

An Improvised Prelude-Conversation

This is an edited transcript of an interview with Professor Henri Pousseur which took place on the veranda at his home in Waterloo, Belgium on 14th June, 2004 as part of the 'Scambi Project', funded by the Arts and Humanities Research Council. The interviewers were Dr John Dack (the director of the project) of the Lansdown Centre for Electronic Art, Middlesex University and Dr Craig Ayrey of Goldsmiths College. Also present was Dr Mine Doğantan-Dack of Middlesex University. References in square brackets are inserted where clarification is necessary.

Professor Pousseur assisted us in the editing of the transcribed text. We are most grateful for his infinite patience in this matter. We are also grateful for his suggested title: 'An Improvised Prelude-Conversation'. This was indeed the first meeting we had with Professor Pousseur and the breadth of subjects we were able to discuss, as well as the informal nature of the meeting is a tribute to his generosity and charm. Thus, this conversation was a true 'improvised prelude' to the entire 'Scambi Project'.

John Dack: I became interested in *Scambi* in relation to 'open' form. It strikes me as an extremely forward-thinking work, because although it is in open form, it seems that in some ways, the technology available at the time [1957] resisted that openness. Presumably, you had to splice the tape, whereas nowadays we just use sound files. Very few electroacoustic composers now work with open form for their concert works (even though they use it in gallery installations). This strikes me as a rather strange: although new *technology* enables open form, people don't seem to be interested in the open work as much as they used to be.

Henri Pousseur: I think that one must accept the idea that the concept of the open work has enlarged greatly. First, let me tell you a small anecdote. In the 1980s, at the beginning of DVD technology, I was working in Paris. A gentleman came to me and said 'we have the intention to publish *Votre Faust* [1968] on DVD' with the mobility of the situations and so on. 'OK, wonderful, but it's a big work' I said. Nothing happened: it was too early I think. Today it would be very easy to do on recent DVD and with other kinds of media. Yesterday my son [Denis Pousseur] came here. He is also a composer, and has a nice little studio, very compact and up-to-date, he has made a lot of music for theatre, cinema and so forth, and two years ago he started to develop a program to assist composers (this is still continuing) — and he said 'I have the feeling that my program is like a very open composition, because other people can use it to produce all kinds of music with it'. It's quite general and permits very many possibilities. He has also incorporated microtones and so forth. In 1972, I composed *Icare Obstiné* which addresses almost the same problem, but on paper. At that time, I was a teacher of composition at the conservatoire in Liège. The work was written for my students, to teach them to compose with what I call 'net theory', to teach them how to compose the harmony for pitch collections and to manage forms etc. by using more or less aleatoric methods. Not absolutely aleatoric, though, just choosing a certain direction among various possibilities, of which there are many. *Icare Obstiné* is a work but it's also a small treatise of variable composition.

So, I think composition will not always be the production of closed and finished objects which one can sell and buy. Composition will be more or less a network (*réseau*), or more accurately, like a rhizome. We will have to think increasingly in a collective way, with knots (of course) where a special energy develops, but also with contour currents and so on. In fact, this has always been the case. Composers have had mental rhizomes between one another, but now I think this becomes much more constitutive and almost institutional, especially now that we have the internet. Your project fits this idea.

JD: Many of our students have become very excited by this *Scambi* project, because as you say, it facilitates their way of working. They take other people's material, and they like the sound of the work because it resembles what they call 'glitch' music, where they get a record or CD and scratch it, which will then keep jumping and stopping and starting...

HP: Like water on stones.

JD: They don't have any problem with using this material. Taking material from outside is, for them, what they do — *plunderphonics*, the idea of taking music from somewhere else and incorporating it into your music, like the notion of the remix. But they were absolutely shocked when I said 'Yes, but *Scambi* was done in 1957, with analogue tape'. That, for them, was a real surprise, because most of them don't realise that anything really happened much before 1980, in other words, before digital technology. They're not really aware of analogue techniques. They know a bit about Pierre Schaeffer and Stockhausen, maybe, but not much of the music. If you play them *Etude aux chemins de fer* [1948] they are familiar with the sounds but they're not aware of the historical foundations. The background of the whole project was partly to show them that there were intellectually and aesthetically interesting concepts current a long time ago that need to be worked through because they are unfinished and are still interesting.

HP: *Scambi*, in Italian, means 'exchanges', a very good concept for the project. The work is known by many people and widely played but it has not been realised as often as it has been taught. When I play it now I play always practically the same version as a finished piece. But I have a second, probably in my archives in Basel. There are two versions by Berio. *In Tempo Reale* [www.centrotemporeale.it] they told me that they played them in Rome recently. Berio took a lot of liberty with the rules; he didn't consider the rules at all, he did

his own job!

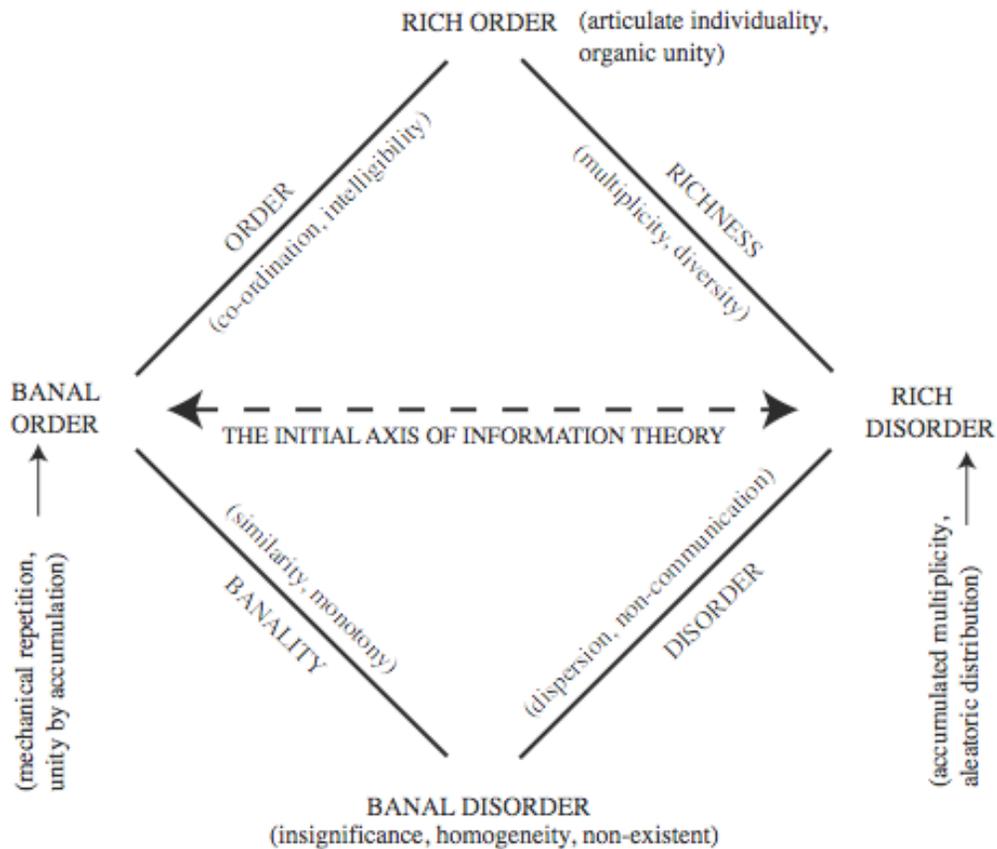
JD: Did that worry you?

HP: No, absolutely not. I gave the rules to ensure a continuity, and no break, no undesirable breaks, let's say. But if somebody prefers to do it another way: OK. In the meantime I have done many different things.

JD: Many of our students prefer discontinuity to continuity.

HP: I think we have to use both. They are, in fact, two sides of the same coin. Discontinuity is continuity zero, and you can have all kinds of gradations. You can find that in classical music too. I think it extremely important to fight, mentally and spiritually, to overcome dualities, the extreme opposite and irreducible and incompatible oppositions. Cartesian dualism, the basis of rational thinking, has been surpassed for several decades in philosophy and so on. We must learn to think Chinese, Taoist. Basically I am a Taoist. We need to go not just from one extreme to the other, separated by a line. Xenakis said that, following Abraham Moles, in the middle you have the real, useable messages, because these are not too rich and not too poor, or not too ordered and not too disordered. But this is not entirely so. In one of my books [*Musique, Sémantique, Société* (Pousseur (1972))], I proposed a scheme: if you have order, poor order, let's say, or rich disorder, which is what some students may prefer, in fact you have two parameters, you go from poor to rich, and from order to disorder. There is richness and poverty, but you also have rich order and poor disorder. Then you have messages within this whole field. Living organisms, good works of art, good organised societies and so forth are all placed in mid-field somewhere. One could say that classical music has, at its best, occupied the middle, while, to speak simply, academicism and anti-academicism occupy the extremes. In politics too

there can be total anarchy: good, perhaps, but we need also to work on this tendency.



(Pousseur, 1972: 138)

JD: Where would you place minimalism in this scheme?

HP: On the disordered axis, not too poor... *Musique, Sémantique, Société* gathers three long articles: on the polyphony of Schoenberg, on the question of new order (also published in *Perspectives of New Music*), and on art and the death of God. There is a preface about semantics, based on a lecture course. I think it's a good book. It was very much read at the time and has helped people

to think. My *Fragments Théoriques* [1970] concerns the sources of my work. *Musique Croisée* is new, but variable in the depth of thought. Some articles were for programmes of the Paris Opera (about *Don Giovanni* and Gounod's *Faust*), but there are others on *Zeitmasse* [by Stockhausen] and about the problem of analogue and periodicity and so forth. The latter was written for IRCAM, but they refused it. I gave the lecture, but [Jean-Jacques] Nattiez thought that it was too far from the orthodox direction to be acceptable for their book. [Célestin] Deliège, who was co-editor with him, then quit for this reason. So we were not in complete agreement. There are also a few articles also about other matters, including one on the anthropological beginning of music which I think is a basic text, one on analysis, and a long analysis of *Flow my tears - La spirale des larmes* [John Dowland]. I found that the poem can be arranged so that it makes a spiral with a centre: and the harmony of this marvellous piece is very interesting. The process of returning, recurrent sadness, is in its text and form.

JD: Let's return to electroacoustic music. You seem to think of white noise as organic, which is interesting. Do we need to go through the technological mediation of analogue equipment to get to the organic nature of noise?

HP: In various recent articles about electronic sound, the whole problem of analogue versus digital has been discussed. I do not think these technologies should be set in opposition: they are not on the same level. Analogue corresponds most directly to natural, physical phenomena: the waves are continuous transformations which inform our ear. And, of course, with analogue equipment, which is another problem, one had insufficient precision, mastery, and so forth: digital was therefore extremely useful. Digital is rather like the geography of the North American flatlands, I would say, where everything is divided in squares. When you are on a plane though, immediately you might be able to see that there is a creek or a mound: thus the square is compromised. This reminds me of Stockhausen's *Die Einheit der Musikalischen Zeit* in which he

tries to reduce everything to one dimension (a series of numbers: that's typically numerical and digital). Technically, this is very important, but we don't perceive time and sound in this way, certainly not in the way we perceive analogue phenomena. The problem, then, is to develop in the digital field ways of modulating and so forth which retain as much direct access to analogue sound as possible. Digital is an intermediary, an interface, and a tool to measure the infinitely small but nothing else. I exaggerate a little: because it's a calculus, you can, of course, make all kinds of combinations and this is very useful too. It's a sort of general seriality. But in the end even seriality devolves to a sort of periodicity. I call the 'generalised periodicity' - from the most disordered to the most ordered. Even when you have something seemingly very aperiodic, it can always be analysed on the basis of various levels of modulation which interact. Because each one is uncoordinated with the other, they produce irregular forms. This can be seen very easily on a computer screen or oscilloscope.

JD: When I started to work in the digital domain and began to use sound-processing it wasn't in real time. You tapped in all the information and then sat there, maybe for hours.

HP: Yes: but when in the age of analogue we cut and spliced even a little bit of tape, it was also the work of hours, even months.

JD: But there was a physicality to it. You could adjust the speed and when you had a sample, there it was. I still find it a problem when you have a sound file on the screen. For me it's just a line on a screen.

HP: Well, for my son [Denis Pousseur], digital is very natural, but he also has a very clever ear. When he writes instrumental music he makes an electronic sketch, because although he hears internally he also needs the materiality of sound. This is not absolutely accurate, of course, because electronic sound will

not give you the trumpet and the cello, but at least he gets an approximation which is, for him, better than internal hearing alone. For me, internal hearing is the most important.

JD: Is this a matter of training and education? I find that I miss physical interaction with an instrument.

HP: Even a keyboard is already mechanical, and far from sound itself. I have two granddaughters approximately of the same age. I wrote one of my books for the eleven-year old, *Les petits doigts de Lisa* (for the beginner on the piano); she plays the clarinet as well. The ten-year old began the violin this year, but she complains: 'At least at your keyboard you know where your pitch is!'. The clarinet is somewhat accidental but at least you know if you finger and blow correctly you get a definite sound. On the violin, this is more difficult. These are basic, but very important problems, which relate to the whole issue of acoustic performance. I remember that forty years ago I dreamed of having instruments that would be so clever that by moving the hands, the feet, the body, everything, you could change, produce and modulate sound, even without touching an instrument or machine.

Craig Ayrey: A sort of gestural music?

HP: Yes: but, to speak generally, playing the piano or violin is also *musique de geste*. I think this direction is developing to some extent because some people, like my son, try to find interfaces which are directly convivial with the machine, where you feel immediately what happens, even if only with a mouse on the screen. My work on images is very interesting in this respect, but it's limited and it should be opened up and enlarged.

JD: Such new interfaces are something that our students are interested in. Our

course on new interfaces investigates the interaction with sound either physically, in motion, or gesturally.

HP: We have examples of dancers who, by moving on the stage, produce magnetic fields, transformations, and this produces either music or changes in lighting. In 1961 I composed *Trois Visages de Liège*, for the inauguration of the Palace of Congress in Liège which is on the bank of the river. (In fact, it should have been seen from the other bank: my music was played at the light show, completely abstract, once in the preview, and then the authorities of the city were so afraid that they rejected it!). But beside the palace there is still an earth sculpture by Nicholas Schöffer which had elements which could rotate and move in different ways with little motors; it also had sensors of light, wetness, sound, heat, and so forth. These would react when a certain threshold was reached and then the sculpture would begin to turn until it ran down and stopped. During the day it was not very interesting because it moved little, but at night when there were large projections of light, it was beautiful; it moved in response to traffic, the movement of people, changes in nature, meteorology and so on. I remember also a seminar by the great dancer, Merce Cunningham, in Buffalo when I was there. He presented one 'ballet', so to speak, where they had antennae in different places on the stage and then someone rode a bicycle, and by riding around they changed various parameters. So this does not have to be only on screens - it can take many new forms. So-called 'virtuality' will be part of that of course.

CA: What is the relationship of your electronic composition to 'Sound Art'? Often there's a rather naive narrative supporting this type of composition.

HP: Here we go back to the opposition between *musique concrète* and *musique électronique*, in terms of practice. Schaeffer and his team recorded sounds with microphones and transformed them little, or, in the early years, combined them

crudely. Gradually they became more expert in manipulating and combining sounds. Stockhausen, on the other hand, wanted to be absolutely pure, only sine-waves at the beginning, no notes, but then he added a new type of electronic sound. In *Trois Visages de Liège* (1961)— and also in Berio's *Thema – Omaggio a Joyce* (1958), and *Gesang der Jünglinge* (1956) — you have voices, real noises recorded from reality which were then processed selectively so that unwanted residues were removed. In the last part of my *Trois Visages*, you seem to be in a huge foundry, with fire and molten metal. Although this is purely electronic, it is intentionally descriptive and as complex and musically descriptive as Bach was, for example. So, again, there is a false opposition between categories. Categories may be useful to order things, but they shouldn't be petrified. 'Sound art', 'new' music, 'experimental' music, 'electronic' music, 'electroacoustic' music, and 'acousmatics' all overlap and go from one to the other constantly. *Paysages Planétaires* (2000) [see: discography] uses continuous, more or less changing sounds, long sounds. I and my son took these from film soundtracks (city sounds, the sea, fire, birds) and employed them in various transpositions. We did the same with analogue sounds, slowing them down. So you have film-sound backgrounds which are sometimes mixed or overlapped to make the sonic background of one landscape (between 6 and 28 or 29 minutes long) — the sound 'pool' of a landscape. Then, within that, we put sounds from the regions of the earth that we wanted to relate to one another and with Nivelles (this is where the work should have been installed initially, but it was not. We took samples of ethnic music from all possible sources which we elaborated variously (some are very recognisable, some almost not) so that there is every degree of change. Even in the course of a sample which may last up to two minutes you can have a transformation from *vice versa*, placed in the background so the sample and its transformation go together. The sample seems to come into the foreground and then (usually) it recedes. So, this is music, it's electroacoustic music that contains traditional music and noises of reality, but I don't see any difference between the concrete and the electronic. Similarly, the

pictures I made to go with the music were taken from photographs, from reality, from works of art, but then transformed with many operations. Often one small detail of a picture is enlarged and enriched by new means and becomes a sort of abstract painting. The whole process is to modulate from one picture to the other, and so forth. Sometimes the images have long fades from the structures of the one to the next, and sometimes it's more abrupt. There are also written texts which are on transparencies, and which go over the pictures and, for instance, go from the middle of one picture to the middle of the next one, and in the meantime they are transformed.

CA: Would you see this as a development of the open work – outwards from music and into other media and so on?

HP: Yes, I call it 'audiovisual music'. One could call it also 'audiovisual art'. I think it's absolutely fascinating.

CA: Is this a work in 'open form'?

HP: *Paysages planétaires* is not an open form, except the end. For the architectural complex for which it was conceived it had to last from 6.00am until 10.00pm (16 hours) in an absolutely fixed programme. Now I have a compact version of four hours and forty minutes, which is also fixed. However, in the museum where it will be played there will be a room in which the whole thing will be played every day, except Monday, when it's closed. In one of the big halls of the museum there will be a selective projection of the sound only. There will be, for instance, half an hour at the beginning and then a long silence, and then again, twenty or forty minutes of music, and then again silence, and then a last period to end the day. Normally the duration of four hours forty minutes is not completed by then. On the second day it's longer and longer again on the third day. The last piece is the finale really. During the three days, twice each week,

there is a selective presentation of this material. To begin with there are bells every hour, then close together, and then on both sides of the room for the even hours (except for the first and last which sound only on one side). On both sides there are landscapes. When there are two landscapes it lasts almost an hour; but then at the odd hours you have also small bells and some projected words that prolong it in other regions of reality because it covers the whole planet. In the interim there is what we have called a little bit of 'coloured silence' (some of the background). We have compressed this considerably so that we have 'Un Tour du Monde en 280 minutes', an allusion to Jules Verne ... 'Un Tour du Monde en 80 Jours'! The next thing I did was to take the sonic landscapes in a certain order and match them with the more-or-less animated pictures. That's not very mobile (though it could have been done differently), but I had to present a finished recording.

CA: When you are composing or organising a work like this how do you control structure? Is the work a series of illusions transformed in various abstract ways, or is there some controlling narrative behind it?

HP: The pieces have titles that indicate which regions of the earth are put into relationship. *Alaskamazonie*, for instance, is Alaska and the Amazon. *Vietnamibie* is South Africa and South East Asia. In *Gamelang Celtibère*, Gamelan refers to Indonesia, the north Coast of Australia (some didgeridoos): *Celtibère* means the western coast of Europe, mainly Great Britain, Ireland and Scotland, and the Iberian peninsula (Spain and Portugal). The first short section of *Celtibère* has one background constructed by several periodically repeating machines, polyrhythmic, in combination. The pictures for it include a photograph of the construction for the Hanover exhibition, a couple of years ago. I made some blow-ups of details. The image begins black and white but gradually changes to colour, with some texts on it, more or less in the fast rhythm of, and in relation to, the machines, so the change of images is also fast. When we

composed the music we had not yet decided that there would be pictures. There are two movements. In the first movement the first thing you hear is bagpipes from Scotland. But we have made them somewhat strange. Then there is an Irish Jew's harp in the rhythm of the jig. For the two bagpipe sections, I used a picture of Romanesque Spain, a series of angels and images of people with very Romanesque faces. I multiplied them and put them outside their orthogonality so that they appear in blue during the first section, then in green, then the first disappears. In the second piece the images are more distorted. A transformation of detail is introduced so that suddenly one has the impression of little angels dancing in a row. My son also made rhythmic transformations and cuts in the images so that they are not synchronized: some faces from the Spanish picture are enlarged. Here one hears polyphonies made from a monodic almost *canto grande*, sound: two, then four voices and so on until, after six or seven minutes, a second series of dancers is transformed into renaissance ships departing for Indonesia. After that, they transform into a sort of vegetal abstraction and then to an image of four characters who seem to be musicians or singers. The music here is from one of the islands of Indonesia, in the south of Java. This progression is in the music, as are the two realities as we perceive them normally. There is the almost-abstract or seemingly abstract, but the images and music go to and from signs of reality.

Canadacathay begins briefly with something that sounds like Canadian Indians; but the images are African masks which look like Hopi masks. The mixture in the title is also inside the image. And then, suddenly, we are on a train to China with a short sequence in the Opera of Peking The train then goes back to Canada with a very special 6-minute picture of Inuits. The last piece is focussed on Namibia [Vietnamibie]. It begins very rhythmically and gradually transforms to become a sort of Buddhistic quietness. It's very long and slow, and the images transform very slowly. I think it's quite beautiful, but it's the most problematic one of the three.

CA: I have a question about periodicity. In *Scambi* you seem to work with various types of periodic material.

HP: I was looking for as *aperiodic* material as possible inside the work. Even though this work is quite aperiodic, you can analyse it quite easily because it's well-composed! But the work is not just its materials: it evolves, and so you can distinguish larger waves, probability waves rather than absolutely designed wave-forms (something goes up and down, slowing or not, with a silence and so forth). The whole piece, or my preferred version of it at least, is a large periodic form in fact. It begins quietly, has a first climax and then becomes very soft and delicate; then there is a big climax which is very loud and a little descent (this is repeated), and it then falls down finally. So *Scambi* is a form in a single wave with a few secondary waves. Those secondary waves are analysable into smaller, more random-like waves. You can then go down as far as the material and you find that an impulse is one thing, modulated in their pitch because they are in a narrow band which has been modulated in its speed: but, for all that, the waves interfered. This was not intended but finally emerged more-or-less unconsciously, because I feel as musician who wants to produce a music which communicates. I wrote about this in an article for *Die Reihe 3* [see: Pousseur (1957)] about method and *Variation One for Piano* which is a serial, complex form, but which doesn't forget the symphonic scheme of a big crescendo with many intermediary valleys, but with one main high point and one decrescendo at the end.

CA: In the first *Paraboles-Mix*, there seems to be an opposition at the beginning between periodic and aperiodic material.

HP: This piece is a tapestry. I didn't do anything but let the machine work alone. It is all periodic in fact. I had a sound fountain. I began to work with four sound generators which had four low frequency generators inside, eight sources of

signals from which seven could be used as modulating, and when I put everything together it gave me a disordered machine – incredible! Not only aperiodic but also the characteristics were constantly changing: my business at the beginning was to channel them. One evening, suddenly a sort of rotating pulse happened which alternated with things lower. It seemed to be another voice but it was the same thing that went up and down constantly. I recorded it for half an hour; it was never exactly the same, but it was constantly similar, rotating. I had also put a ring modulator between the two channels of recording so that it made, with a very small frequency difference, a phase difference, and a motion in space automatically. It bounced off periodicity. The next morning I listened to it for half an hour, and then I applied another process of the same kind. It was a little but different but not much; and I didn't interfere with it, so I had two voices which seemed like a tapestry (polyphony if you want). In the second piece [Liebesduett] I took the first again [Les Ailes d'Icare] and put it on a machine with variable speed, two-track. My assistant, a young Mexican girl, Estella, controlled the speed and the dynamic of this machine, and I made a new thing, not completely new but quite different in feeling. I gave her some very brief instructions, and we made a 'four hand' piece, which I then manipulated so that there is a moment in the middle which is very quiet with octaves and interval-groups alternating between glass-like sounds and loud noise. I gave a demonstration in Florence last Saturday with an easily perceptible, very long *accelerando* and *ritardando*. I also revealed my layer, which was partially hidden by what she had done, but it was easy to hear when I pointed it out. At the beginning there were very slow, long sounds which then became so fast that I had to count on two levels at once, as in Indian music. This piece works better with its square waves. The material is also transformed because there are other parameters which change constantly. Each study suggests new possibilities. The fifth, *Zeus Ornithologue*, is the best, I think, because it tells a long story. It begins with a hidden source, followed by a slow march that goes through all kinds of transformations until it begins to change to birdsong. After that we are in a town

and then there are only birds, without machines. After this middle part, the periodic comes back sporadically and seems to become waterfalls, louder and louder, until there is a sort of periodic, almost African metallic percussion. The march then becomes very brassy and finishes the piece. Zeus himself (a barbarian Zeus!) appears. I felt the piece in this way, but I had to search for the materials and connections. For each study I had a different connection of the equipment. The four generators, with low frequency oscillators, went up to two minutes a period; hence the slow transformations which one hears very well in the third study [Viva Cuba] . In *Viva Cuba* the whole of the beginning was made partially by hand – not by cutting, but by turning knobs – but then it becomes automatic (the transformations of speed, with more percussive sound). I also had peripheral devices (ring modulators, filters and so forth) which were variously put into play. There was a four-channel tape and tape recorders: so the last phase was to make feedbacks, four tracks in different combinations. This made a very interesting movement of sound, especially when played in four-tracks.

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Discography

Acousmatrix 4 Henri Pousseur: Electronic Works *Scambi, Trois Visages de Liège, Paraboles-mix* Bvhaast, Amsterdam, CD 9010

8 Etudes Paraboliques, Sub Rosa, SR 174 (box of 4 CDs)

4 Parabolic Mixes Pousseur-Main-Jeck-Oval, Sub Rosa, SR 199 (Double CD)

Paysages Planétaires Alga Marghen, Milan ALGA 051 CD (box of 3 CDs)

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