This article was written with a word processing program - View - on a popular British microcomputer (a BBC Master Series micro). It was printed in 'near letter quality' on a Centronics printer. Most probably, what you are reading now is a plain reproduction of the computer printout: this was arranged by the author so that the format would coincide with the one used in the first article of this series, by Chris Cutler. You may notice that there are no italics, here (substituted by underlining), as H80 Centronics printers do not have italics in 'near letter quality' mode (which is standard, instead, in more recent printers). To obtain the same character quality of that article, a more expensive daisy wheel printer should have been used; however, even in that case italics wouldn't have been included: View, in fact, doesn't allow changing daisies during printing (which is standard in more recent word processors). Anyway, despite these limits, you will probably acknowledge that the result is readable: it should be added that the way it has
been produced spared typesetting and proof-reading, which means editing time and costs.

I have been using word processors for about five years: I'm quite good at Apple Writer II and View, and I'm also doing pretty well on more sophisticated ones like WordStar and GEM Write, the latter belonging to the so-called WIMP type of programs (which means Windows Icons Menus and Pointers: what did you think?). Word processors spared me the pain of re-typing, of cutting and pasting, giving me more concentration and control (and time to spend) on my main point of interest in my writings: meaning. Sometimes (as in this case) a word processor helped me to bypass typesetting (or re-typing by friends!), and I'm quite aware of the fact that this general practice is creating unemployment among workers of the typographic industry (about the same that photocomposition did to linotypists, and the linotype to hand typesetters, an almost extinct race of handicraftsmen). So, shouldn't I use word processors? Should journalists refuse to sit in front of their terminals, and go for their old portable typewriters? I think this is the kind of moral problem that cannot be solved by individuals or even by groups of individuals in any society, first and foremost in capitalist society. Commodities and services incorporate exploitment. Shouldn't I buy food? Use electricity? Take buses? Whenever I make a telephone call, am I aware of the number of brave couriers that could be employed instead?

So I use word processors. Most people writing intensively use word processors: teachers, students, journalists, writers (like Gabriel Garcia Marques or Umberto Eco). What interests me most is: does the use of word processors affect the way people write? The general answer is: yes. As I said, when you use a word processor you have more control on style and meaning, form and content: the result is actually what you meant. You move words and sentences until you feel they are in the right place. This helps, for example, if you are writing in a foreign language (as I am doing now); and, to be honest, this helps to lie: you simply
rub out any trace of incompetence, tale-telling nouns, adjectives or adverbs. But this is the proof (semiologists would say) that word processors improve your ability to communicate, as anything that can be used to lie can be used to communicate (and vice-versa). Umberto Eco wrote (on 'l'Espresso', 19th January 1986) that probably word processing will affect style, in that writers will start to think 'in blocks': blocks that can be moved across the text more easily, as there are no particles or adverbs like 'but', 'however', 'then' etc. in the beginning. But there are very little signs that this has already happened: what one normally notices is a cleaner, more synthetic text (and sometimes, on newspapers, a tendency to use capital O's instead of zeros (0)).

664 words (if the 'count' command works properly in my wordprocessor) are quite enough for an introduction to our main point: musical skills and technology. I hope they will be of any use, later. Frankly, I am a little embarrassed in talking about musical skills, for three reasons: first, I wouldn't describe myself (nor anybody would, I doubt) as a 'skilled performer' (Fred Frith once said that what intrigued him in Stormy Six concerts was the contrast between our music and the amateurish way we held our guitars - a compliment to our music, most probably); second, as a composer I've had problems in relating to other musicians much more often when they were 'skilled': which, I learnt, didn't mean at all that they were quicker to understand what should be done; and third, most musicians that I've liked can be described as 'skilled' only in a very broad sense. For example, Hank Marvin wasn't as quick as the average jazz or rock guitarist of his time, and his clean sustained sound relied certainly on technology: however, without him I would never have learnt electric guitar; I didn't go to see the Beatles because they had any 'really good bassplayer' or 'great drummer': actually at that time I thought Brian Bennett to be much more skilled than Ringo (I still think like that), but
that didn't prevent me to love the Beatles (and
Ringo's drum sounds, later); finally, when the
Stormy Six did the supporting act during the
Stones' first Italian tour, I was first surprised
at how unskilled Charlie Watts was: but soon I re-
alised how essential his drumming was to the
meaning of the group's music. That doesn't mean,
of course, that I consider skills as an obstacle
to 'musicality'; on the contrary, I agree with
Chris Cutler that 'the more intangible skills...' are 'qualitative extensions of quantitatively ac-
cumulated physical techniques'. However, I object
that the quality and quantity of the (physical)
techniques involved are far from being absolute:
they are related to an historical context, to
norms and codes in the musical community and
within different musical genres.

Punk rock is an obvious example. It must be
stressed, however, that the proclaimed unskilled-
ness of punk rock musicians does not mean that
they were unskilled at all. To put it simply, a
punk guitarist would refuse the sophistication
implied in Steve Howe's fingering technique (as
well as in his equipment), but would certainly
rely on some basic pub rock guitar techniques,
that can be easily compared to the ones used in
early recordings by the Who, the Kinks, or (later)
the Troggs (see Dave Laing's excellent One Chord
Wonders). Punk rock did actually put an end to the
idea that rock should 'progress' from an early
basic form to a more complex structure, partly
grown up autonomously, partly incorporating 'the
best' of other musical traditions and techniques.
This concept (which branched into different
genres and tendencies, 'to the left' and 'to the
right' of what could be described as the 'progres-
sive rock mainstream') has various origins: 1.
the individual technical and cultural growth of a
generation of musicians; 2. an increase in social
recognition and status compared to 'straight pop'
musicians; 3. a widely accepted metaphor about
youth 'growing up', 'mastering the world', ex-
pressing a rich culture of its own, a complex but
lively culture (compared to the old boring aca-
We shouldn't forget that the wind of punk rock (and post-punk 'new wave') brought a stream of fresh air also into the more radical experimental rock groups; around the end of the Seventies we were all confronted with the loss of meaning of an equation we all had been trying to demonstrate: the more complex, the closer to the complexity of the real world, the better (both aesthetically and politically). We discovered how much this assumption was based on particular audiences (belonging to certain generations), on a particular political and ideological atmosphere, related to certain economic conditions, all of which were rapidly changing if not disappearing. Long suites incorporating atonal, bartokian or strawinskian fragments gave room to short songs; large line-ups dissolved to form trios or quartets; as Fred Frith once frankly observed, 'old' experimental groups were 'recycling themselves'. This again is a proof that what we could call 'the development of production forces' in music is not an invariant: it depends strongly on the context. There is no established criterion for 'musicality', no standard learning process (what about un-learning?), no minimum or maximum dexterity, co-ordination, 'sense of rhythm', 'feel for affective expression'. Although, of course, average standard levels can be specified in a certain genre, at a given time.

Different 'musicalities' exist, which might be distinguished according to 'temperature': we could put Bach's Art of Fugue or Stockhausen's Klavierstueck XI at the low end, Conlon Nancarrow's Music for Player Piano (and Stockhausen's Studie II) some degrees higher in the very cold region, Jimi Hendrix somewhere in the hot region and maybe Cecil Taylor (or Captain Beefheart, or AC/DC?) on top. Although this scale seems appropriate to 'measure' (?) the various degrees of physical involvement in the creation of a musical event, it says nothing about the value of the music itself: the fact that Nancarrow committed himself simply to designing holes on
player piano roll paper, or that George Martin and John Lennon plainly suggested to the sound engineer to splice together verses and choruses from different versions of Strawberry Fields Forever, makes these musics by no means inferior to the lots of meaningless results of misused dexterity and sweat (as exhibited in most of the so-called fusion music).

'We wanted to eliminate sweat from our music: so we first eliminated the drummer'. Far from being a sign of individual antipathy against any particular drummer, this was the aesthetical and political anti-rock manifesto of the italian group Confusional Quartet, emerged in the post-punk scene in Bologna (around 1980). Personally, I do not support it (indeed, Chris), but I find it reasonable. As I find reasonable that millions of people exorcize the din of the industrial societies they live in by listening to loud noisy music, like their ancestors gained power on animals by painting them on the walls of their caves (see Philip Tagg's Reading Sounds - An Essay On The Soundscape And Music, Knowledge And Society), although in both cases 'art' did not eliminate the enemy, but emphasized it. If this can be reasonably accepted, then why not to accept the following: computers are threatening established human relations; in offices and factories people interact with computers more frequently than with other people; even during 'free time' people are offered entertainment at home, rather than in places where they can meet others; a future of diminished physical involvement and of increasing solitude can be predicted for the new generations. Then, isn't it possible that they react by incorporating computers, solitude, repetitive and schematic interactions in their expressions?

I agree that this brings big business for the electronic instruments industry (not much bigger than for Fender, Gibson, Marshall or Ludwig a decade or two ago), and I agree about the risk that 'non-musical' people take important decisions about musical features of electronic instruments. Indeed, it seems that people in the in-
dustry too are worried by this, as a musical misconception in a piece of hardware or software can destroy the sales of a particular product (Mr. Fukuda of Fostex, Japan, told me that they were remaking the firmware for a studio synchronizer according to the critiques of recording musicians). And, as it happens with word processors and printers, there are limits both in the software and in the hardware that, in turn, put limits to what you can expect to do with the system. However, instruments are improving, and by far exceed the limits described by Chris Cutler in his destructive overview of rhythm machines and sequencers, which might look appropriate if we were in the late Seventies and if the only programmable rhythm machine available was Boss' Dr. Rhythm. Velocity-sensitive pads are becoming standard even on budget rhythm machines; both real-time and step programming allow very high resolution: that doesn't mean that you get the same 'feel' of a real drum kit (as on a Stratocaster you'll never have the same 'feel' of a Ramirez), but many various (and new) nuances of expression are available. Good sequencing software (on rhythm machines, dedicated sequencers or MIDIfied computers) offers control over tempo, swing, level, timbre, in such a way that a self-demanding musician can approach progressively his intended result; many things still have to be done, in terms of 'intelligent' software that helps in the process of composition or improvisation, but some examples are already circulating (Bruno Spoerri, from Zurich, recently demonstrated an excellent interactive system, based on a Macintosh computer with MIDI and special software written, if I'm not confused, by Philip Glass' keyboardist Michael Riesman). Of course, much bad music is produced using these instruments: computers are often described as 'amplifiers of intelligence', which means that they can also amplify stupidity. I would add that this is to be expected if intelligent musicians refuse to use them for some kind of prejudice. And, of course, the very nature of computing (of digital compared to analog) pre-
vents some kinds of experimentation that became straightforward with 'old' electroacoustic instruments: if you turn the volume knob on a Vox AC 30 amplifier you move gradually from clean sound to mellow distortion, up to total saturation and maybe feedback; but if you push the master level fader during a digital recording you increase, increase, increase volume, always with a very clean unchanged timbre, and then suddenly... CRASH! Yes: with computer technology you have to 'plan the unexpected'; yes: this is 'colder'. Is it bad?

I was asked to make the 'positive case' of the use of some recent technologies in popular music. I would rather call it the 'non-negative' one. Technology (including human skills) can't be positive or negative in itself. I admit that there aren't many examples of musical use of new technologies that go beyond a pleasant but somehow irritating showcasing of electronic gadgets (see Laurie Anderson's *Home Of The Brave*); however, it took six years from the introduction of the Stratocaster to *Apache*, and six others to *Voodoo Chile*: maybe we should wait, and learn.