit whims of the business executives who run this not-too-profitable side of the recording industry. It is entirely possible that priceless recordings have already wound up in the wastebasket because the new broom, fresh from his MBA training, decided there was no point in keeping a lot of stuff around that has names you can’t even pronounce.

A great way to help children acquire self-confidence while they are taking music lessons is to help them to compose their own tunes, so that, for once, they feel that they are in the driver’s seat when it comes to music, instead of always having to do what others tell them. If the student has a chance to play his composition before other students, so much the better.

Discuss: “Music is a ceremony for the feelings.” Why does it seem to make certain deeply painful feelings more bearable when they can be experienced through the ceremony of music, or, for that matter, through the ceremony of poetry? What is the effect, physiologically, of rhythm and sound, on these feelings?

“Playing music for someone” is a phrase that covers both the performing of music on an instrument and the playing of a recording, and rightly so, since both are merely different expressions of the same impulse. A perfectly good response to the question, “Can you play Bach?”, is to get up and play a Bach CD.

Music