

A Keynote Lecture by Professor **Henri Pousseur** given as part of the Symposium on 'Open' Works at Goldsmiths College, London, February 18th, 2005.

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Organized by: Dr **John Dack** of the Lansdown Centre for Electronic Arts, Middlesex University, Dr **Craig Ayrey** of Goldsmiths College, London University and Dr **Pascal Decroupet**, Université de Liège¹.

The following is a transcription of the lecture given by Prof. Henri Pousseur. Prof. Pousseur talked in English and without notes. Some very minor editorial changes have been inserted in order to preserve the fluency of a spoken presentation when printed as a written text. To clarify certain points some names, dates etc. have been added between square brackets in the text. In addition, footnotes indicate where information can be found in the references and discography. Following Prof. Pousseur's talk John Dack, Craig Ayrey and Pascal Decroupet also presented papers.

Henri Pousseur: I will not talk very much about *Scambi* because Pascal Decroupet has talked about it and there will be other sources of information. You have heard one version, which I consider my preferred version of the personal versions I did (there are also some by Luciano Berio and others²). I will try to give a quick overview of my electroacoustic practice, and concentrate, as John Dack said, on a work I did in the 1970s [Huit Études Paraboliques] and which then continued to occupy me and was re-used several times by myself and others.

¹ Since this symposium Dr Decroupet has been appointed Professor at the Université de Nice.

² Henri Pousseur completed a shorter version of *Scambi* (duration: 4:01) than the one available on CD (see: discography (1)). Luciano Berio's version lasts 3:25. There is also a version by Marc Wilkinson which was realized at the Studio di Fonologia (for more information on this work see: Wilkinson (1958)). None of these versions is easily accessible.

Let's start at the very beginning of this idea. When I met Pierre Boulez in 1951 (it's more than half a century ago!) near Paris, we spent two weeks together with other people, and it was, for me, a very important and decisive encounter. Among the subjects we discussed was our desire to arrange new means of modulating sound due to the imperfections or insufficiencies of instruments - this was how we thought then. It was true to some extent but later we also learned a great deal about instrumental possibilities, naturally. We discussed this thoroughly. Boulez realized a small musique concrète composition in the *Studio d'Essai*³ in Paris, and he was dissatisfied with it, and he wanted very much to have purely electric/electronic possibilities - he convinced me about this. I had also heard about musique concrète, and he also told me about a young German he had met recently, his name was Karlheinz Stockhausen, with whom I then was in contact. I met him, I think the following winter. Thus, the idea continued to circulate between us, together with our preoccupations in the general musical project, which was the post-Webernian serial project. In brief, we can say that the main idea here was to reach as high as possible a degree of asymmetry, to refuse all types of periodicity. This had started earlier in the century with tonality, thematicism possibly as well, and then also periodicity in rhythm and so forth. We were following Webern but we wanted to go much further, even down to the lowest morphological level. We wanted to emphasise this asymmetric principle, and this was very serious, fanatical research for several years, I would say. One could say during the 1950s in general, but there was a certain evolution during the 1950s. The beginning was very, very rigid and poor, one could say, to some extent some works were very punctual [pointillistic] and a little boring sometimes. Some are beautiful, and they are still of this [pointillistic] type of music, but some are less so. And then we tried to find ways to render the texture more musically, and this was already a sort of memory of musical values which we had acquired in our education and culture, naturally. So one technique was, for instance, the technique of *groups*. Instead of working with *points* - isolated points - we worked with groups of things which had a certain unity in common, a certain register, a

³ Boulez completed two musique concrète études at Pierre Schaeffer's studio during 1951-52. They were: *Étude sur un son* and *Étude sur sept sons*.

certain loudness, a certain speed and so forth, and were opposed not only punctually but by groups. I could give examples of works of this period like *Kontra-Punkte*, [by Karlheinz Stockhausen] or *Le Marteau sans maître* [by Pierre Boulez] or my own *Symphony for Fifteen Soloists*. A second way to expand techniques was electronic music which Stockhausen had been able to initiate in the studio in Cologne, from 1952-53 onwards. I was able myself to do a very, very small piece in 1954. I could do very little work because I was teaching in a school and could not be absent, so I went to the studio in the vacation of Easter 1954 and studied some possible methods, influenced by the first *Studie*⁴ of Stockhausen, and then I gave some instructions to a technician who realised the work on the basis of what I had imagined. I would like to play you the second part of this little *Seismogramme*⁵ The first is not very interesting, it's a sort of a remake, a poor remake, of the two first *Studies* of Stockhausen, I would say. But the second has something a little different, because my composition of the complex sounds was not atonal. It was based on overtone scales, of high overtone scales, so that you have a sound which partly resembles a small ring modulated sound, or the sounds of ring modulated instruments, as in *Mantra* by Stockhausen which was composed much later. So, one has something of this quality of mixture and of colour of sound which appears in this piece, but I was not able to control it during the realisation so there are some moments which are a little difficult, a little noisy, I would say. Also, we were not opposed to noise, but it was a noise which was a little..., Well, the first performance was in Cologne but I remember the second performance which took place in Paris in the *Domaine Musical* in 1955, at the concert where my *Symphonies* were also first performed. It was in the *Petit Théâtre Marigny* where the first seasons of *Domaine Musical* took place, and there was a balcony with a ramp which was not fixed down very well and the low sine waves which are present in this piece produced vibrations in this unstable structure!

Sound example 1: *Seismogramme*

⁴ Stockhausen realized his *Studie I* and *Studie II* in the *Studio für elektronische Musik* of the NWDR in Cologne in 1953 and 1954 respectively.

⁵ *Seismogramme* is available on the Acousmatrix vol.6 CD (see: discography (2)).

It's made only of sine waves, and in the low registers this gives it this very soft and somewhat moody colour, I would say. You can also hear the idea of *group* technique because there are some blocks of different qualities which are opposed to one another, in effect like steps. The third way that we started to follow in the second half of the 1950s was the idea of 'open' form, which again, Stockhausen initiated with *Klavierstück XI* especially, also to an extent with *Zeitmasse*. Very quickly Boulez began his third sonata, I began *Mobiles* for two pianos. But *Mobiles* was finished only in 1958, and in the meantime I met Luciano Berio in Darmstadt and in 1956 he invited me to work at the *Studio di Fonologia*. When I was in the train to Milan, my idea was, I would say, a double project. On the one hand, I wanted to emphasise asymmetry as much as possible, even inside the sound - that means beginning with noisy material, white noise, and filtering it in many ways so that it produced the material you have just heard at the beginning of the lecture. And the other was to try to compose variable forms, that meant to compose a certain amount of small elements which could be organised in different ways. One thing you may have heard very clearly in this version is that because the echo chamber I used (which was a natural room constructed of concrete) and which, of course, is characterized by privileged resonances at certain frequencies, you have a sort of a central spectrum when there is much sound, especially sustained sound. You hear a sort of 'column', which is like an 'overtone' column, at the highest point of the form. And this shocked me very much... not shocked but interested me very much, and it was a very important experience, among others.

So in 1958 at the international exhibition in Brussels we created a studio for electronic music which we had wanted for a long time. I say 'we' as musicians and two other persons: an engineer and a young businessman who helped organise everything. We made some works for the exhibition, film music and some outdoor music, and for me it was the occasion to begin *Rimes*. *Rimes* was a piece for orchestra and tape, it was one of the first examples, I think, for orchestra and tape. I did the first part in 1958 and it was first performed under the direction of [Bruno] Maderna in a week of experimental music in October at the end of the exhibition. And then I composed the second part in early 1959 which was performed by the orchestra

of Brussels Radio, under the direction of [Pierre] Boulez (he replaced Hans Rosbaud who was unwell) - this was outdoors in Aix en Provence. And he asked me to compose a third piece to make the first performance of the whole work in Donaueschingen the following October. I shall play the first part. There was a little orchestra of strings and percussion only, percussion including keyboard, on the stage. I had a one-track tape which then, by modulating, I produced a 'false' impression of distribution, using the orchestra to hide the moments where I changed, and so forth.

Sound example 2: *Rimes* (movement 1)

You can hear the tape was made partly of pure electronic sound, at the end especially, but also partly of concrete sounds, mainly originating from small percussion instruments which were then repeated, iterated and so forth. In the second part, which is a little longer - six minutes - you have new instruments which are distributed around the audience, and which complete the tape in spatial distribution. When Boulez asked me for a third part I had no time to work in the studio to finish the piece so I left the tape out and just the orchestra remained. So you have a form which evolves from the orchestra on stage with tape, and then all the players and equipment, and then only the players. And one doesn't feel any rupture after the second part, it's absolutely continuous, it means the orchestra has learned from the tape, one can say, or the composer has learned how to write for the orchestra by composing with tape. No mobility here, no 'open' form, but a study on space, on distribution. But I composed then, also in this studio, a tape for a ballet called *Électre*, after Sophocles, which gave me the opportunity to study dramatic and expressive means which were all derived from very elaborated speaking voices. And gradually, at the end of the 1950s - in 1960 to be precise - I arrived at the point where I decided not to remain confined within this very strict and very narrow orthodoxy of serial music. It was already very greatly enlarged. For instance, if we compare this piece with *Scambi* you hear that there is already a very much stronger wave structure in the

form. I then developed the idea of *generalised periodicity*⁶ - but we will come back to this a little later - I worked on it a great deal. And I decided also to enlarge completely my material in the direction of harmony again. This meant to take up - not to go *back* - but to take up again all existing harmonic and melodic possibilities which had been repressed by us in the 1950s. Likewise on the rhythmic and formal level, macro-rhythmic level, and also on the material level of sound, of harmony and so forth. I widened the scope a great deal, and also it was the time when I met Michel Butor, the writer, and began to compose with him *Votre Faust - Your Faust*. This is a kind of opera of musical theatre which is variable - 'open' - and where not only the performers are included in the creation but also the audience, because the audience has to intervene and decide on some direction that the action must take, and naturally the music as well. So this occupied us for almost ten years, during which I also composed other things, of course. The idea of *generalised periodicity* was applied to various instrumental works, like my first string quartet for instance *Ode for string quartet* of 1961, or *Couleurs croisées*⁷ of 1967. But at the end of the 1960s, early 1970s, I had the opportunity to compose a work where I would study this question in detail: it was when the studio in Cologne invited me to realise a new, larger work. I passed the whole summer of 1972 composing eight studies which I called *Parabolic Studies*, which are now released in a box with four CDs⁸. I would like to emphasize this work and its consequences – its practical consequences - today.

So, first of all I will describe the principle. When I came into the studio, I had worked in various studios. I had been in America and had also visited the studios in Stanford, in San Francisco and I had also seen Moog's equipment in New York State and so on. I was slightly acquainted with the idea of voltage control, which was an analogue technique, where instead of turning knobs (as we had to do in the very first period of electronic music) to vary the sound, we just used the equipment (which was laboratory equipment, in fact, for scientific purposes) so one turns the knobs, one uses the switches and so forth to change the sound. We had low frequency

⁶ For more information on 'generalised periodicity' see: Pousseur (1970) and Decroupet (2003).

⁷ See: discography (3).

⁸ See: discography (4).

generators which would influence the frequency of sound generators and, for example, give a perceptible sine-wave motion or triangle or sawtooth or square-wave motion like when you hear a police car or fire engine or ambulance passing by. But fortunately I found in the studio four generators (which were items of laboratory equipment) with a main generator which had one big dial going from 1 to 1000 Hz, which could be also modified by another small switch by 100, so you could go from 100 to 100,000. And then there was one small, so-called 'sweep' generator, this was a low frequency generator which could have very long periods, up to two minutes for one period - so that's already very, very long. And they also had an input where one could put signals coming from the other generators. For example, one could have one main generator for the sound and all the other sources, seven other sources at low settings. Naturally, in addition to the low frequency generator, the three other main generators could be set to beneath the audible threshold, where it is not sound anymore - but rhythm. This would interfere in such a way that at the beginning when I tried it gave me a sort of chaotic 'fountain' of sound, and my main concern was how to channel it, to use it to get something interesting and meaningful.

So, I'll briefly show the principle. [Prof. Pousseur illustrated the following remarks with diagrams] You see here the four main generators connected in such a way that the sound of the upper right one is modulated rather quickly by the second, whose speed is modulated by the third, which is in turn modulated by the fourth. So you already have a variation of the speed of the modulation. Or instead of being in series you can have them have them in parallel. Then the different modulating signals will interfere with each other and you can set them as square-waves or as sawtooth waves - or as any waves - and it gives you forms, structures. I will show you this in a second but I will show you the principle of connection first. Here then you have the four, like at the beginning, but also with sweeps, these are the very slow ones which influence the main generator, and this already complex signal modulates three times; either one another or all three sounds, which also has a sweep! So you already get things which are incredibly lively and musical - or pre-musical, if I can say. This, at any rate, was my impression. Here I have described the same process but with a little more about the principle of series or parallel in rather clearer manner. And here we have the first

examples of results, the first example is already something quite complex. I don't need, I think, to show you the most simple ones, you can easily imagine the police car or the ambulance! Here we have three sweeps, one has a period there, which modulates the speed of this triangle-wave, and here we have another sweep which modulates the speed of a square-wave, and it has a period length which repeats, of course. And here a third sweep with a very long variation of pitch which modulates the whole result - the whole process produces this design for the sound as result. It's already rather complex but you can imagine when we have all the eight sources synchronised in such a way that the sound and rhythm influence the sound colour - the timbre - a great deal. You will hear how incredibly the sound material constantly becomes modified very slightly. I will give you examples in a moment. Some more - here are more simple examples. In fact it's a triangular-wave which is modulated by two waves that interfere, and here is a triangular-wave which modulates it in pitch, and here the rectangle is faster, so you have another design, and here again you have a complex result, maybe it's the same as we had on the first set of examples. Here you have the simplest examples, it's frequency modulation in fact, by square-wave modulation. A square-wave modulator modulates a triangular modulated signal. And here, on the contrary, there is a triangle which modulates a triangle, and it's more continuous.

At the beginning, as I said I was just trying to 'govern' this turbulent material that came out, and I had to reduce some things and to co-ordinate everything. So, one day after several days of little success, I got something very interesting, and I left the tape recorder recording half an hour. I will play you just the beginning of this. The next morning, I recorded on four-track tape recorders. Thus, I recorded it on two tracks and I also used peripheral devices, of course - ring modulators and filters and so forth. I used a ring modulator to differentiate somewhat the two tracks, so there was also a spatial motion, which one can hear. The next day I did a second double-track, which I added to the two other places of the four tracks and which was approximately of the same type, not precisely - but I will not go into details. So, during this half an hour I didn't change anything; it was without any splicing and without any intervention by me. I didn't change anything. I left it half an hour, I added a second

half hour double-tracked and it was the first étude⁹. I called it the *Les Ailes d'Icare* - 'The wings of Icarus'. Because Icarus had become a character in many of my titles as a sort of sign of the desire for liberation. It's Icarus the second! Icarus who has found wax which *doesn't* melt in the sun. It's like pearls 'turning' - turning around; pearls which change constantly in colour and light.

Sound example 3: *Les Ailes d'Icare* (extract)

One heard in the 1970s and 1980s many sounds of this quality, but the interesting thing here, I think, is that without any intervention it's already so varied and interesting in its evolution. You have many accelerandi, decelerandi... and so forth. You can hear the two levels. In addition, one of them, which changes in square-waves, already seems to be a 'double' voice, like a Bach sonata for violin where you have two voices alternating. Now, my idea was to produce a certain amount of such studies, each with a different character, and I decided that I would intervene a little more, of course, to conduct my little 'boat' in trips that would visit various 'landscapes' so to speak. And I also gave very imaginative, or picturesque titles, because in the meantime I had also considered, I would say, the idea that electronic music is not at all abstract. It's music that makes many references to many kinds of reality. If you hear a piece like Stockhausen's *Kontakte*, for instance, you have incredible landscapes which pass by and mix and change, landscapes and events of various types. So this was my purpose, to 'conduct' this material by having images in my mind.

⁹ The titles and durations of the eight studies are:

1) Les Ailes d'Icare	31:06
2) Liebesduett	28:16
3) Viva Cuba	23:18
4) Voyage aux Éléments	38:22
5) Hymne à Zeus Ornithologue	27:52
6) Aerial View of Haïphong, Massachusetts	21:06
7) Mnémosyne Disparue	36:03
8) An Heinrich, Ping-pong	21:20

So, the second étude I did with an assistant, a young Mexican girl who was my assistant, Estella. And we made it by hand, so to speak. I took the first track of the first étude and put it on her tape recorder, which was a tape recorder with variable speed, so she could change it again. In addition to all the changes that are already there, she could change the speed, more or less. It would not appear like something artificial because it was already in the material itself, so she just emphasised some movements in the sound, or went against them sometimes. And I placed, on a different tape recorder, another scrap of material which contrasted quite a lot with the first one. Thus, we had two type of 'beings', with long pauses in one or the other. I made some signs, I didn't say many words. But because we did it in this way, and because of the stories that you hear, I called the piece *Liebesduett*, 'Duo d'amore'. I will play you a moment where one hears very well the main sequence which is very, very long. Not just here - because there are other moments which hide it to some extent. I don't remember exactly whether it was *accelerando* or *rallentando*, but one can follow it very easily.

Sound example 4: *Liebesduett* (extract)

My material was based mainly on square waves. Not only these, but it is characteristic of events which are well cut, defined, while the other (*Les Ailes d'Icare*) was more fountain-like. Up to this point I had no dynamic modulation, the dynamic modulation was made by hand or was the result of the registers, but... I was looking for something. So, with the ring modulator I could produce dynamic modulation by using very slow impulses, whose zero point was a small, but very soft sound. I did a whole study on this material which I called *Viva Cuba*, because it was very percussive and has a sort of character of carnival. So, we hear something from the beginning, where very periodic elements follow on one another.

Sound example 5: *Viva Cuba* (extract)

(Prof. Pousseur comments on the piece whilst it is being played)

There are small turbulences, and then it will become periodic again, and then after the next turbulence it will become periodic a little faster, a little faster every time for four or five minutes. And then I put in a modulating frequency which will replace my intervention. The turbulence is made by hand. But you see there are small appoggiaturas, this is because there are two frequencies, in fact, which modulate the periodicity, one is secondary and adds little irregularities. Again a turbulence, and it will continue. And if we hear now from just before the end of the study where it is purely automatic, I intervene a little - but not very much. Then at the end it becomes very, very periodic and disappears like a little carnival which goes away, You see, some modulating elements, changes of pitch and the colour, the quality of sound and so on, while the rhythm is fixed. I accelerate a little, in fact it was the moment from the first periodicities where one enters into automatic modulations. It's purely automatic here, but, I could, of course, intervene with the generator on one sweep to produce one partial change, I think it's easy to perceive the process.

I won't speak about the fourth étude but the next, the fifth, is my favourite. It's called *Hymne à Zeus Ornithologue*. I will play it completely at the concert this afternoon, but we'll hear a little from the beginning. I gave it this title because there were two extremes in the scale of possibilities. There was a unidimensional scale of course - it was a sort of field. At one extreme one had sorts of fixed chords which alternate very slowly. At the beginning they were very, very slow, and then they accelerate irregularly until it becomes a kind of slow march. I thought I would put this slow march into the [listener's] memory because there is one of the modulation techniques that I could put in or not: when I put it in, then one has the march. The other extreme is like birds, singing birds of all kinds, water birds and so forth, sometimes many together, sometimes only a few. And the middle region of this study is a landscape of birds, and then one goes very gradually from one to the other, and then one goes back again (in the forest if you like) and then Zeus appears! - he was already hidden at the beginning. So we will hear three examples: from the beginning, the march and the way it changes in sound character but always coming back as rhythm. Then we go briefly to the bird region, and then we have the end with the appearance of Zeus. But I will modulate [the volume] because it is necessary to correct some levels.

Sound example 6: *Hymne à Zeus Ornithologue* (extract)

There are a few more études with their own characteristics but I will not go into these further. What I did during this period, as at the end of the work I had very little time, was a 'Paraboles-Mix'. You know that Cage introduced the word 'mix' from the kitchen into musical composition, from cooking into musical composition! And I called this possibility - it's an 'open' possibility - 'Paraboles-Mix'. It consists of taking some of this étude (or all of them) - it depends - as I did with tape recorders at the time. In the studio I did one where I planned the work, not completely as one piece, but as six big blocks in which all the études were partially contained. The études were divided into six, each of them, and they were then mixed and also, once again intermodulated according to the possibilities of the studio. These six blocks could be put in various orders. And then I gave concerts where I had my études (just in two-track versions because I have two-track copies that I was given by the radio station) and by putting them on two or three (rarely more than three) tape recorders according to a certain plan that I changed every time - I never did the same thing twice! - I did a mix in which I modulated the sounds. Then I listened to what happened as I had done during the composition. I listened to what the equipment and the nature of sound gave me and I conducted my 'journey' through the various 'landscapes' in this way. Now I mixed them and I listened to how they differed. I knew, of course, the trajectory of each study and I could also, to some extent, foresee what would come next. So I privileged one or the other and so forth. And also by composing my plans, of course, I also work with some knowledge of the content of various studies. Sometime I put 'alien' elements inside this mixture, other pieces of mine, electronic or not, or pieces by friends. Or there might be live musicians or singers who improvise 'inside' it. And so there have been many, many versions. So, we could hear the CD from the book¹⁰, minute 50. It is very, very long. It's called *Paraboles-Mix mit Höllenlektion* - it was done for Cologne University, *Paraboles-Mix with Lessons of Hell*. *Lessons of Hell* [Leçons d'enfer] is another work - a musical theatre work - which I did in 1991 for the 100th anniversary of Arthur Rimbaud's

¹⁰ Prof. Pousseur is referring to the book: *Parabeln und Spiralen*; see: Pousseur (2002)

death. It was quite a long piece but with few people: two actors, three singers and some musicians. But with a lot of electronics, direct from the transformed instruments or from tape. And on the tapes I had either little elements by Rimbaud himself, which are already repeated in his texts sometimes, and I made long, long loops, repeating them and gradually changed the quality by filtering and so on, [to produce] various types of transformations. And these periodicities, which were on four different tracks, came to have a function through the piece, a very precise function. They describe the last journey of Rimbaud in Africa when he was brought from Harar through the Red Sea to be taken back to France to die. And he wrote a little journal, a little diary, it was very, very short. The baritone sings this as well as the punctuation signs - everything. And these periodicities are the basso continuo, so to say, to this singing. Other instruments and voices also intervene. Another part of the electronic elements on tape is Ethiopian ethnic music from all the tribes of Ethiopia. There are many very different cultures which accompany the recitation, their sounds are also transformed and, to some extent they are recognizable. Things are told, which Michel Butor has written in the texts, imagining what was happening poetically in the head of Rimbaud when he was in Africa. And so I put these two elements and all their repetitions inside this version. We can listen to a part where you have the 'Paraboles-Mix', rather quietly. I think one hears something of the birds but also other elements that you haven't heard, and in the foreground one hears three layers of Ethiopian voices: a Hamar narrator, a man who speaks to his child, maybe, or children or tribesmen and says something happened, he doesn't know what, in a very gentle manner. And then there is a warrior of Eritrea, from the north of Ethiopia, who talks about his war experiences. The third is a Coptic priest who reads in the old religious language of Ethiopia an epistle of Paulus, St Paul, and the three are mixed in a certain way, so we'll hear at least the beginning of that.

Sound example 7: *Paraboles-Mix mit Höllenlektion* (extract)

I would like to play the complete passage, but time is running out and I still want to play you some other things.

The CD of this piece, which lasts more than an hour - an hour and a quarter - is published in this book [Parabeln und Spiralen], published by Cologne University. It's a series: *Signale aus Köln*, and my book is based on two lectures I gave. A text is included, it is almost half of the book. It is a report I wrote in the winter of 1973 about the composition of these Parabolic Studies. It is very detailed, the whole text is there, and it also describes the circumstances which are interesting from the point of view of relations between composers. The first lecture was about an instrumental and vocal work which is called *Dichterliebesreigentraum*¹¹ which is a sort of long paraphrase about Schumann's *Dichterliebe*. I gave a lecture about my harmonic studies particularly in *Votre Faust*, and then the second was about this 'Paraboles-Mix'. After that I gave a concert, the realisation of this *Paraboles-Mix* with *Lessons of Hell*.

I want to tell you one last thing before we finish. I could say many things of course because there have been many realisations of all kinds. I have taken excerpts from this material to put inside of other works because it fits very well. It is material that is very useful for many purposes. For instance I made in 1977 a sort of radio play telling a story¹². It was for the inauguration of IRCAM. And it's a double journey, a tourist of Liège goes by train to Paris, to visit Beaubourg and comes back by train. At the same time Michel Butor leaves Paris by plane and goes around the Earth, giving at some places a lecture about Rousseau. For the play especially I used some of the sounds, some studies, that you have not heard, and to accompany the lectures I used the birds of *Zeus Ornithologue*. Now I want to show you that other people can also use this material. There is an organisation in Brussels that is interested in new culture, not only so-called serious music but also open to more young styles, and popular styles, but at the level of research let's say. And so they got some DJs to work on this material, and we did a concert where I played a small *Paraboles-Mix* for half an hour, at the beginning. And then came two English sound artists: we will hear Robert Hampson first and Philip Jeck second. We will hear the beginning of their realisations. They took my material and did something personal. The first one

¹¹ See: discography (5).

¹² See: discography (6).

respected my material and, I would say, didn't use much other stuff, but he sort of dispersed the material in space, in time-space. So maybe we'll listen to the beginning of his piece because it lasts half an hour, of course, each time. So just a little bit...

Sound example 8: *Paraboles-Mix* by Robert Hampson¹³

Well, we are obliged to be very brief, excuse me. I would ask the composers but they are not here! But we must stop and before I play the piece of Philip Jeck you will hear that he did something much more compact where some features of my material appear on the surface so to say. Similar to the way some artists who press old cars together - it's a little like the same type of procedure.

Sound example 9: *Paraboles-Mix* by Philip Jeck

The first one was modulating from the booth, like that [points to the control booth]. He was onstage with a record player, working directly.

Just to say a few words to finish before leaving you with the work. You can tell me your opinion or ask questions if you want. In the last few years I have produced a work which is not 'mobile' or 'open' in this sense but to some extent is also an example of a work which continues to change and is able to evolve in the future. I was asked to compose a programme, a long programme of sound, music and words and also silences, for an architectural complex of buildings with an internal courtyard. It has not been realised because this architectural project, although it has been constructed, it is not really built for the intended function. It was 16 hours, a programme of 16 hours which I have reduced to 4 hour and 40 minutes, *Un Jour du Monde en 280 Minutes* and the main musical materials of this whole programme are 16 planetary landscapes, landscapes in which I have used (as I did in *Leçons d'Enfer*, (Lessons of Hell) ethnic material from all over the world. This time I composed landscapes of various lengths, from 6 to 29 minutes. There are 16 which have titles indicating which regions of the world are combined. They are very distant

¹³ These Paraboles-mixes have been released on a double CD, see: discography (7).

from one another, in fact. You have for instance *Alaskamazonie* or *Vietnamibie* and so forth. In the afternoon we will hear a second piece in the little concert, one of the longest of these landscapes, which is called *Caraïbes ouralocéaniennes*. Thus, it means the Caribbean, Central America one might say, and central Asia combined. I have taken 5 of these landscapes, which are published by the Italian publisher Alga Marghen as a box of 3 CDs with a booklet¹⁴ in which Michel Butor has written poems and so forth about the material. I have taken 5 of them, for several years, and begun to produce images, visual images on my computer, with Photoshop and other programs, and also a special program that one of my sons-in-law has developed to produce light projections so that my images can be interwoven in different ways. I have made 5 of them, which makes a complete evening if you will. We gave the first performance in late November¹⁵ in Brussels, and I played it again in Lyon a few weeks ago. Here we have one of them with projections, on a somewhat too small a scale, it should be large scale but it will be a reduced version, visually speaking. You will see here how the music, the sound and the pictures complete one another, I think it's an interesting work. Anyway it was for me very, very important¹⁶.

Applause

Questions

John Dack: Has it always been important, then, to re-use material?

Henri Pousseur: Yes, I think it's a general procedure, in my instrumental music also. For instance, my theatre works, my musical theatre works, *Votre Faust* and others, are not played very often, because the opera houses are not really interested in this kind of thing. I wanted the music to be heard, of course, so I composed taking part of the material and rearranging it for a small chamber ensemble or for a large orchestra

¹⁴ See: discography (8).

¹⁵ The date of this première was 21 November, 2004 at the Théâtre Balsamine, Brussels.

¹⁶ The UK première of *Voix et Vues Planétaires* was given on Saturday, 24 November, 2007 at the Conway Hall, London. The concert programme with additional information, Michel Butor's poems with English translations by Christine North and images by Henri Pousseur can be found on the 'Scambi' web site (www.scambi.mdx.ac.uk).

while in the theatre piece there are only 12 musicians. I composed, I call them 'satellite' works, there are 'satellites' to *Votre Faust*, I don't know, almost 10 I think, various pieces of this kind. One should be played next winter [2006] at Mozart's 250th birthday in Genoa and in Freiburg conducted by Hans Zender and the orchestra of the Südwestfunk. It is from one part of *Votre Faust*, which is an 'open' play, and exists in various versions where the audience chooses where to go. In addition, the 'open' play has the background which, in 2 cases out of 4, leaves a big important opera scene, one of them being the scene of the commandatore in *Don Giovanni*. And then - it'll take a long time to explain - there are many little examples inside that, but it's an example. And I also told you about examples where I took material from the *Parabolic Studies* in other works - and there are many examples of this kind. Of course, I also must invent new things but I like to re-use material in one of the other ways. In this case the music is fixed, I myself - and this is a question that could be posed - I'm surprised that nobody asked about it, but the *Parabolic Studies* are purely analogue material, and it was only possible to do it, up to now at least I think, with analogue material. And I must admit analogue material is sympathetic, because it is closer to the reality of sound. It is 'waves' and analogue techniques directly produce waves, of course with much less control than digital techniques. I'm sure that the development of digital techniques will allow - or already allows - things that would be close to that type of modulation, intermodulation. But I have not worked personally very much with digital techniques, but my son who is also a composer and has a small but very well equipped studio, is very familiar with these techniques. The music of this whole programme [Voix et Vues Planétaires] was done at his studio. I made the small plans and then I went to him and he realised them in my presence, and he also responded to my suggestions, so he was almost a co-author. But he doesn't want to be co-author! He wants to have his own personality and he realized my project, just giving some sort of expert advice and suggestions. And then I did the digital images myself, at home, I did every part alone, working very hard, first to acquire the ability to control the images in all these variations, and then specially mixing them by long fades or by replacing some parts of an image by another and so forth. It's another example, and maybe I have a few years more where I will try still other things, I don't know. I hope that these 5 which are the duration of a concert will

be published on a DVD - I hope, it's not yet decided. But there are some young publishers who are interested, and then on the DVD one could then put not only the programme with its modulation, if I could say. But in front of each of the 5 pieces there would be - like in the concert when one does the whole thing - a prose text, which was read at the first performance by Michel Butor himself. It can be read by somebody else, of course, if he cannot be there. But one could also have on the DVD, the opportunity to look at the pictures separately. There are many - almost a thousand - but they are worthwhile because, as we will see if you attend, sometimes they pass very quickly and one might like to see them a little longer to look at the details and so forth, voila, it's a type of project.

Prof. Simon Emmerson (De Montfort University): Because music exists in time we only hear the fixed result of your choices, those choices or somebody else's choices. When you did your version of *Scambi*, those years ago, did you do several versions and then choose your favourite by ear?

Henri Pousseur: I did several that still exist. In the Cologne lecture in December when I spoke specially of *Scambi* I played first the version by Luciano Berio as a little homage in memorium. Then I explained different things and I played two versions of my own, which are quite different but respect the rules, if I can put it like that. The one by Luciano Berio doesn't! He took the material and organized it in a way that was his way of doing it.

Prof. Simon Emmerson: So for us, the audience, what do you think the great artistic benefit of such mobility is?

Henri Pousseur: Well, I think it's the possibility of participating, not only by listening and recognising different versions for instance, that's the simplest and the most passive way. Receptive way, let's say, not passive but receptive, purely receptive. While in instrumental music firstly the independent ones - the performers - are really taking part in the invention of the actual music, and this can be seen by the audience,

in some cases at least, because there are movements of the musicians or, who knows, there may be theatrical gestures. In *Votre Faust*, as I told you, the whole story is variable and the audience did not have a great deal of experience with this. But at one performance in Bonn, Germany in 1999 (which I didn't like completely as far as the staging was concerned) there were some big mistakes - but the circumstances are too long to explain. However, at least all the possibilities of ending and of going in various directions were realised. And then, in the 1970s we have a reduced version. We made cassettes from three records. This reduced version has been used since as the basis for performances. Universal Edition preferred to have a less 'heavy' version for the materials and so forth. And also, I think, for theatres it's easier to prepare this version than the whole lot, because it's a difficult task really. And then, I think now with electronics, and that really is the purpose of the study, of the collective study, the internationally 'open' study that John Dack and his friends have initiated, through the internet it's possible to imagine all kinds of interventions with the material. I am not against this. I hope in the future the economy will have changed in a way that this becomes a real factor of happiness.

Mark Schreiber (Sound Artist): In your piece *Scambi* it sounds as though there are a couple of big moments where sounds need to occur from different spaces. Did you actually play your sounds in different places or...?

Henri Pousseur: In fact it's 2 track stereo, and with 2 tracks we can already have the orchestra imitated and I modulated a little to play with it a little more. Sometimes, in Cologne, in the lecture concert I gave there, I had 12 tracks, I had 12 points of distribution, and I distributed the 2 tracks in a way that each track did the whole circle but each point had another spectrum and correction so that the sound itself was attracted more or less to this or that loudspeaker. So one left an impression of whole complex space. I did this already with *Rimes*, with one track I tried to give the illusion of multispatiality.

Pavel Nichtburger (Sonic Arts student): In *Leçons d'Enfer* there is, in the middle, a

sort of melody, some ostinato?

Henri Pousseur: It is the seventh study, as I told you, which we have not heard examples from, and which was made only by modulation of square-waves, which produced pitch variations, but there was never very much ostinato. However, sometimes they had a certain fixed quality. I did it with the assistance of Peter Eötvös, the composer and conductor. He assisted me at that time - he was busy in the studio in Cologne. And this gives it a sort of, how does one say... bell play, carillon, bell ensemble... it's a sort of bell ensemble but with a flute character and then it accelerates so much it becomes a sort of vibration, but it's impossible to play you everything, it's too much!

Pavel Nichtburger: I just wanted to ask if this is the result of premeditated thinking, or just the result of experiment?

Henri Pousseur: It's both!

Audience member: The melody was... (imitates)

Henri Pousseur: In various studies there are such things. Also in *Hymne à Zeus*, which you will hear this afternoon completely - in only a few hours. You have moments where it's quite repetitive but slowly it changes, and sometimes it changes quickly as well, but I deliberately include quite repetitive structures, from rhythmic or different points of view, of course. But, naturally, I cannot predict exactly what will happen, in this particular case I mean, so the result is a dialogue between me and the chance of machines, and of waves, interacting waves.

Prof Elena Ungeheur (TU, Berlin): When you hear your own pieces do you mostly compare the versions, or when you think about *Scambi* is there one version that is better, what's your own feeling about the various versions?

Henri Pousseur: The version, that was played before, I said (I think) that it was my

preferred one, because I made 2 or 3... I don't remember, and I think they are all valuable. But this one has the most perceptible overall form, in one big wave which is itself carried by several smaller waves, so it's a good demonstration already of this theory of generalised periodicity. This may be one of the reasons. And I wrote, in an old article that Pascal (Decroupet) knows very well, in *Die Reihe* volume 3¹⁷. I wrote this in the period of very asymmetric research. In some piano pieces for example, I had a tendency, which was a traditional tendency, I think to some extent a symphonic tendency, to compose a form which had a direction which was very strong. It was carried by asymmetric material but reached a climax, so it may be a sort of atavistic way. But sometimes I also do things which are much more constellated. Voila, I think we can explore different formal models more or less effectively, but I think that there is (and probably your question would fit with this idea), there is in perception, the consciousness of reality anyway. Particularly in a piece of music, there is a sort of 'legality', a complex of laws, which have been described, perhaps not in a complete way - one should not be too fanatical about this - but which is nevertheless described by the Theory of Information. This means if you repeat the same type of information too much, even statistically, it remains always in the same field of possibilities. Then the information goes down more and more, and you have to find ways to renew interest, if I can put it like that. But it's an idea and you can also have a contrary idea, because, for instance, the music of trance is more based on repetition and putting you in a state of less conscious perception, it's a choice, and the choice of the same person can change from one place to another.

John Dack: Professor Henri Pousseur – thank you very much indeed.

Applause

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