

JEAN-CLAUDE ELOY
with
HORS TERRITOIRES

BETWEEN CONCRETE AND ABSTRACT

(About « Gaku-no-Michi »)

First interview of Jean-Claude Eloy with Avaera
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Between concrete and abstract

to Dajuin Yao,
to all the young sound artists from Asia.
May their freedom flourish
and their creativity open the future !

« Gaku-no-Michi » (Paths of Music, or The Tao of music as the Chinese say) aroused a good deal of interest at the time of its premiere in 1978-79, and created an unquestionable impact, as witnessed by the very positive and abundant press coverage at the time.

It is a unique and unusual work, situated outside of all norms, first of all because of its length, lasting for about four hours non-stop. Also, due to its structure that resists compartmentalization between the concrete and the «abstract, constructing a whole dialectic discourse between « spontaneous sound life » and « elaborated sound art ». Its configuration and sound material connect it directly to electro-acoustic, acousmatic music, etc... Later on, during the eighties and nineties, this work was featured in various contemporary music and modern art festivals, both in France and abroad. However, Gaku-no-Michi's « social life » found an existence both within distribution channels for electro-acoustic music as well as on the fringes of these channels. The dimensions and aesthetic of this work have clearly placed it in a category of its own, « elsewhere », confining it to a few events that were considered « unconventional » as well.

Today, Gaku-no-Michi seems to have stirred renewed interest, since, as of the year 2000, several festivals devoted to new technologies, organized by younger generations, have wanted to program it, and have invited Jean-Claude Eloy to be the sound-projectionist. This interest has been associated with a fresh attitude of questioning, coming from young generations of artists, and often from countries that are quite different from a strictly European culture. A world that is undergoing unprecedented mutation : massive democratization of digital art, the development of urban arts, new trends and a new freedom and openness in the use of concrete materials, the delocalization and functional transformation of the concert, whose ritual is searching for a new form of expression ... All of this puts « Gaku-no-Michi » back into the heart of the debate.

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A (Avaera, for « hors territoires ») : *My first question has to do with the work itself and the conditions surrounding its creation. Could you describe the atmosphere in which your work in Japan came to fruition in the late seventies, as well as something about life and organization at the « Denshi Ongaku Studio » (electronic music studio) in Tokyo, then located on the premises of the large NHK radio station (Nippon Hoso Kyokai) ?*

JCE (Jean-Claude Eloy) : I was invited to Japan for the first time in 1976 to participate in the « Pan-Music » festival, organized every year in Tokyo by the Goethe Institute and a committee of Japanese composers and critics. There I produced a concert with my electro-acoustic work, « Shânti », which was starting a sort of world tour at the time. In addition, there were roundtable discussions in Tokyo, Osaka and Kyoto, also organized by the Goethe Institute, surrounding a recording of my work « Kâmakalâ », whose driving force had attracted the attention of the composer Yoshiro Irino (one of the first to have developed the Japanese atonal school after the war). Participating at these roundtable discussions were the critic Kuniharu Akiyama, the German musicologist Dr. Rudolf Heinemann and composers Toshi Ichianagi, Yoshiro Irino and Maki Ishii.

During this stay, I was invited to visit the NHK electronic music studio. Strangely, for a country as technologically on the cutting edge as Japan, this studio had hardly been used. Takemitsu had come to work once, a few other composers had tried it out in the 50's and 60's : Fukushima, Ichianagi, Matsushita, Mayuzumi, Moroi, Yuasa (1). Eleven years prior, Stockhausen had produced « Telemusik » (in an earlier studio, located in another building).

A : *As of the following winter, you were back at work in Tokyo. Describe for us the studio equipment at NHK in 1977 when you started work on « Gaku-no-Michi ».*

JCE : The equipment was « conventional » and used analogic and voltage control techniques. There wasn't much in the way of voltage control, but this small amount was efficient. In particular, there was a very good module for high, low and band-pass filtering, which could be voltage-controlled. Associated with different oscillators, some very sharp, varied, rapid and complex filterings could be obtained. There were four oscillators to begin with, but ultimately, there were as many as ten, according to certain circuit diagrams in my notes. They covered a wide range, from the audible frequencies on the spectrum to very low frequencies that could be used as voltage control. Frequency modulation was thus made possible, in order to create complex blocks. Among these filters, manually controlled by various knobs, there were the very conventional octave filters, thirds filters and pass-bands. But I recall a filter that we referred to as « Mel-band » (melodic bands) that filtered the signal on a gentler curve and produced unusual bands of spectrum cuts, defined in relation to the natural auditive curve of frequencies. There were also two Ring Modulators, as well as an amplitude modulator (Attack-Sustain-Decay) and a frequency divider.

Also, the studio had access to two echo chambers, like in the large radio stations at the time (true reverberations were produced by sending signals into a room that was specifically built for that purpose). The problem was that access to the echo chamber was automatically timed to stop at 9 P.M. sharp. I sometimes had to race to finish mixing... and got « cut off » in the final seconds ! There was also a beautiful echo-plate.

A : *At the premiere of « Gaku-no-Michi », during the concerts in 1978 and 1979, it was said that sound quality was unusual for an exclusively analogic production. Some people were astonished and attributed this result to newly advanced technologies that the Japanese had secretly given you ...*

JCE : There was nothing exceptional on a technological basis. The console itself was in no way impressive and would make the engineers in today's large commercial studios guffaw !

The NHK tape recorders were mono and stereo made by Denon : excellent, but common for the times. I no longer remember its performance level, but we must not have had much better than a signal-noise ratio of about 55 dB, the equivalent of Telefunken. At the most, 60 dB. That made for 12 tape recorders in all : 6 monos, 4 stereos, and 2 stereos with continuously variable speeds - from 9.5 to 76 centimeters per second. And finally, for a terminal, there was a half-inch four-track tape recorder of the same quality and make, to which was subsequently added, at my request, a second half-inch four-track recorder. Thus, I had access to a unit of 26 tracks, grouped into 14 autonomous blocks of one, two or four simultaneous tracks.

If there was a « secret » of any kind, it would have to be in the strict attention I paid to recording levels: a strictness on which I was quite unrelenting ! I had learned this in the early seventies at the WDR studio in Cologne with Volker Müller (sound engineer) and Peter Eötvös (who at the time was assistant producer at WDR). Recordings of work materials must always be maintained at the highest possible dynamic level, just before distortion. On the Telefunken equipment in Cologne, we could sometimes go up to +3 or +4 dB with no particular problem. On the Denon equipment in Tokyo, we could absolutely not surpass +2 dB on the recording level-meters, without running the risk of rapid distortion. But that was the case only when recording levels were accurately gauged and verified and recorders were regularly maintained, their heads demagnetized, etc.... There was no other « secret » with regard to the quality, except for applying these basic principles, also referred to as *craft* ... In Tokyo, when levels went above +3 or +4 dB during a recording session, I started over. If, on occasion, they went below -1 or -2dB, I figured I hadn't reached optimal recording, so I started over. I was rather finicky on this point. This principle applied to everything concerning « materials ». But this was not the case for composed pre-mixings and terminal mixings, with their necessary dynamic fluctuations ; these were produced with the best possible average levels.

A : I suppose that the size that this work gradually grew to during production must have triggered high supply costs.

JCE : The great advantage of radio studios was the large number of tape recorders, unlimited time for mixing, assistance in manipulation... and the quantity of consumable magnetic tapes ! At the end of the production of « Gaku-no-Michi », we counted some 70 large boxes of magnetic tapes and reels on the shelves... all full ! ... At certain points during intense production periods, the assistant had to go and get more boxes of magnetic tapes every day.

« Gaku-no-Michi » brought proof of the great efficiency of analog techniques at a time when these techniques were being disparaged by the holders of digital technology, who were then battling with PDP 10, PDP 11, VAX ... and maddening software programs. What aesthetic could possibly emerge from all that ? What personalities surfaced and blossomed ? The systematic effort to combine realms that were complementary, but dissimilar (pure research and art) would ultimately sterilize creation and gravely hinder creative freedom.

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A : *Apart from the recording studio, did you have any ties with musical circles in Tokyo ?*

JCE : None. But contrary to popular belief, contact in Japan is rather easy. I should also mention that I had shown obvious interest in Japanese culture and what it had to offer at its most authentic. Many people welcomed me in a very convivial and friendly atmosphere : the Studio Director Wataru Uenami, the composer Yoshiro Irino and his wife, the composers Maki Ishii, Toshi Ichianagi, Toru Takemitsu, Kunio Toda and his wife, Yoji Yuasa, and many others. They were all truly charming.

I also frequented now and then a group of young Americans who were settled in Japan and who had studied traditional arts in depth. I rented a room from a young American who was very well informed and integrated into Japanese society (Jane Corddry) and who had written her thesis on « Nô » theater. She was invited by the Kanzé theater troupe to perform a « Kyôgen » spectacle with them on stage, a great honor for a « Gaijin » (foreigner) !

A : *Did you discuss electronics with other musicians in Tokyo ?*

JCE : Absolutely not ! ... This wasn't their area of interest. And electronics at the time were much less popular than today. It's a very odd phenomenon, which is perhaps due to a kind of « deference » that surrounds Occidental classical music in this country. The classical music model that comes from the Occident is too often considered universal and untouchable in Asia. Composers from Japan (in the realms of « learned » music, because in popular music, it is very different today) don't seem thus far to have experienced a strong tie with electro-acoustic music. This is all the more contradictory in my view given that their traditional music, vocal techniques, and especially their use of all sorts of percussion instruments (extremely refined for centuries) should have led them towards the music of timbre and texture that electro-acoustics allow. Even when they are interested in computers, it is still too often in academic terms and without true abandon. An American friend who is currently teaching music and information technology in Japan recently told me how frustrating he finds his students' questions, which are limited to « technological » aspects: « *What software do you use ?* » . « *What machine do you work on ?* ». Never any questions on aesthetics or the *artistic* use of things.

To speak of problems in musical electronics, there were the assistants in the studio, the sound engineer, Tsutomu Kojima, as well as Wataru Uenami, the director, who maintained an ongoing presence in the studio and not for any administrative or bureaucratic purpose. Wataru Uenami was truly interested in the music of today, and wanted to be on site, not to direct or intervene in anything – my freedom was absolutely unquestioned ! – but just to make sure everything was running smoothly, and if needed, help us out with daily problems here and there. In addition, he was in charge of the contemporary music program at NHK, advisor for the symphonic orchestra, and taught off and on at the Osaka arts university. He was also friends with Karlheinz Stockhausen and John Cage.

A : *But what kind of music was being performed in Tokyo concerts ?*

JCE : In 1977-78, at the time of my work on « Gaku-no-Michi », and apart from the omnipresence of commercial music – at times the most aggressive and simplistic ! – the general taste for classical music in Tokyo rather resembled... Vienna at the time of Mozart... or Paris at the time of Poulenc and Satie... or Berlin during the twenties. During my first Christmas and New Year's in Tokyo, Uenami pointed out to me that there were as many as five renditions of Beethoven's Ninth Symphony, performed at different places in the Tokyo area during the holidays, and almost all of them on the same dates ! ...

A : *Did you have any ties with Japanese traditional arts ?*

JCE : As long as I was there, I tried to take full advantage of them, while still working very hard at the studio. I attended « Nô » and « Kabuki » theater in Tokyo. « Bunraku » puppet theater in Osaka. An exceptional production of a very ancient « Gagaku » at the National Theater. And the impressive « Omizutori » ceremony in a temple in Nara. I was invited to attend one of the last nights of the ceremony. You can see the ceremony seated on the floor in a separate room by looking through a finely meshed window. I recall a particularly intense moment, when the monks were circling a great central object, running and shouting, and clacking their « Geta-s » (wooden shoes) on the resonating wooden floor of the temple. At each new circling, one of the monks would take off his « Geta-s » without stopping and continue his circling ... but silently at that point, no longer shouting. After several circles, everything became completely silent, whereas the original action continued, and remained *visually unchanged*. A striking example of a true, perfectly organized « audiovisual counterpoint ».

A : *What about contemporary music ?*

JCE : There were a few concerts of contemporary music. Most frequently, chamber groups, or soloists. Seldom a full orchestra. Japan has many highly-skilled and highly-educated composers and performers. But the majority of the ones I heard in the late seventies were, unfortunately, still too often in the somewhat neutral style of post-Darmstadt modernity ... With the exception of Ichii, Ichiyanagi, Takemitsu, Takahashi, Yuasa, and younger musicians such as Sato (Somei), who had their own very individualized personalities, completely independent.

Obviously, like everywhere else (and still today), there was a strong presence of institutional academicism. This is a worldwide problem for all *learned* music... Let me tell you a brief anecdote to give you an idea of the mentality you might come across ... one that still exists today (even in France, Germany, and elsewhere).

The Kansai Franco-Japanese Institute in Kyoto organized a concert for my electro-acoustic work, « Shânti », for which I was the sound-projectionist. After the concert, during the cast party, a young man approached : « *I'm a composer ... I studied with X ... at the University of Z ... I very much liked your work " Equivalences ", conducted by Boulez ... (long silence) ... At the time, you were still a composer ...* » he added with a very knowing look as he strode off, very proud of himself and his witticism ! At first, it occurred to me to quote Cyrano de Bergerac's « tirade on noses » to him: « *Oh no ! ... It is a bit short, young man ! ...* » But why waste my time ?

A : *This didn't keep « Shânti » from being acclaimed in the late seventies in the United States, Canada, Indonesia, Brazil, Holland, Yugoslavia – as witnessed by the press coverage...*

JCE : ...And even in Hong Kong, with a large Chinese audience in a concert organized in 1978 by an American resident of Hong Kong. This concert was probably the first electro-acoustic music concert of this scope ever to be performed in this city.

A : *And was the work understood ?*

JCE : With no problem. Most of the audience consisted of young people from the Chinese university. Unprepared audiences are often freer and more spontaneous than

educated audiences. Unfortunately, for years (and particularly in Europe), certain *educated* audiences have been, in fact, *indoctrinated*, which is absolutely not the same thing.

A : *What do you mean ?*

JCE : For about fifteen years, everything I have read and heard in France, but also in certain neighboring countries through various publications or trade magazines on contemporary music (including works that allude to musicology, history, social sciences, etc.) has too often resembled manipulation, misinformation, indoctrination, ideology, prejudice. This culture lives in a closed circuit and gradually eliminates all contradictions and differences. It feeds on itself.

A : *But why, for what purpose ?*

JCE : To serve established institutions and the circles that support these institutions. The desire to reign and to occupy territory stems from the planning and policy efforts of these institutions that end up installing ideological, financial and practical hegemonies. In any case, and whatever the original intentions might be, as soon as the practice of contemporary music owes its existence to direct assistance from the greatly centralized powers of the state, the reign of a small group of structures seeking equilibrium among themselves is bound to happen. Such economic dependence can in no way favor democracy. The institution (or small group of institutions) that functions in this closed circuit system is fatally led to surround itself with a sort of propaganda, meant to justify the place it occupies, allowing it to therefore continue receiving state support. An artist no longer has any autonomy whatsoever : his project must *serve* whatever is established. Young artists particularly fall victim to this organized instrumentalization. Any work that runs adrift of the established order of things risks being isolated and marginalized. This trend has been accelerating over the past fifteen years. The sixties, and especially the seventies, were not at all mired in this frame of mind and social situation. Quite the contrary.

A : *You seem to be saying that a work such as « Gaku-no-Michi », for example, wouldn't be able to see the light today, given the present circumstances ?*

JCE : Exactly ! And even more so for works such as « Yo-In », « Anâhata », etc. It was already very difficult for me at the time to follow through on these endeavors. But it was still possible to find a few sponsors who were relatively free in their orientations and policies, who benefitted from a certain autonomy and who were willing to include some unconventional projects in their undertakings. The eight months of full-time studio work obtained from NHK are an example of this. Nobody came by to ask Uenami, the Director, for justification ; institutional ambition and tightly managed policy were not the sole *raison d'être* for this workplace, in spite of its serious, professional standing.

A : *But finding an audience open to productions such as yours, for example, shouldn't this audience receive some special education ?*

JCE : Not necessarily ! An audience that is *motivated*, even if it is a « blank slate » is often more responsive, sensitive and receptive. I don't deny the usefulness of a general education that is rich, multi-disciplined, permanently renewed and open. But an education that is abusively oriented, too enclosed and systematically drawn can only lead to dead ends. For years, I have given a great number of lectures and analytical sessions all over the world and in very different universities and schools : in the United States, Canada, Brazil,

Mexico, India, Korea, China, Japan ... In France, I have participated in many radio programs. I even produced a few. Essentially during the seventies, eighties and nineties. I did it more in the spirit of « communication » than in the spirit of « education ». And this is why I emphasize : education is certainly valuable on condition that it remain strictly in a spirit of openness, from a broad background capable of providing uncensored information that is only slightly *directed* or even not at all. Education must be based on information and communication. It must stimulate curiosity and questioning. This is, unfortunately, not often the case in the area of contemporary music, where indoctrination (conscious or involuntary) has taken over more and more to the detriment of information that is authentically free and diversified. And this has been taking place for a very long time, particularly in areas dominated by institutional academicism. So we end up with a situation where certain audiences, because of their cultures or geographical locations, show greater receptivity ; they escape from systems like ours in Europe that *format intelligence* and that give us so much pride.

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A : Let's go back to « Gaku-no-Michi », to your work in the studio in Tokyo. How intensive was the work ?

JCE : I worked hard, continuously, and so went out very little. What was imperative for me was to push myself further and further into what I wanted to accomplish sound-wise. In cases like this, a complete break from ordinary life and usual routine is extremely beneficial. I was in a faraway country, wrapped up in this project, and all my energy was channeled towards its achievement. Nothing at that point could have stopped or distracted me.

If I left the studio or my room, it was to go to bars, very late. Or public places on Sunday just to relax a little, observe things and *listen* to people : in the street, stores, subways.

The activity that I've always enjoyed in cities of the world where I've lived is to listen to people as much as possible, share in their daily lives, hear them, observe them, see them. In certain big cities like Berlin, New York, or even Seoul, I would sometimes get on the subway and take it all the way to the end, just out of curiosity. Just to see what this or that suburb looked like ! I sometimes got myself into some quite unexpected situations and rather incredible ghettos ... And people live there everyday ! ... What do our cultures represent ? What can our musical practices possibly mean to them ?

A : In an interview made with you in Tokyo by the filmmaker Chris Marker (2), you were quoted as saying : « ... In Japan, there isn't one single type of music, but many types of music. This is the city in the world where the most kinds of music can be heard at once. In everyday life, an incredible amount of atmospheric music is around. We stumble onto speakers everywhere, in the street, on the beach, on lakefronts ... [...] ... I have tried to open my eyes and ears. The sounds of the city seemed so prevalent, so present, that I couldn't resist the pleasure of recording them. Little by little, I said to myself : why not ? This is sound material, even if I didn't invent it. And I took this Japanese urban life as a primary source ... ». Tell us more about this urban material.

JCE : It is true that Japanese (and Asian) urban life has always been marked by this use of sound as an « identifying sign ». When I was working on « Gaku-no-Michi », Uenami explained to me that there were University faculty positions for specialists in « shouts »

from ancient times : merchants and craftsmen of all types, ritual signals, announcements ... Uenami gave me an exceptional recording of shouts made by these specialists.

A : Consequently, the presence of the city of Tokyo in the concrete material of your work does not appear to be a concession to exoticism or tourism, but rather something experienced from the inside, a part of your everyday existence in the city : a major and essential component, which comes across though relatively little in your work, at least in a « direct » sense.

JCE : I wanted the life of everyday city sounds to *innervate* the overall construction of « Gaku-no-Michi » and slip into a number of its articulations, but through a kind of presence-absence that would be more or less masked or veiled. This is the kind of work that only new technologies can approach, which, in my view, is one of the great revolutions of electro-acoustic music. It is this *openness to the outside world* and its *noises* that overturns the idea itself of « music » in the established and conventional use of the term.

A : You are not the only one to have worked in this direction. It is a very natural trend in a whole part of concrete music.

JCE : And that's why « Gaku-no-Michi » has been so warmly received by concrete music musicians. Of course, I am not the only one. Let's just say that everyone has their own approach.

Several times in « Gaku-no-Michi », I used a technique that is well-known by traditional Japanese architects, the technique of « captured landscapes ». If you were to visit temples or palaces or ancient villas in Japan, you would see that by sliding the panels of certain windows, a magnificent landscape opens up, often somewhat mountainous. The window was placed exactly in that spot to capture this particular scenery and bring it into the house, a bit like a painting on the wall. One can then appreciate the contrasts between the complex and natural shapes of the captured scenery and the pure, geometric and abstract structures of panels and materials that make up the house.

A : Where did you go to capture your sound landscapes ?

JCE : Everywhere ! I didn't seek out the most beautiful, or the most spectacular, like a tourist. I was eager for the concrete, and Japanese life is filled with noises of every kind. The assistants in the studio were delighted ! My role in the studio was assumed to be as the « sound architect ». They had expected « abstract » behavior from me (sitting behind the table and calling out directions, with no understanding of practices). On the contrary, I handled everything in the studio (along with them), I invited them to open up the windows, and I took them out for walks ! That a musician from the Occident could be interested in the noises of their daily lives seemed to please them. It was their everyday world and I wanted to give it voice in my music...

I remember, among many other anecdotes, a « sound capturing » that took place in the subway. We were in the middle of the compartment, with our recorders and our microphones, and the intrigued commuters kept looking everywhere : they looked up towards the baggage racks, down to the floor, or even behind each other ... Not for an instant did they suspect that the object of our recording was the noise of the subway itself !

That's what concrete is. And it's an attitude that goes with our times ... because the development of radio and television and the means they have had at their disposal to record and directly capture life, to set down material and later to reconstruct it, have sensitized us to dimensions that simply didn't exist before.

And this development is irreversible : we can no longer go back to where we were. It is a revolution from the inside of the world of sounds, of the *sociology* of the world of sounds. This is what our computer-oriented conductors have always fought against and rejected. They are Puritans. For them, a sound must be a note of music, or not exist at all. For myself (and for more and more young people who agree with me), all the sounds in the world should be available and usable. It's a democratic sound revolution. The declaration of the rights of sounds : « *All sounds are born equal* ». Finished are the class privileges of a virtuoso trumpet compared to a simple, powerful train horn. Finished are the class privileges of the violin in relation to the sound of bamboo striking a stone. Finished are the privileges of a reciting voice as opposed to a voice distorted by a speaker.

In the new acoustic republic, the sounds of the people also wish to participate in the exercise of power. The phenomenon of « world music » and cultural globalization has only reinforced this aspect of things – no matter how reserved or negative one might judge this or that distortion of the industrialization of music. I think that many young people are very sensitive to this aspect of things, both the « sound artists » of modernity as well as the multiple moving trends in popular music.

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A : Some of your recent « Gaku-no-Michi » listeners have said that the monitoring of potentiometers and levels in the larger mixing process is very much « on target ». What they mean is the acoustic monitoring in the whole of the composition, as it was executed during the terminal mixings, seems balanced to the greatest possible degree. This leads us to issues concerning final production in the studio. How did you work in the studio during the seventies ? What was the « Way of daily work » ?

JCE : For these large studio productions, from « Shânti » (1972-73) to « Erkos » (1990-91), and including « Gaku-no-Michi » (1977-78), « Yo-In » (1980), and « Anâhata » (1984-86), I always followed a roughly similar method.

Beginnings are sometimes difficult ... In certain circumstances, I had to struggle to get the maximum amount of hours per day, to get weekend work privileges, or even the keys to the studio with freedom of access both day and night ... But the people in charge at institutions understood that I, myself, was making sacrifices to come and create my works. The Sound Institute in Utrecht was exceptional on this front, offering me permanent access to the large studio, day and night, weekends included, during months and months of solitary, but very intense, output. Hence, my work « Yo-In ». In the Conservatories and Universities (Conservatoire Sweelinck of Amsterdam, TU-Berlin), I had to work around student hours, almost always at night, and without much assistance. In the big radio stations, on the other hand (WDR-Cologne, NHK-Tokyo), it was a dream ... Working all day long with technical assistance. But the assistance was there only for helping with practical matters. As soon as everything was in working order, and if I no longer needed any extra help in handling, they left me in peace, alone with my sounds, for hours : « *we're right nearby ; if you need anything, just push this button to call us* ». This is what Peter Eötvös said to me when he was studio assistant at WDR ... Total respect for individual freedom and for the *intimate* nature of all artistic creation.

In Tokyo, as of the first weeks, the team complained to the Director and asked for a re-organization of hours because, for them, I was working far too much ! ... It's true that these assistants had huge commutes every evening ... Kindly, Uenami organized a rotation system : I used a first team (two people) for a part of the day, and a second team came to replace the first one to continue the work...

A : Describe for us the different stages of work.

JCE : In this type of work situation, I always start off with a first month to test and explore all of the studio's possibilities. Each studio is different. Each one is a grouping of various technologies. Each studio is an instrument. You have to learn how to use it. It has to be discovered.

Afterwards, I enter a first phase of production. I undertake vast research on circuits (3). In the evening, in my room, I draw up these plans, these patch diagrams, to be tried out the next day. These patches are generally achieved with the assistance of the principal engineer and they change constantly as various attempts and results evolve. Every time a patch is satisfactory, I work with it, for hours or days, depending on the degree of its potential, adding numerous parameter modifications to generate the maximum amount of possible sound materials. These materials are then « fixed » onto a support structure. This phase may last for about a month or two or so, depending on how ambitious the project is and the availability of the studio.

Then I proceed to the next phase, which concerns the inter-modulation of materials among themselves, and the first pre-mixings.

Generally, such a phase is not undertaken until a very important intermediary phase has been traversed : re-listening to all the sound material produced so far, trying to combine them, auditively, into various shapes and diverse families. This is to see which materials can be associated (that « mix » well), and which ones resist being combined. The importance of this auditive phase cannot be overstated, as it is the central *kernel* from which the work will take shape, in its orientation, its skeleton and its first formal configurations.

Naturally, I make a lot of mnemonic notes as this exploration progresses, which can last for many days if the production is rich in materials.

It also goes without saying that these work phases can go back and forth. If sound materials aren't developed enough, I'll reconstruct their patches to generate new variations. Raw material pre-mixings might end up being indispensable, etc.

Once these families and groupings are set (like so many kernels in sound galaxies, acoustic proto-planets), I attempt to invent other circuits : this time to transform existing materials, allowing modulation or inter-modulation of materials that have been grouped within the *same family*, so as to enrich, expand and develop it. At that point, the same work is undertaken among *heterogeneous families*.

Here, as well, these stages can clearly go back if need be (towards new generations of materials that seem to be missing) or project themselves forward towards high levels of transformation, for instance, formerly elaborated pre-mixings with an entire temporal or acoustic micro-architecture, etc... In the latter case, a mixing « plan » will sometimes be worked up, including cues for starting and stopping materials, potentiometer movements expressed graphically, etc ... These are like « micro-compositions » that can become the heart of a particularly defined passage.

These stages will follow each other towards levels that go higher and higher and become more and more complex : just as in nature, the universe, the history of life, biology, etc. We ultimately reach a series of very elaborate pre-mixings that succeed in forming true sequences, and constitute important fragments of compositional activity.

This work is always accompanied by frequent re-listening : to the materials, but also (and more and more) to parts of sequences produced, in order to sense which type of event, which development is called for and would seem to flow naturally at such or such point of formal construction. This should be felt, lived and constantly re-lived by perceiving and experiencing what the proper length should be.

The longer the work becomes, the longer the act of re-listening becomes and this must be done with all desirable *concentration*. It is essential to always keep in mind the entirety of the work's shape and its parts as it continues to expand. This is where the mental effort must be more than sustained, and must transcend its usual limitations to produce a type of work that lasts over a long period of time ... a matter that is valid anyway for any composition, including, in my opinion, a developed orchestral work.

A : *But the fact of having to organize your life in a foreign country, having to manage a support system, being faced with new technologies and living on a daily basis in a different linguistic environment : doesn't all this run counter to the profound need to master the part of your work that is the most artistic, aesthetic and, let's say, spiritual (meaning of the mind) ?*

JCE : All of this falls into place quite naturally if work conditions are good, which means : concentration day and night, seven days a week over the whole project. Which also means : the fewest possible distractions and least possible social life ! That is one of the essential keys ! Otherwise, it won't work.

A : *That's where your reputation as a « monk » comes from, a label some people have wanted to give to you !...*

JCE : But in this case, instead of a monk seeking *God*, I'm a monk seeking *sound* !

A : *But it's the same thing, isn't it ?*

JCE : I don't know... maybe... it could be.... But for that, for the quest of sound, for following this « Way », I am willing to go anywhere, to hell if need be, I would just as soon wander into city slums as coop myself up day and night inside a studio on top of the Himalayas !

A : *Let's go back to the description of your work process.*

JCE : Through this process of accumulation, of sequencing levels that are more and more complex, stage by stage, we finally reach the highest levels of this pyramid, which comprises the final realization of the work : the large terminal mixings. These mixings are achieved through various approaches and steps. The articulation points of planned elements, the sequencing of all the pre-mixings and pre-terminals : everything is tried and placed into a first overall plan. Then I try to execute it. This trial (usually quite unsatisfactory) often concludes by a return to preparatory stages of pre-mixings, transformations, re-modulations, even research for new materials. Very often, I have conceived very complex mixings which are too complicated to execute in a single operation, and which would require not only a gigantic console, but also a sort of octopus to operate it ! So, once again, I have to go back to the pre-mixing stage ... Only through proceeding this way do I eventually succeed in determining the final version.

In most cases, particularly for « Gaku-no-Michi », the amount of recording space allowed on tapes ended up by setting the architectural and temporal limits of every overall terminal mixing. The *gesture* of about thirty minutes (roughly 20' to 35') became a sort of reference module, like a natural time vector. It ended just when a second tape recorder would pick up during concert play-back. Hence, the choice of this configuration for concerts : 1 x 4 tracks (1/2 inch) + 2 x 2 tracks (1/4 inch) for « Gaku-no-Michi » (alternating). I used other combinations for other works.

The final stage of these overall terminal mixings came when everything was ready : beginning pre-mixings placed on all the tape recorders, other pre-mixings set aside next to each tape recorder, the general plan finalized and revised, sufficient numbers of assistants lined up and ready to go.

In NHK studio, I never had enough potentiometers for my needs, and the engineer had to recover other modules from neighboring studios. Some of these didn't work with potentiometers, but with knobs instead. You can imagine the amount of gymnastic handling required to manage the whole thing...

We had to *rehearse* these mixings many times, the same as if we were rehearsing a work executed on instruments. At this point, my past as a virtuoso pianist came in very handy ! I piloted the work, one eye riveted on the clock and recording level-meters, the other eye on cues in the « score », my hands going from knobs to potentiometers, signaling to some when to start and to others when to stop and change materials. I managed to do this in Tokyo without needing enormous amounts of pre-mixing stages, thanks to the large number of hands I was able to mobilize. I notified the director when the probable week for overall terminal mixing would take place, and he and the assistants were able to bring in colleagues from neighboring studios who were regulars in electronic studio work.

In general, it took a full week to finish an overall mixing of thirty minutes of previously prepared material: that is, a final reel. For two hours of « Gaku-no-Michi », it, therefore, took four weeks, a month's work. I mixed parts 1 and 2 over about a month in 1977, and the terminal parts 3 and 4 over about a month in 1978. In all, there were about eight full months of production, spread over several periods through 1977 and 1978. A huge amount of work, but it was done with enthusiasm, passion and shared friendship.

A : Did the studio function reliably ? Were you able to make good progress ?

JCE : As for any electronic studio, there were quite a few ups and downs ! I remember once inviting one of my French friends who worked at the embassy, and who knew nothing of contemporary or electronic music. I said to her : « *Come on over to the studio some afternoon : you'll see how we work* ». She spent her afternoon quietly sitting on a chair. And on that day, the studio completely refused to function ! All day long, the engineer, his assistant and I tried in vain to figure out what had gone wrong with the circuits in this overall terminal mixing ! It is true that this circuit had been pushed to its limits. I spent my whole afternoon sending out random potentiometer signals, exclusively from test materials, to try to figure out the source of the problems, and with no success ! As my friend was leaving the studio, she asked me : « *So, is what I heard today part of your music ?* ». I was so upset !

A : Was your relationship with the technical team a good one ? What language did you speak ?

JCE : We spoke English. Everywhere I've worked, my relationship with technicians and technical teams has always been excellent ! Most of the engineers and assistants that I've worked with in these large studios have since become real friends.

The NHK team was very friendly, competent and convivial. Ties of friendship developed. We went out to lunch together. In the beginning, the Director, engineer and technical assistants even gave me advice to help me integrate into daily life, which is not always easy to do in Tokyo.

It was because of this good atmosphere that the production process that eventually became « Gaku-no-Michi » expanded to such an extent, much more than what I had originally imagined ! Stimulation of ideas, practical possibilities in opening up the studio's availability, team solidarity for a project that had become somewhat of an overgrown

« monster », my show of interest for Japanese culture which everyone appreciated and welcomed ...

In the fall of 1978, after two years of frequent and prolonged stays in Japan, having, at long last, finished the last overall mixings of « Kaiso » and « Han », I announced that « Gaku-no-Michi » was finished and that we could start picking up the studio and put away the reels and all the sound-material, when I noticed that the conversation was mounting in excitement among the whole team present (Kojima, Oishi, Minowa, Uenami, and others). I saw a bottle appear out of nowhere and then some glasses... So I asked : « *What's going on ?* ». Uenami started to laugh. Then he said « *Some of them made a bet that you would never get to the end of this project ! Others bet that you would ! ... So they have a few scores to settle !* »

*

A : NHK studio was over-stretched from a technological point of view. It was already the beginning of computer technology. Why did you want to use the « outmoded » techniques, and what were you looking for exactly ?

JCE : Computer technologies at the time offered little room for creative freedom : it's the least one could say ! The race towards technology has always been pushed by people in powerful positions : politicians, technicians, company managers, even the military... Not forgetting the misadventure of the 4X at Ircam, taken into account only by the French army during the eighties for limited series production... These are people who have no sensitivity or motivation whatsoever concerning anything having to do with art !

This ideology, unfortunately, has managed to mobilize a lot of people. Any studio that found itself slightly out-of-date was immediately disparaged by people who had no aesthetic, artistic or real musical motivation. We come back here to what I see as the indispensable separation between *research* and *art*. *Works* (« works of art ») are of no interest to people in power ! They are interested only in « research », in institutional functions, the organization of roundtable discussions and conventions, technological advances that can be promoted more or less scientifically, opening stands in trade fairs and international expositions, finding products that ensure superiority of one state or company over another on the international market, etc. True art ? Authentic culture ? Who bothers with that really ?

Strangely, this relative *technological disinterest* is what allowed me to obtain NHK studio for long periods of time, as well as, later on, the Institute of Utrecht in Holland, where I was able once again to work for months and months, day and night, non-stop, in the creation of « Yo-In ». Moreover, there is no musical creation without mastery of tools and *unlimited access time* to these tools. Just like Beethoven with his music paper !

For this is another parameter that should not be forgotten wherever creation and art are concerned : the enormous amount of work hours that an artist has the right (and the duty) to demand. This problem never came up when the composer worked at home on paper. Beethoven, Bach, Schubert or so many others did not need to get the Director's permission to be able to work for three extra hours ... An « old » technology can be very productive when properly mastered, and when it allows an investment of many months of work. The *unlimited access time* to music paper, feather quills and inkwells is one of the secrets of Beethoven's genius !

A : But all of these modern technologies should be helping in the development of the most complex tasks !

JCE : And in making them more complicated as well ! Nowadays, a composer who must constantly be devoting time to learning new technologies runs the risk of engaging in a never-ending race, never able to gain mastery in every possible situation. This is a *fact of life* in today's world, both exciting and dangerous... because a composer needs a certain stability in his knowledge, techniques and equipment if he is to master practical matters and liberate all of his time and energy for his project, his creativity and imagination.

I, nevertheless, remain completely watchful and fascinated by all new technologies. I have devoted a lot of time in the last ten years to keeping up with this development. There are potential treasures that are undeniable. But there are major pitfalls as well for composers because life is short !

This is the problem that was expressed to me by Maurice Fleuret one day in the eighties, at a despairing moment in his office on the rue Saint-Dominique when he was Music Director at the Ministry of Culture, and the reforms that he was trying to implement were misunderstood and hindered (according to his words) by the Minister (Jack Lang) : « *We were born too late in a world too old : we were born too early in a world too new* ».

*

A : For the achievement of your overall mixings for « Gaku-no-Michi », you have just described a kind of musical mode of execution, with rehearsals, finetuning and finally recording.

JCE : We made different « takes », just like in normal recording sessions. Afterwards, I had to re-listen to all these different takes and choose the best version.

A : When you do a concert with all of these terminal reels lined up one after another, you are creating a kind of ultimate mixing. Isn't there a way today to obtain all of the lengths that you couldn't originally get, and then set this final mixing once and for all ?

JCE : There are some durations that I prefer to leave « open » to discretion, to be freely decided upon during the actual concert, depending on the moment and the audience's ability to concentrate . That's what I did for the sound of introduction, the sound of stillness (in the middle of « Gaku-no-Michi »), and the sound of prolongation. The same goes for certain sequences and transitions. The more articulation points there are and the more « floating » they are, the more open and fluctuating the projection possibilities.

As for techniques, until recently, the ADATs or Tascams didn't allow for such durations, and the DATs have only two tracks. But as of today, this is technically possible on the computer (even a portable one), thanks to the progress made in capacity, reliability and silence of hard drives.

A : Tell me about the concerts now, and first of all, the concert halls and techniques available.

JCE : Our societies are still very primitive when it comes to providing new facilities compared to the real progress made in electronics overall. Facilities have not kept up with developments made in this music, particularly in the realm of learned music. This is where we can measure the deep cultural gaps in our societies. Concert halls are erected for traditional symphonic orchestras, which are not appropriate for new needs. We recover historical sites which can be attractive from an aesthetic point of view, or interesting and

unusual, but which are completely inappropriate from the point of view of acoustics or audience comfort, etc.

A : *You speak of « cultural gaps ». What do you mean exactly ?*

JCE : I am referring to this enormous gap between popular music for the masses and modern learned music that stems from classical music and its successive revolutions throughout the 20th century.

I sometimes take a look at the concerts given by big name pop stars. Recently, I watched a video of some of these very sexual top female names in show business (Beyonce Knowles, Kylie Minogue, etc.) performing in front of gigantic audiences ! Obviously, I will not make any aesthetic or musical comments here ... But when I see the technical sophistication, I have to wonder : who today, *in actual fact*, is on the technical cutting edge ? Is it the Avant-garde ? Or the commercial musical industry ? I am not saying that there is any artistic originality to speak of ... But what strikes me is the abundance, the absolute profusion of technology, and the extraordinary professionalism achieved with massive teams of sound and light technicians functioning with a precision and accuracy that are utterly astonishing ! Of course, there is money. A lot of money ! But money doesn't explain everything.

When I compare this with certain electro-acoustic concerts that I have produced (or attended in many specialized festivals), when I think of some of the unsuitable places I have had to manage in, I really feel as if I were a lone explorer from the twenties who ventured off all by himself to conquer the North Pole ! Drafty, echoing churches, planetariums with mushy acoustics, speakers that disfigure signals, crackling consoles...

A : *I suppose that even though these difficult situations have often occurred, there have also been times when you've had satisfactory techniques at your disposal...*

JCE : Absolutely, and most fortunately ! But one has to be very demanding to produce this type of concert ... and able to impose precise choices for technical equipment, obtain rehearsal times and adequate, decent installations, figure out how to improve the venue itself (environmental noise, temperature, audience comfort, etc.). And all of this is that much more important and necessary when there are works mixing voice and instruments *live*. Without fail, an exhausting tug of war has to be waged with the festival managers. Only experience and the influence of a bit of notoriety eventually simplify a few of these problems.

A : *Where, in spite of everything, do you feel you achieved the best results for your electro-acoustic works, including the ones using soloists, specific instrumental sound material, etc. - besides « Gaku-no-Michi » or « Shânti ».*

JCE : One of my best memories is of the four concerts performed at the « Warsaw Autumn » festival in 1994. It was my first time in Poland and I had been warned about the myriad of practical problems I might run into. But, actually, it turned out to be just the opposite. The organizers were involved and very efficient, particularly Mme Bilinska. Most of the technical team were women from Polish Radio, managed by Mme Okon-Makowska. Everything functioned very smoothly, in spite of the ambitious program (four complete concerts, one of which was nearly four hours long with « Erkos », « Anâhata I », « Galaxies », « Butsumyô », « Sappho Hikêtis », « Yo-In »). The festival had received support from the electronic music studio director at the Technical University of Berlin (Folkmar Hein), who sent his own speakers from the German company D&B, which are among the finest today (along with Meyer). I should add that my solo performers and I

arrive in such festivals totally prepared, trained, experienced and well-versed in the execution of these works. Ever since the beginning of these works, I have chosen exceptional performers : Michael Ranta, Yumi Nara, Fatima Miranda, Junko Ueda, a few others. However, the Polish really impressed me : competence, professionalism, responsibility. All of this with great courtesy and calm. I remember saying to them : « *You are the Japanese of Europe !* »

A : For concerts such as these that are costly to produce, were you able to get any financial support from official French institutions ?

JCE : Not in the least ! ... All of the requests made to the authorities were rejected ; these proposals clashed with our great institutions' foreign tour schedules, which are set up a year or two in advance and consequently take up all possible resources. As my project was already quite advanced, the managers of the Warsaw Autumn festival, not wanting to pull out for my sake, took on the complete cost of these productions. It was a wonderful gesture of solidarity with my music and one that I have never forgotten.

A : For four concerts of unconventional work of this type (such as « Yo-In » and « Anâhata I », that have a lot of percussion materials and require bringing in several soloists from elsewhere, three of whom came all the way from Tokyo), what kind of costs can be expected ?

JCE : Overall, for these four concerts : nearly 100.000 if you count the transportation of different soloists and equipment, rental of specialized equipment, room and board, rehearsals, soloist salaries, the minimum needed for lighting, benefit packages (which vary greatly depending on the country)... But all of these big festivals need cooperation and sponsoring ; without the support of hotel chains, airlines and national radio networks that offer technical teams and certain concert halls, etc., they wouldn't be able to survive !

A : Are there any places in France that have provided good technical support ?

JCE : Of course ! All the concerts that I produced at the Paris Festival d'Automne with Guy-Noël Le Corre, the festival's technical manager. The « Sigma » concerts in Bordeaux. The GRM acousmonium in Paris, particularly for « Gaku-no-Michi » in 1982. This acousmonium is an exceptional tool. It is only regrettable that rehearsal times in Radio-France's concert hall are often limited, and don't always allow for sufficient practice.

A : And what about abroad ?

JCE : The concerts in Tokyo and Tsukuba in 1979 and 1985 with the excellent technique of NHK. There was very good sound-technique as well at the Donaueschingen festival in 1990 (« Anâhata », integral version). It was the first time for me to use the D&B speakers that I mentioned. When I first saw these small-scale sizes, with no 38 cm bass speakers that I was used to seeing anywhere in sight, I expressed my doubts as to their performance. The technicians from Südwestfunk said to me : « *Just wait until you've tried them* ». They were right !... I was quite amazed by their spectrum linearity and power.

A : For a long time, the mere idea of « executing » music such as « Gaku-no-Michi » was rejected by professionals, including a part of the avant-garde, because this work was considered non-malleable at the time of its performance. Today, this attitude is changing. There are even courses now given in « sound-projection ». What do you think of this issue ?

JCE : It is fortunate that there is a newfound understanding of the truth ! I myself received training as a performer. I was a pianist, and spent a whole part of my youth at the Conservatory practicing for hours to master technique, learn repertoire, and take part in competitions. I played Bach, Beethoven, Schumann, Chopin, Liszt, Grieg, Debussy, Ravel, Fauré ... My school peers were Georges Pludermacher, Christian Ivaldi, Jean-Claude Pennetier, and others ... This might surprise you, but I even received my Piano First Prize for the « Bourrée Fantasque » by Emmanuel Chabrier, and my Chamber Music First Prize for Debussy's « Sonata » for cello and piano. My partner was the cellist Alain Meunier. It's a good school. It provides substantial music education. And I am certain that, as I sat in front of a console later on in life in other circumstances, faced with a vast production in an electro-acoustic studio, these trained muscular gestures of dynamics and acoustic flux are what came flooding back to pilot my hands and arms once again. The ear, as well, was trained to follow auditive events, translating them into muscular movements and directing them.

A : *So there are executional parameters in this music that has been qualified for years as "dead" and lifeless by its detractors ?*

JCE : Yes, there are. I must admit, though, that the parameters I worked with as a pianist were much more numerous, rapid, complex in certain ways and infinitely more « virtuoso » than those I have to deal with in a typical electro-acoustic sound-projection in concert ! There is no comparison whatsoever ! But you can still « ruin » an electro-acoustic projection just as you can « ruin » a piano performance. And sound technologies are constantly developing and becoming more complex.

Auditive memory is at work as well. When you perfectly memorize all of the metamorphoses of an acoustic thread, you can better *anticipate*, monitor and reach the best levels at the exact time, while taking into account the resonance of the place of performance, the density of the audience, the set-up, etc... The problem expands if you have one or more soloists to monitor and synchronize. No two concert halls sound exactly alike, and the installation of speakers and amplifiers can go from the best to the worst ! ... All of this needs to be piloted and managed as well as humanly possible for a work that should be learned completely by heart. This is fundamental for a good projection. And memory in electro-acoustics (especially in the type of complexity that I generally favor) is not a memory for « notes », like when I was a pianist ! It's a memory for « acoustic bodies », for « threads », for « textures » and for « texture sequences », for « galaxies of acoustic bodies », etc ... Certain instrumental or vocal soloists have great difficulty memorizing this type of texture, accustomed as they are to memorizing notes, and not complex acoustic shapes. When this is the case, I need to visually provide them not only with a musical score, but with timers as well that I operate for them from the console ... without these they would be lost. Even very experienced musicians get lost.

A : *Why don't you use « click-tracks » ?*

JCE : If performers are standing in one place and don't need to move around, the visual timers allow them to remain at complete auditive attention, and they can thus concentrate better on their performance.

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A : *Tell us about the audiences for « Gaku-no-Michi », their reactions and the way such a work can be received. I have a hard time believing that audiences can stay and listen to something of this nature for so long. Four hours non-stop, that's a long time !*

JCE : The organizers and the established musical profession are the ones that are the biggest obstacles ! Much more than the audience ! Audiences (especially young audiences) are perfectly open. Obviously, concert conditions for presentation, advertising and reception have to be properly designed and carried out. The venue and techniques should be of good quality and appropriate. These criteria are the same for any other artistic function ... In addition, people should be informed about what they are coming to hear. Conditions to get a kind of pre-approval should be created. Some organizers have said to me : « *Who do you think you are ? How dare you expect an audience to grant you so much time ?* ».

It so happens that the most varied and unexpected audiences have proven that this is possible, and without any psychological or ideological pressure at all. Playwrights have had similar ambitions : nobody ever begrudged this of them. Filmmakers have gone up to the same lengths, even longer ; nobody has reproached them of anything. So ?

Once again, it is a problem of musical conventions, which strive with all their might to stay within the framework of inherited traditions. If length is extended, one always wants to justify it by a spectacle of some sort or *visible* theatre. But let *sound* become the centerpiece of a type of theatre without visuals, of an experience extended over the course of a long evening, rejecting customary number-by-number programming... and the musical world loses all sense of direction, criticizing, protesting, saying that this can't possibly be part of it, declaring that such an endeavor can only be « provocation » ! ...

And yet ... I remember the premiere of « Yo-In », at the « Sigma » festival in Bordeaux in 1980. It lasts as long as « Gaku-no-Michi » (3h.40' on average), but with a solo percussionist, spectacular percussion equipment and rather elaborate lighting, in addition to constant and very sustained electro-acoustics. Towards midnight, after the premiere, I spoke to the audience, which wasn't leaving the hall : « *For those of you who would like to stay, I can happily present the integral version of « Gaku-no-Michi », which lasts about the same amount of time as « Yo-In », which means it will take us until around 4 in the morning* ». Quite a number of people chose to stay ... And in the wee hours of the morning, at dawn when the performance was over, we started up a conversation which lasted for a very long time. There were people there from all different backgrounds and ages. They had lived through eight hours of music, and assured me that they had just had a unique experience, one that had lifted their consciousness and opened them up to a new perception of time and matter. I am making none of this up. This is exactly what happened. I would just like to acknowledge it. No more.

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A : *You added a subtitle to « Gaku-no-Michi » : « film without images, for electronic and concrete sounds » . What did you want to get across by this reference to cinema ?*

JCE : I wanted to emphasize a very direct relationship. I've always loved films. I have always and very naturally been steeped in their construction and dimension because, as a child, I used to go much more often to movies than to concerts. Movies were popular culture and much more accessible to us and our financial means. It's a form of culture I like. And I have noticed that the young audiences who willingly accept the dimension of a

work such as « Gaku-no-Michi » are audiences who have been influenced by the temporal dimension of cinema.

As soon as one works in a studio creating a final work that is « set » on a support medium, one approaches a situation similar to cinema. The final « sound projection » of a concert resembles « projection » of a film in a movie theater, even if sound projection calls for *intervention* – through actions taking place live – whereas film projection does not. The fundamental operations of *editing* and *mixing* made in a studio also resemble film techniques.

But it is especially in the realm of general architecture and proportions that I sense a relationship between a work such as « Gaku-no-Michi » and the temporal dimension found in film. « Moments » that are spread out and follow each other, like so many highly individualized zones, are to some degree the equivalent of « scenes » in a feature film, and comprise a theatrical architecture of the same *tempo*, of similar nature. For that matter, I remember an article from the late seventies published in the Montreal press after a performance of « Shânti » : the headline was : « Shânti : cinema for the ears ». For « Gaku-no-Michi », the connection is even more direct : hence, the subtitle that I chose.

A : But would you consider (apart from the absence of images already legitimized by choices you made) a visual accompaniment of some kind for this work, produced and specifically designed for it ?

JCE : That is possible, although there is a considerable risk of altering the perception one could have of it. I considered it, a long time ago, for the concert in Tokyo. Uenami and I even talked about possibly linking it to Ikebana (4) artists who came from a creative school of thought, and who would be capable of building not only a *bouquet* on stage, but also of going farther and building quantities of « *objets d'art* » on stage, slowly, in front of an audience, as in a sort of ritual – objects that could allude to the sounds heard. For example, there is a « Shishiyôdoshi » (5) at the end of part III (« Banbutsu-no-Ryûdo »). And I thought of putting a real « Shishiyôdoshi » on stage. But I quickly gave up on this idea because the link with the sound construction was too weak, and jeopardized the perception of the work, instead of bringing it an extra dimension. It is somewhat the same problem for choreography using an existing musical work, which already possesses its own sound autonomy and personality. How does one *justify* this extra addition ? Few choreographers succeed in this.

A : Do you prefer to remain in this specific « non-seeing » dimension, such as you describe it in your writings in 2001 ? (6)

JCE : I believe that it is much more powerful this way. To adapt something visual that is truly meaningful, I would have needed very sophisticated image and light technology, equivalent in complexity and capability to the sound technology that generated the work.

In fact, we wouldn't be able to reach a true equivalence of the two poles (visual-auditive) without the intermediary of a video studio, and the synchronized projection of a « set » visual work that would be *as elaborate* as the sound work. And I am not sure the result would be worthwhile, as redundancies would be a great risk !

This problem is very difficult. We would need the genius of a Bob Wilson or a film director capable of conceiving types of spectacles where visual action wouldn't be a constant : where passages of interrupted or immobilized visual action could allow an audience to go back into darkness and recover all the fullness of pure sound dimension.

As it happens, this is what I developed right after « Gaku-no-Michi » in my work « Yo-In ». And also, a little later, in « Nimîlana-Unmîlana », the third major part in « Anâhata ». In this case, the participation of the chosen soloists is achieved *intermittently*. Their parts

fit into an electro-acoustic thread, similar to « Gaku-no-Michi ». And their participation is musically justified because all of the sound material, from the origin of the work, has been obtained from a vast sampling, produced on their instruments *before* the creative process of the work was engaged, thus, from its source.

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A : In Tokyo, in 1979, how did Japanese audiences respond to « Gaku-no-Michi » ? Was this work perceived by the Japanese as a « Japanese » work or as a foreign work ?

JCE : The work was very well received. Very focused, attentive listening on the part of a rather large audience. They were surprised as well, and intrigued... because, as I have already said, electro-acoustic culture in Japan was very unusual. And even today, as far as « serious » music is concerned. « Gaku-no-Michi » was received very naturally as the work of a composer who possesses his own identity and his way of being. An *individual*. It doesn't matter if he is Japanese or foreign. It's important to recognize that the performance conditions for this concert were professional : a good concert hall in the heart of Shibuya with an audience for the « Music Today » festival, which was regularly organized by Takemitsu and NHK technical support. A « marathon-concert » had been scheduled (afternoon and evening) consisting of a live performance of « Equivalences », then a conference, followed by listening to a recording of « Faisceaux-Diffractions »... before « Gaku-no-Michi ».

But from this concert, the memory that struck me the most took place towards the end of « Gaku-no-Michi » during the final part, just prior to the sound of prolongation : that is, the part that evokes Hiroshima. This part ends with a gradual juxtaposition of modulated layers around the Japanese National Anthem (« Kimigayo »), very slowed down, transposed to the bass registers, thus taking on a dark, dramatic, oppressive color. The audience was visibly tense, very quiet and still.

At this point, two Japanese women came up close to the console and kneeled in silence. I was very upset because I could see they were crying. Holding back my emotion was very difficult. It was overwhelming for me ! Although concentrated on the sound-projection, I was deeply touched. I almost wanted to present my apologies and say to them : « *I didn't mean to do this ! I didn't mean to upset you this much. I didn't mean to awaken your old wounds to such an extent* ». But what can one really do ? This work is what it is. This is how I conceived of it and this is how I created it. It was at a time when we, as Westerners, still had what a Japanese friend of mine qualified as the Occidental « Hiroshima complex ».

Shortly after this passage, I arrived at the « sound of prolongation », in its very contemplative fullness. I closed my eyes and listened closely. After a long while, I opened them again ... and at that point, I saw these two kimono-clad women slowly rising to their feet ; they turned to me with a calm smile and a slight nod to make sure I understood it was a sign of respect and gratitude. I have never forgotten this scene ! It always comes back to me at that exact moment during every concert of « Gaku-no-Michi ».

A : So, you have evidence that the most advanced modern music and the deepest emotions can still sometimes come together.

JCE : There are many human emotions, a whole scale of emotions going from the most straightforward of this type to the most refined, secret and hidden aesthetic emotions. An artist must attempt to cover the whole gamut of emotions. But it is true that a work of art

has no meaning if it doesn't touch the individual in his/her sensitivity through many different channels.

A : *But why did you choose this particular musical gesture to conclude « Gaku-no-Michi », and how did this idea occur to you ?*

JCE : In 1978, at the end of the summer, I had reached the end of the whole compositional process that had lasted, off and on, for nearly two years. Thousands of sounds had been produced, worked on, transformed, used or rejected, assembled, modulated and re-modulated, mixed, etc... I was in need of a strong, conclusive, dramatic gesture... Because this final part had become the part that evoked the tragedy of Hiroshima, and I couldn't leave this musical form without achieving a powerful gesture.

It was my habit to leave the studio at around 9 P.M. During this last period of time, I was staying at the hotel and I usually had a quick bite to eat before going back to my room to prepare for the next day's work in the studio. I would often pore over my notes until late into the night, jotting down ideas about new patches to look into or spotting unused materials that could still be developed or associated and inter-modulated. All this daily and nightly work allowed me to arrive at the studio the next day with new projects in my mind, gather my strength and then use my work time as advantageously as possible. To create a bit of presence in my hotel room, I often left the television on. Some programs, like NHK programs, finished with the national anthem ... That evening, the Japanese anthem particularly struck me. It's a simple melody, both pentatonic and tonal, almost commonplace, but still touching and effective. As is often the case with national anthems, the « Kimigayo » has a certain majesty.

In this particular case, I was looking for a strong gesture with dramatic contents, one that would contrast with all of the preceding grand architecture, without so much as clashing with it or destroying it. A « contrast » that would arrive, in fact, like an outcome. And this anthem came to me suddenly as this « sound object » that I was seeking in vain everywhere else.

A : *You seem to be trying to justify the use and power of a type of music whose contents and functions you have denounced elsewhere, specifically in your writing about the elimination of applause at concerts (7).*

JCE : It's true that I have talked about the existence of ideological music as the music of *indoctrination* and *manipulation* of the masses. I maintain this position. However, this music exists outside of me, and its *power* exists. And if this power exists, then I have the right as well to exercise « power » upon this music, in order to divert it from its original meaning, by transforming it. Moreover, emotion comes not from the melody itself, but from its relation with cultural symbols.

This goes back to Gilbert Rouget's analyses in his book « Music and the trance » (8). It isn't this particular ritualistic music with those particular melodic contours, or these specific rhythms with those specific articulations that *create* a situation of bewitchment or magic, of ritual or possession. It is the cultural link between this fragment of music, which is elaborated and identifiable, and the ritual that is associated with it. If I dramatically transform this acoustic and « cultural identity », I will then be altering the customary link which unites it to its symbol. I will be modifying the connotation of the ritual. I *remodel* its power.

A : *In spite of that, you still use this music by playing on its social and cultural dimension, or « cult-ual », we could almost say in this case ...*

JCE : ... But to transcend it ! And to redirect it towards something else. I don't use it directly, at face value or according to its *conventional criterion*. Through an acoustic transformation that I impose on it, I place it in another context, in a meaningful contradiction. This anthem, which is in praise of the emperor and the nation, turns into funeral music. This is entirely different. And it fits into the whole approach of « Gaku-no-Michi », which often transforms sound signals : aggressive political speeches turn into cicadas, a « Kamikaze » chant is transformed into a peace song, subway buzzers become sustained threads, like « shô-s » ; etc.

A : *That means that, on top of the notion highlighted by Gilbert Rouget of « ritualized code » situated outside music, you are adding a specifically musical dimension ...*

JCE : ... which is also *codified*. In this case, the first « code » (praise, celebration, embodiment of the nation) is recognized and instrumentalized through a second very established code (slow, somber, funeral music) : hence, a contradictory encounter.

But let me go back to that particular evening ... The next day, I immediately asked the sound engineer to find a copy for me of the official recording of « Kimigayo » used at NHK. Once it was taped, I first tried different modulations, filterings, superimposed transpositions ... None of the results really pleased me. So I went back to the original material and simply tried to slow it down considerably. I think I went as far as two octaves below ... And at that point, as soon as the first sounds came out of the speakers, I saw the whole team freeze ! Their facial expressions were set ... Something was happening. I must admit that this anthem, when slowed down, takes on unusual power. This was indeed the gesture that I had been looking for.

Of course, subsequently, I enriched it all with an ascending development, in stages. I added a sliding vocal sound of Samourais lamenting a lost battle. I reworked it and made it thicker. Then I added a few fragments from the anthem : broken, transposed, modulated, chopped, in pieces – like « tattered shreds ». A little like we see in certain movies where defeat in battle is symbolized by torn flags, reduced to rags. All of this gradually builds and dissolves into a kind of faraway « choir », a rather vague « murmur »...

A : *If I follow you correctly, we reach a kind of cadenza-gesture, a sound action indicating conclusion.*

JCE : That's more or less the case, but not completely... Because what interests me, through this work, is transcendence. The « Path » must succeed in signifying and *acoustically materializing a place beyond the events and antagonisms* that the whole journey of « Gaku-no-Michi » represents. A journey that has been *already traversed* by the time we reach this point in the global form. Thus, I cannot end the work on somber, deep red colors, which are still too prevalent in sound drama.

This is why the last sound of the anthem will lose itself in an entirely different sound, a brighter, acoustically more contemplative sound. The frequencies (approximately a non-tempered major seventh) allow for a very natural sequencing, almost melodically continuous, going from one atmosphere to another. But, due to a change in timbre and acoustic character, we completely change the sound environment in just a few seconds, and without any abruptness. The world of tragedy and pain gives way to the contemplative, to a dimmed, unreal light, to complete serenity and a stillness turned towards infinity. From the end of « Kaiso » to the beginning of « Han », the transition is smooth and seamless, but the change in the « sound space » is complete. This is a very common technique in film.

A : *Where does the material for this sound come from ?*

JCE : From afar. It comes from the first part : « Tokyo », at the beginning of « Gaku-no-Michi ». It is concrete sound material from everyday life. It's the subway buzzer. One of these buzzers used in the beginning of « Tokyo » to make chords, then, later on, to generate clusters, and finally to produce the extremely dense texture which comes into play just before the end of this first part.

But here, this buzzer sound, selected and isolated, has been systematically slowed down, many times over, to try to obtain a rare, muted color, like a very « pacified » acoustic body. At each new octave transposition towards the bass register, I carefully and very drastically filtered out anything that was below the spectrum, letting through only the upper part of the signal (newly audible because now lowered), reinforcing its dynamic at each new transposition. Gradually, an area of complex spectrum that was *normally inaudible* revealed itself and emerged, from transposition to transposition and from filtering to filtering.

Believe me, it is quite an emotional experience to little by little uncover unknown zones from the sound spectrum that come from the most ordinary and daily sound sources. It is like a revelation through a microscope. Layer by layer, stage by stage, we penetrate into the inside of matter, whether it be matter that we touch, that we look at, or that we hear.

At such times, when we have truly put our hand on a piece of precious stone, the technician and assistants present, - these people who work everyday in the studio - immediately realize that they are attending an unexpected miracle ! They become very attentive. Silent. Which, for me, is a test. And even if this miracle might be planned, researched or probable, it is still always a little unexpected ... because it would take only the slightest difference in the original sound source, or in the gauging of circuits, for this miracle never to take place.

A : But all of that is the result of chance. Chance that you might have sought out, guided and solicited, but which is still exclusively pragmatic research. It isn't something you can reproduce. It's the result of a number of operations.

JCE : But what is research anyway ?... If it isn't to cut a path through myriads of « chances » which have progressively made up the universe, galaxies, stars, planets, matter, our bodies ? And this *chance* wouldn't be reproducible ? But what do I do at every concert of « Gaku-no-Michi » if it isn't to *re-produce* for hundreds of listeners this miracle that happened, that *produced* itself, one day, during my work at NHK ? These sounds have been set onto memories. They are forevermore reproducible in any circumstance. And if, at that time, tape-memories granted these sound signals a good life expectancy of about 50 years, today, with a simple CD-R, I can count on the double, and in the future, an even longer and better quality conservation will be possible. In fact, I can « set » for eternity the acoustic miracles that my work might one day produce - at times with a bit of luck, but also with a good deal of method.

A : But the final sound in « Gaku-no-Michi », for example, you wouldn't be able to regenerate that today at NHK, would you ?

JCE : I would be able to find something very similar, by referring to the method I followed such as I wrote it down in my studio work notes. By going back to the same exact machines. By re-creating the patches. And by using, of course, the same sound materials, the same buzzer ... Why and how do you think so many commercial companies today are trying to use computer technology to *virtually* reproduce the synthesizers that were popular in the eighties ?

But what is important to understand is that I didn't exploit the thousandth of the potential possible that day in the studio at NHK and with that patch. If we had been

endowed with a supernatural life span, I wouldn't have hesitated to launch myself into an investigation of the possibilities of these same successive operations on hundreds of other sound sources ! I could have generated thousands of sounds which would perhaps have been from the same acoustic « family ». Other treasures – an infinity of treasures ! – have remained unknown, that I could have revealed over and over again, like in an inexhaustible mine. I left it all, like a thief or a prospector taking away a few gold nuggets. But there remained still billions of other nuggets to extract, to generate, to reveal and discover ! ...

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A : According to what you have explained, you apparently practice a form of notation in your studio work.

JCE : For « Gaku-no-Michi », I used 9 different notebooks, plus separate sheets of paper, coming to a total of more than 1500 pages [see details pages 13-14]. They contain : 1) a daily log of operations ; 2) diagrams of the patches used, and the detail of each take, with indications as detailed as possible about all the parameters (knobs, etc. ...) – including voltage measurements practiced at my request on oscillator outputs after each take ; 3) all the plans for composed pre-mixings, various mixings, and the overall terminal mixings, written on Japanese paper that I found in Tokyo and that comes in very large rectangular format. These plans (very « sketchy », like rough drafts) use approximative graphics, curves of all kinds, which essentially indicate input and output of materials, including intensity curves on potentiometers. Along with reference points on the names of materials, the tape recorders on which they are placed, verbal indications and notations on « clocking » in relation to a timer that I positioned in full view.

A : So it isn't really a « score » in the true sense of the term.

JCE : But what is a *score* in a technological situation of this kind, which is hardly standardized, and very influenced by the return of verbal transmission ? Because, as it happens, new technologies reinforce the fundamental oral nature of sound communication. What does electro-acoustic mean when it comes to composition ? It means an ear that hears, hands that act, and a head that selects. And is a « classical » score for symphonic orchestra so exemplary and absolute ? When a melodic part for harp is written with the exact same signs for notes and durations as for the oboe, do you believe that this notation makes any sense really from an acoustic point of view ?

We should, once and for all, stop granting the status of *universal* to what has been the fruit of only a few centuries of Occidental musical heritage ! The numerous musical cultures that have existed and still exist on our planet have created a thousand and one ways to memorize music for the purpose of reproducing it. The cycle : *memorization* and *reproduction* have always existed. Adorno wasn't the one who invented it. Written music is exactly that : *memorizing* a piece of music according to codes that can be extremely varied, for the purpose of *reproducing* this music at a later time, with some degree of faithfulness and accuracy. Written music is thus very precisely one of the numerous forms of this « pre-recording » that we speak so much about (and often unknowingly) when we bring up the subject of electro-acoustic music.

A : But the classical composer was master in the realm of music writing to a point of abstraction that electro-acoustics, with its direct connection to the concrete, seems unable to reach. Even when Beethoven was deaf, he continued to write masterpieces ! ...

JCE : ... And to develop these same masterpieces even further than he had ever gone ! But that is an issue of a specific *moment* in a given civilization. A moment of equilibrium and elevated achievement within a culture. What Beethoven wrote, even when he was deaf, was possible because he relied on a great amount of codes and mechanisms that preceded him, codes he grew up with, that he was trained with, that he exercised in his profession during part of his life. When he wrote an « A » on the violin part, and a « C # » for the trumpet, he *knew* what it would sound like.

In the current realm of electronic music (analogical or computer-generated), no composer can afford to be deaf and still compose ! For a composer who works today in a studio or on a portable computer (no matter what software is used), going deaf and being struck by the same plight as Beethoven, points to just one thing : compulsory retirement !

*

A : This confrontation between traditional musical notation established for centuries in the Occident and the natural oral character of new electro-acoustic technologies leads me to pose the problem of memorization and reproduction, which are issues of a parallel nature. A musical score – as you have just said -, represents the memory function. Reproduction would be the execution function.

This also leads me to re-open the old debate that opposes the defenders of « fixed music » (according to a more current terminology for what used to be known as « taped music ») and the defenders of processing in « real time ». In an interview published on the net, David Wessel brings up the famous episode at the Ircam in the early eighties when Boulez « banned » any memorized work, or any pre-recorded work (9). The same problem is treated in the well-known book by Georgina Born (10), a book that was considered scandalous ...

JCE : ...Yes, and a book that the French won't be reading in their own language for some time.

A : Were these radical stands that systematically excluded all « pre-recorded music » (taped or otherwise) justified in any way ?

JCE : They were and still are completely ludicrous ! But those who insist on looking for specifically musical reasons for such a type of « Fatwa » are either politically blind or enormously naïve !

The reason was exclusively strategic. Putting *locks* into place, on different levels, with a goal to gag a certain number of approaches, ideas, productions, works, accomplishments and people. Also to wipe out part of contemporary history, the part that has produced works and significant creations in these directions ; the idea was simply to silence them. A strong desire and will to wield hegemony. And that alone is what is behind this decision : absolutely nothing else ! Today's youth who are really interested in electronics and who work with sound on a daily basis have already relegated all these prohibitions into the famous « garbage-pile of history » !

A : But didn't these eliminations, these « fatwa-s » somehow contribute to opening up other territory, particularly in the realm of syntheses and actions in real time ?

JCE : It's a false debate, which has triggered the worst confusion. The problem was arbitrarily framed by one man who has become, first and foremost, a great conductor, and who was already imposing this point of view as early as when I studied directly under him in his composition class at the Music Academy in Basel. A fascinating class in many ways, and one that I recall with great pleasure. However, it was also a time that was marked by this « closed-mindedness » towards ideas that have since been recognized. The beginning of a very striking contradiction was starting to develop because, no matter how undeniably admirable it may be to become a famous conductor, it is not a « Path » for electronic music.

All of this today has become completely irrelevant. Syntheses in real time (whose development is ongoing) are merging little by little with sampling – particularly streaming, which is the direct outgrowth of play-back « tape ». And the boundaries between these two areas are no longer boldly drawn. If I play « Gaku-no-Michi » for you from a computer using streaming, even adding a few plug-ins and « improvised » synthesized sounds, or if I play it from the original tapes, without adding anything, will you be able to hear the difference ? Would you dare tell me that this is not the same music ?

As for « live modulation » from external instrumental sources, we have seen its limitations in spite of a few rare success stories. Modulate a vibraphone, and you still have a vibraphone. Modulate a violin, you still have a violin.

Today, all sorts of memory facilities are available everywhere. Whether it be hard drives, digital cassettes, computer memories, audio-midi sequencers, samplers, flash-memories, etc... All of these tools are ways to set something down. And not just for audio ! Any synthesis in real time pre-supposes a prior set-up of software and patches capable of producing it. What existed as tape memory yesterday has today become multiple memories. If, when we were children, our minds hadn't memorized in a part of our brain cells the signs and articulations necessary for language, their meanings, codes and rules, their various muscle combinations required for phonation, etc., we would be utterly incapable of speaking to each other today, and an interview like this one could never take place.

A : True, but these various articulations are taking place in real time.

JCE : In real time, yes, but in a limited way. There is undeniably some knowledge that somewhere had to be « set » beforehand ! And due to what ? Due to our very sophisticated memory facilities. Language is anchored in our memory banks. For example, in an extreme case : a person who suffers from advanced Alzheimer's disease will not speak to you ! In advanced dementia, the function of *vocal synthesis in real time* is no longer active. Due to an absence of memory. Due to an absence of « set structures ». Whether it be through the absence of « set sounds » (recorded samples) or through the absence of structures capable of producing them (synthesis), the final result is exactly the same ! Eliminate the « set structures » of language (including acoustic mental images) and no « real time » language can be articulated.

Memory and its countless abilities are present in many shapes everywhere in the world ! Matter itself consists of all sorts of forces which represent so many layers of virtual memory whose origins and operating modes we sometimes don't even understand yet. Without memories, without an ability to set these memories (and thus reproduce them later), the world wouldn't exist, matter wouldn't exist and we wouldn't exist. Atoms, cells, genetic codes, animal and human reproduction : all of this is a chain of memorizations and reproductions. The « arc of time » itself would not exist without memory and fixation capacities. For, in order to exist, memory needs matter. Only layers of memory, interlocking with each other on multiple levels, allow the universe to be what it is, time-matter, and not be empty.

A : *If I understand what you are saying then, the antagonism between pre-recorded time vs. real time is a false debate.*

JCE : This duality exists, but the error is to have placed them in *opposition*. In the concrete reality of practice, they are actually *complementary*. Any memory, no matter through what technical means it has come to exist (including brain cells), always implies two terms : a capacity to « set » and a capacity to « reconstruct ». Just as the magnetic tapes did yesterday ! My work « Gaku-no-Michi » is fixed on a type of memory and can be reconstructed from this memory. Admittedly, at the time, the « memory » axis was much more powerful than the « reconstruction » axis. But, I should remind you of everything we have discussed concerning the whole issue of sound-projection, which remains a problem still today for reconstructing what has been set.

This is why the polemic against techniques for pre-recorded time, a polemic which has gone on for several decades, is absurd. All of these pseudo-conflicts *for* or *against* « fixed music » are completely insane because the real problems in musical electronics certainly don't reside on this level. Today, *pre-recorded time* or *real time* are just two sides of the same reality. These two forces utterly overlap each other, to the point of often merging.

Young people the world over, who are exposed to computer technology on their portables, are very aware of this. Ask any of them. Ask the ones who are using PowerBook live. They couldn't be more indifferent to these old ideas. They are, to some degree, the heirs of « live electronics ». They work in real time, but they use huge amounts of pre-fabricated and memorized elements. Many of them want to go back to concrete elements after these years of purgatory in computer real time synthesis. Because they have transcended this contradiction, to the point of completely forgetting about it. They know very well that their PowerBook wouldn't work if it weren't fitted with powerful memory functions. They make no distinction, no difference, no discrimination, they establish no hierarchy whatsoever between a sound produced through sampling (thus memorized, that is, « set » in one format or another) and a sound produced directly from this or that synthetic form (additive, FM, granular), or even modulated by this or that circuit, plug-in, or whatever... For them, there are no boundaries between « sampling » and « real time synthesis ». They mix both of them into their patches. They use the computer to do exactly what Stockhausen did in the studio almost a half-century ago with « Gesang der Jünglinge » : to unify the two rival approaches (*concrete* material or *abstract* electronics) by transcending them into a perfect synthesis on a practical level. Once again : let freedom from dogmas ring ! May *unification* prevail as a superior and complex approach to possibilities, leaving behind the narrow-minded *fragmentation* of ideas.

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A : *Let's go back to « Gaku-no-Michi ». Do you have any other memories of concerts that were particularly meaningful to you in your experience and approach ?*

JCE : Yes, many ! Every concert brings back certain memories, some of them, pleasant, some painful.

A : *Let's stay with the pleasant memories ! Since the work was entirely produced in Japan, weren't there any other concerts in Japan besides the one in Tokyo you already mentioned ?*

JCE : Yes, the concert in Kyoto remains very vivid in my mind. It took place a long time ago, with the patronage of the Kansai Franco-Japanese Institute.

A Japanese friend of mine belonged to a « Zen » meditation group in Kyoto. At the concert, the group's members all settled in the first row, facing my console, and seating themselves on the ground with closed eyes, they maintained a perfect position of meditation for four hours straight. I thought to myself : « *What a choice audience ! What concentration !* »

A discussion session about « Gaku-no-Michi » was scheduled for the next day in their temple. At the end of the session, after dealing with various topics, the discussion got more involved : « *We felt as if we were in the cockpit of a rocket in outer space. It made a deep impression. But as far as meditation is concerned, this music doesn't help at all. Quite the contrary, it disturbs us ! We can't meditate because the music is too present. Not only through its strength, but also through its density, action and the tension it generates. We are FORCED TO LISTEN TO IT, instead of meditating !* »

I tried to get across to them that for me, as a composer, this was the best compliment possible ! « *If I force you to listen, then that means I have accomplished what I set out to do !* ». They seemed puzzled by this remark. I went on : « *The music itself is the meditation. The sounds that you hear make up what meditates. I am not urging you to let your minds wander. I'm suggesting a path to follow, through sounds and combinations of them. A path which is like a message : another kind of message. You must listen to this message* ». They just became more and more puzzled. « *For us* », they said, « *meditation music should consist of a very delicate sound – a flute, a barely audible stream of water – to calm our spirits and not disturb us* ». The misunderstanding was complete. There was no way out !

Finally, an American woman who was a member of the group came to my rescue, and made this comment that I find very interesting : « *Before coming here to study Zen, I spent several years in Turkey, studying and practicing Sufi meditation. It's a completely different approach, having nothing to do with Zen. The duration, time, and general dynamics are closer to what is found in India. It is immersion into a continuous and infinite flow. It is a very gradual and unlimited ascent of all our strength. Zen, on the other hand, is situated on the outer edges of silence, in the non-event, and especially in what is instantaneous. In your work, I felt a phenomenon of duration, of the development of acoustic forces in time, whose arc seems to me very similar to what I have experienced in Sufism or Hinduism* ». This remark seemed extremely pertinent to me ; it is true that ever since my work « Kâmakalâ », I have been much more influenced by Indian philosophy than by Japanese.

A : *Could you quote me a remark you may have heard after a concert of « Gaku-no-Michi » that struck you in one way or another ?*

JCE : Yes, after a concert in the « off » Autumn festival in the « salle Wagram » in 1979 in Paris. A friend came up to me (François Di Dio, founder of the « Soleil Noir » publishing house that was linked to many artists from the surrealism period) : « *It's fantastic... You are insane !* ». In his mind, that was the highest of all compliments !

Strangely, the same remark was also made to me by Benoît Thiebergien, director of the « 38^e Rugissant » in Grenoble, after the concert in 2001 produced in the « Grande Bibliothèque » in Grenoble : « *You're a complete madman !* ». And once again, it was said in the friendliest of ways.

A : *Your friends probably mean that you go all the way, as far as you can, without concern for risks, even if it takes you to very distant places.*

JCE : You're probably right. And it's true that this attitude is not very common in an art form like music because it is very difficult to pursue from a practical point of view. It's found more commonly in graphic arts or with certain writers. Music today is still a prisoner of established production conventions, which are very « packaged ». Music is a very cumbersome art form, determined by the complexity of its techniques and the social permanence of its institutions of reference. Models are imposed. Social pressures and considerations are very intense.

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A : *A young Asian listener (M. Li-Tien-Chen) who recently attended your concert « Gaku-no-Michi » in Taipei, and who presented himself to you as a person with no musical background, a simple « salesman » (working in the private sector), sent you this e-mail : « ...I felt so many emotions : exaltation, calm, gravity, expanded consciousness, etc... At times, I was confused between what was natural sound and what was electronic. « Gaku-no-Michi » made a deep impression on me. Because of your composition, I think that you are not just an Occidental musician, you must be an Oriental monk as well, attaining the perfection of Tao or Zen [...] After listening to your work, I had a question about the relationship between music and the world. Do humans create music to emulate nature ? Or do we use music to explain nature ? ». How did you answer him ?*

JCE : It's very difficult to respond briefly to a question like this one, which is *deceptively simple* ! The relationship between music and nature is a vast subject. But before attempting what will only be a « sketchy » response, I would first like to point out how people from the other side of the world, and who don't make the slightest claim of belonging to any cultural elite, are capable of having an elevated artistic sensitivity, of being touched by these forms of music, and to ask very complex questions in very simple terms. This proves – yet again – the potential strength and communicative capacity of this music, when it manages to get out of the ghettos in which it is still too often confined.

What this person is talking about directly refers to what I was looking for when I structured « Gaku-no-Michi » : an unceasing dialog between concrete and abstract materials. By transforming numerous concrete materials into abstract materials, taking them through gradual and varied stages and conversely trying to reveal and bring out the concrete potential of abstract material, we reach this ambiguous interplay between the different levels of meaning with regard to signals that are « recognizable » or « non-recognizable ». In addition, a lot of work has gone into exploring *dynamic* and *static* capacities of materials (in the agogic sense, of the extent of acoustic activity). For instance, the shape of the second part of « Gaku-no-Michi », « Fushiki-e » (11), includes « areas of contemplation », carefully placed at different moments in the continuo. At other times, true eruptions of sound activity are triggered, such as in the final sequence of the first part : « Tokyo ». That's what the TAO of sounds and acoustic activity is : this is the meaning of the title. Mediation between enormous contrasts located at extreme opposites. And the concert has meaning only as an attempt shared *together, all together*, through sound and through the broadening of proportions and acoustic activity fields, to reach elevated and rare levels of consciousness and perception.

A : *This ideal is somewhat religious, isn't it ?*

JCE : It is aesthetic, philosophical, sociological and spiritual. In fact, this has been the ideal of all *artists* since the beginning of the world ! But I readily acknowledge that the artistic ideal *contains* a religious element.

As for nature ... « Conventional » music, music that is made up of notes, has been preserved for centuries from any mission to represent the natural world – as opposed to the history of painting. Music has been a creation of *another nature*. Through abstract play, even mathematical speculation, we created a world outside of nature, situated well beyond : that is, most often turned heavenward. This was the case for Christian religious music. This was also the case for the emperors' court in China. Music was a sort of speculation about the order of the cosmos. Social, political and human orders were linked to harmony in the world, to the order of the whole universe or at least the universe as it was perceived by human beings in those times.

Oddly, at the time when painting pulled away from its figurative mission by becoming abstract (hence joining the sphere of music), music, on the other hand, with its concrete sound, moved closer to nature to the point of representing it, as is, on a sound recording.

My position as an artist lies somewhere between the two, and extends as far as either extreme. I must push myself to be able to go as close as possible to nature : the « captured-landscapes », absorbing nature, becoming and being this nature. I must also endeavor to conceive of music in its most abstract expression – mathematical organizations of frequencies, harmony, etc.

Through art, we do not construct nature itself, but we reconstruct it through our perspective, our ears, our mental, visual and sound fashioning.

This is somewhat what I tried to express in my work « Yo-In », which immediately followed the production of « Gaku-no-Michi ». The second « act » of « Yo-In » suggests the idea of man who *is* nature, but who arbitrarily gets placed as if opposed to nature because of his work and desire to *dominate* nature. I said in one text : « *Why not conceive of man's work with nature ?* ». This is probably the wisdom that man should go towards. But this will only be possible when we have gained an even deeper knowledge of nature and her forces. *Dominating* nature : certainly not, for my part. But *knowing* nature more and more intimately so as to live with her, and understand her more intensely : yes.

In the beginning, man was not cut off from nature, and was capable of immersing himself in nature, which was *himself*. But nature developed a spirit in man which allowed him to « become aware ». The reflection in nature starts to resemble a *mirror* : man can see himself in nature. And this is where *abstraction* begins. If man removes himself and climbs towards the highest degrees of abstraction, he will detach himself from this nature, to the point of then believing that he is truly « something other » than nature. At that point, one distinguishes two different poles. Returning to lose oneself in nature and the concrete world, or, conversely, losing oneself in the abstract world, to the extent where one no longer feels an integral part of this nature. This appears to represent two contradictory extremes that one should reach only occasionally. One should work instead at making them intersect. It is the dialog between these two extremes that is the interplay of art, the terrain of the mind, of life, of our position in the universe.

A : *How would you like to conclude this interview ?*

JCE : Let's aim for madness... without, of course, having to lose our minds ! Let's try to simultaneously combine *empassioned folly* and *objective reason*. And for us musicians : let us be mad about sounds, above and beyond anything else ! I invite you and I invite the youth of the world over. Let's be mad about all of the sounds in the world. Let us attempt to capture sounds from the universe. Let us develop techniques to break the locks that hinder freedom and dampen imagination. Let us beware of any rebirths that take us

backwards, of collective blindness, as well as of the many possible reincarnations of totalitarianism.

« Gaku-no-Michi » is a work that bursts out laughing in the face of the music censors, whoever they may be and whatever outlook they may have ! The message from the « Tao of music » is above all a message of *liberty*. It is the same message as for the happy monk that China displays to us. He dances alone, on a mountain, in a forest. He turns, with the wind in his hair and a broad smile on his face. He has found the way of Satori, of illumination, of knowledge. He is the « Happy Monk ».

Let us all be Happy Monks !

Avaera and Jean-Claude Eloy
« hors territoires », October 17, 2004

translated from the French by Meredith Escudier

Notes

- (1) First public concert of electronic music in Japan : 1956, Yamaha Hall, Tokyo. Later, from the 70's until the 90's, other composers came to the NHK studio : Kanno, Kondo, Matsudaira (Yori-Aki), Nishimura, Shibata, Sato (Somei), Takahashi, etc.
- (2) « *Tokyo ville orchestre* » : « *Le Monde de la Musique* », n° 18, December, 1979
- (3) « Circuit » or « patch » in English: specific connection between technical units to obtain a particular result.
- (4) « Ikebana » : traditional Japanese floral art.
- (5) See the description of the « Shishiyôdoshi » in following texts.
- (6) See below : « *Music beyond Sight* » (« Music of the unseen ») (text n° 64).
- (7) See text n° 57 : « *Note concerning the ritual of applause in Galaxies* » (1996) in the publication on « Anâhata » and « Galaxies ».
- (8) Gilbert Rouget : « *La musique et la transe* » (« Music and the trance »), published by Gallimard, bibliothèque des sciences humaines, Paris 1980. Page 254 : « ... *the trance of possession must be considered like a normal state resulting from the learning of cultural modes, which itself is largely determined by history ...* »
- (9) www.cycling74.com
- (10) Georgina Born : « *Rationalizing culture : IRCAM, Boulez, and the institutionalization of the Musical Avant-Garde* ». University of California Press, Berkeley, Los Angeles, London. 1995.
- (11) See the presentation texts below.

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