

## **Pousseur's *Huit Etudes Paraboliques*: Musical and Social Contexts**

**Dr John Dack**

Middlesex University

j.dack@mdx.ac.uk

### **Abstract**

My paper will explore the specific contribution that electroacoustic music can make to challenging the accepted concert framework both in terms of a work's duration and the location in which it is to be presented to the public. My case study will be the specific practices of the Belgian composer Henri Pousseur (1929-2009) and his electroacoustic work *Huit Etudes Paraboliques* (realized at the Westdeutscher Rundfunk studios in 1972). Each of these eight compositions is an autonomous work. However, according to Pousseur they can also be regarded as source material to be 'plundered', reconfigured and thus re-mixed to produce new works. Furthermore, new musical material – by Pousseur or other composers – can be added. These *Huit Etudes Paraboliques* were the first works of a 'Système des Paraboles' (Parabola System) where each piece has the potential for extension. Thus, the connection with earlier and indeed later 'open form' works is clear and, as a result, the *Huit Etudes Paraboliques* are transformed into individual *Paraboles-Mix*. What is of relevance for the questions posed by the EMS2014 conference is that each of the new *Paraboles-Mix*, by using material from one or more of the *Huit Etudes Paraboliques*, opens them up to infinite elaborations. Consequently, the musical material need not demand closure after a limited amount of time thus encouraging works of extended duration – the main subject of the EMS2014 Conference. The act of poiesis on the part of the musician realizing the *Paraboles-Mix* now dominates.

Pousseur's social commitment was a consistent thread in his intellectual development. It was particularly evident in the first decades of his career as demonstrated by his book *Musique Sémantique Société* (1972). Similarly, his 'open' work *Scambi* (a rare example of an 'open' electroacoustic work) has social as well as aesthetic implications. Moreover, Pousseur even imagined real-time realizations of *Scambi*, possibly resulting from interaction by several musicians in 'music workshops'. Clearly, such social gatherings would not conform to traditional concert practices. These ideas were speculative and perhaps even utopian. The technology of the 1950s prohibited the full potential of Pousseur's vision. Nevertheless, I will argue that Pousseur's combination of practice and theory can now be fulfilled and inevitably challenges both the nature of long durations and traditional concert practice.

Drawing on and elaborating research already undertaken on *Scambi* (references to this project can be found in the following text) my methodology will be to examine specifically the *Huit Etudes Paraboliques* both as 'closed' works and in their manifestations as re-appropriated, 'open' works. There are several *Paraboles-Mix* where Pousseur and others use the original material in 'live' re-mixing. These *Paraboles-Mix* can be subjected to a cultural interpretation

along the lines of Craig Ayrey's article "Pousseur's *Scambi*, and the new problematics of the open work" where interpretation of 'openness' can lead to the premature 'closing' of the work under consideration. I believe it will also be possible to show a continuity between Pousseur's methods in the WDR studio where the equipment allowed him to embark on 'voyages sonores' and the final realization before an audience in non-traditional venues.

## Introduction

The purpose of this paper is to investigate the *Huit Etudes Paraboliques* (or 'Eight Parabolic Studies') by the Belgian composer Henri Pousseur (1929-2009) in the context of the conference call for papers regarding the composition of works of long, even extreme, duration. These eight studies are electroacoustic compositions realized in the studio of the Westdeutscher Rundfunk, Cologne in 1972. They were, of course, analogue 'tape' works; their sounds are indisputably those of a classic electronic studio. The sole exception to analogue electronic sound material is the eighth study: *An Heinrich, Ping-pong*. This features a real-world sound: the voice of Karlheinz Stockhausen. Interestingly, Pousseur tended to regard this study as different from the others not only due to the sounds themselves, but also because its realization resulted from cut and splice techniques familiar to all composers of the analogue era as opposed to the 'improvisatory' nature of the other seven studies (this will be discussed below). A thorough study of these works is, of course, impossible due to limits on word length but it is crucial that they be situated within Pousseur's particular aesthetic attitude towards 'open' forms. Pousseur was particularly committed to the variety of 'open' forms used by contemporary composers such as Stockhausen and Boulez. Thus, I shall refer to the origins of the *Etudes Paraboliques*, what role the technology played in their creation (albeit briefly) and, most important of all, how Pousseur's approach to 'openness' can be identified not only at the stage of creation, but also how 'openness' is then subsequently re-negotiated in subsequent realizations. The texts to which I have referred are those in the book 'Parabeln und Spiralen'. This publication resulted from talks and performances given by Pousseur at the University of Cologne over a two year period. Of particular interest for this presentation was the chapter: "Die Zeit der Parabeln" which is a translation of Pousseur's French text "Le temps des paraboles". I have not yet consulted the original French text and have, therefore, relied on the German translation.

## The *Etudes Paraboliques*

The *Etudes Paraboliques* occupy a very specific place in Pousseur's oeuvre. We should note that any one of them can be played individually as a complete, autonomous work. The following is a list of each *étude* and their durations:

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

It is noteworthy that in their original forms these studies could already be regarded as electroacoustic works of long duration along the lines of Eimert's *Epitaph für Aikichi Kuboyama* (1958-62) and Stockhausen's *Kontakte* (1959-60). Indeed, as part of a project I undertook in 2004 on the subject of Pousseur's 'open form' electroacoustic composition *Scambi*<sup>1</sup>, I invited Pousseur to London where he gave a presentation at Goldsmiths College, London. This took place in February, 2005. One of the works he presented (and played with minimal diffusion) was the fifth étude: *Hymne à Zeus Ornithologue*. Thus, this confirms his belief that each study could be played as an individual work. However, from the outset Pousseur also intended these *études* specifically as *source material* for new realizations. Pousseur, like many contemporary composers, created 'satellite works' where material used in previous compositions was re-worked in different ways in an attempt to demonstrate the varied number of possible developments such material implied. In re-working the *études* we might inevitably ask: where are the 'real' *études*? If they are source material to be plundered (as many young musicians would now say) do we ever get to hear the 'original' work other than as in the concert at Goldsmiths College? Or are we always confronted by endless successions of simulacra? One problem in trying to investigate 'open forms' (and this is precisely why they are still so interesting) is that, as Craig Ayrey states in his article on the 'open form', (Ayrey, 2005) Pousseur provides answers to these questions – though only partially. In general, there remains a sense of tension between the pre-given material and the way composers act within the constraints of the 'score' (if there is one). In the case of the *Etudes Paraboliques* Pousseur permits, even encourages, these *études* to be used in part or – less commonly – in whole and, most importantly, with other sounds or live instruments. Thus, even allowing for performances à la Goldsmiths College, the *Etudes Paraboliques* exist as source material for an endless number of new works whose duration will consequently depend on many factors. Most often in Pousseur's case, these new versions were largely improvised (there are 'scores' or plans for these works). Presented in this way they become *Paraboles-Mix* and the possibility exists that the new works become so distant from their origins that any substantial connection with the original *Etudes Paraboliques* is weakened or lost entirely. However, provided the new *Paraboles-Mix* mostly contains the distinctive material of the original *études* (and the original material is very distinctive indeed!) straying too far from the originals is, in my view, unlikely. I have, for example in addition to the original eight *Etudes Paraboliques* the following recordings:

- |   |       |
|---|-------|
| 1) <i>Paraboles-Mix</i> on the Acousmatrix CD vol. 4 (1990) | 40:49 |
| 2) <i>Paraboles-Mix</i> mit <i>Höllensektionen</i> (1999)   | 78:03 |
| 3) Four 'live' <i>Paraboles-Mix</i> , Brussels (2001)       |       |
| <i>Henri Pousseur</i>                                       | 29:14 |
| <i>Main/Robert Hampson</i>                                  | 27:38 |
| <i>Philip Jeck</i>  | 27:27 |
| <i>Oval/Markus Popp</i>                                     | 34:10 |

Furthermore, even though they resulted from 'live' improvisations these additional versions now exist as CD tracks to be played as unchanging new works. This exemplifies the cultural 'closure' of 'openness' identified by Ayrey. Thus, there are these additional six *Paraboles-Mix* readily available. Naturally, any discussion of 'live' mixes will immediately raise the issue to anyone acquainted with contemporary laptop 'performances' about how closely Pousseur's intentions are (prescient as they undoubtedly were) to modern practices of 'live

<sup>1</sup> See [www.scambi.mdx.ac.uk](http://www.scambi.mdx.ac.uk) (last accessed 09/14).

remixing'. Can new, live and recorded versions of Pousseur's *Etudes Paraboliques* be regarded as examples of 'remixing' or are there qualitative, aesthetic differences which are suppressed if all such practices are simply subsumed within one undifferentiated category?

Broadly speaking, before the use of laptops as performance devices Pousseur used two to four tape recorders in such concert mixes and usually enlisted the help of an assistant. With an 'approximate' and different plan formulated in advance for each performance he mixed them, in part or entirely, into new *Paraboles-Mix*. As stated above, he also permitted the addition of new sounds in the form of fragments of his works or the works of others as well as live improvisations by musicians. These were mixed live by Pousseur in order to retain a sense of spontaneity. In the booklet accompanying the four CD set of the *Etudes Paraboliques*<sup>2</sup> Pousseur suggested that 'domestic' performances were also possible as all a person needed was two CD players and with only slight compromises resulting from the way the *études* have been paired on the CDs – obviously the pairs of *études* on the same CD cannot be mixed together! – new mixes can be achieved by anyone.

### The 'Système des Paraboles'

According to Pousseur these *Huit Etudes Paraboliques* were the first works of a 'Système des Paraboles' (Parabola System) where each new piece was composed with the express intention of being extended. Thus the connection with earlier and indeed later 'open form' works is clear. Moreover, Pousseur's work methods in the WDR studio were central to the way in which the *Huit Etudes Paraboliques* should be considered. They demonstrate that the pre-planned 'serial' approach much documented in the early days of the electronic studio was not the only method by which works were conceived but was more flexible and open to modification. Serial thought was not an unyielding body of dogmatic precepts. A more intelligent and accurate assessment still needs to be considered by many composers regarding this subject.

Consequently, in the *Huit Etudes Paraboliques* Pousseur did not use the then standard method of cutting and splicing tape (though as previously mentioned, the eighth study is an exception). Pousseur used the four voltage control generators at the WDR studios as what might be described as a 'hyper-instrument'. Each study required different arrangements but he produced the first seven of the studies in 'real-time' making frequent use of the possibilities of voltage control. Each of the generators had two oscillators one going from 1 hertz and a low frequency oscillator used for modulating other signals from 100 Hertz. By using these generators to modulate signals from other generators and with the use of filters and ring-modulators Pousseur had a system at his disposal with which he could create works which retained the sense of spontaneity but which could still be 'practised' and controlled similar to an instrument (though I would not push this analogy too far). These various pieces of equipment allowed him to go on various 'voyages sonores' (sound travels) as if (according to him) he were a pilot on a boat or small plane. While this image might be dismissed as merely metaphorical, Pousseur's use of language does give a clear indication of his sources and references which I think should not be dismissed.

The *Etudes* must also be situated within his more theory-driven projects such as his 'General Theory of Periodicity' and his 'General Wave Intermodulation'. Pousseur's contributions to

---

<sup>2</sup> see References.

post-war European theory are perhaps underestimated in the English-speaking world as many texts have not been translated into English and exist only in French or German. Many of his ideas must be analysed in light of the ‘negative’ principle that held sway in much European avant-garde music. Music was a-tonal, a-thematic, a-rhythmic. It was defined in terms of what it was not. Pousseur’s intention was to widen the field of possibilities that the serial framework seemed to offer. Pousseur applied the concept of the ‘wave’ as a method to analyse the music of others and to conceptualize his own. He referred to the image of the standard electronic wave types such as sawtooth, triangle and sine-wave as a means to understand and control certain processes in music. In addition, he was able to use the notion of a wave and, most importantly, the inter-modulation of waves to create other, more complex structures. In a sense, I believe Pousseur is still thinking in terms of individual parameters but he shows how one parameter can interact with another. Simple waves can interact to produce complex results. Once again, the similarities with serialism where one series generates another should not be overlooked but we must notice that Pousseur’s thinking is not limited to the discrete values so dear to serial thought – his thinking is analogue. Moreover, his approach is symptomatic of the freer, inter-modulatory thinking that developed from serialism and which has evolved over the decades into, for example, Stockhausen’s concept of ‘Formel Komposition’. Pousseur’s experiences in the studio and using electronic equipment seemed to have a profound effect on his musical thinking.

Pousseur recounted in detail the project he embarked on in Cologne. This included several compromises which were necessary due to personal commitments and are explained in detail in the book *Parabeln und Spiralen*<sup>3</sup>. It is worth summarizing Pousseur’s first experiences as he started the *Huit Etudes Paraboliques*. He recalled his experiments on July 20 1972 when he noticed during a recording an ‘extremely impressive process of variation’. He had two signal sources (generators II and IV) whose average sine-tone frequency was theoretically identical. Both were subjected to a modulation by a ‘sweep’ but in inverse ways and independent periods. These are both influenced by a system consisting of generators I and III (one square wave, the other triangle wave) which are also modulated by ‘sweeps’. He suggested that ‘sweeps’ of II and IV are relatively slow glissandi, I and II modulate the rhythm (an example of the result is provided on page 109 of the aforementioned book). He continued by stating that even though the modulation process is simple the combination of different wave-forms particularly at the onsets and terminations of the period create complex interferences which are perceptible and not predictable. The end result was, he claimed, recorded ‘practically without intervention from my side’.

The urgent question for this present conference theme is: how can these new *Paraboles-Mix* be extended into works of long duration? The plans that Pousseur provides gives some clues as to how he approached these improvised realizations. I think it is not too fanciful to suggest that Pousseur never really repudiated his traditional musical training – he became, after all, director of the conservatoire in Liège. In addition, his intention to elaborate serial thought still underpinned much of his approach to these performances. He often referred to density and the ‘modulation’ of one study with another (I am reminded of Stockhausen’s language in the composition of *Telemusik*). Pousseur does not simply add new sections which would be an obvious and perhaps rather uninteresting process from a musical (and certainly an analytical) point of view. My colleague on the ‘Scambi Project’, Dr Craig Ayrey suggested that Pousseur’s thinking was often similar to that of tonal composers in the sense that he was

---

<sup>3</sup> See References.

creating new works by expanding the material, by growing from within. Composition, particularly tonal composition in the organicist tradition does not grow by simply adding new material. There are many examples in even rather ordinary works where we hear composers deliberately delaying events rather than pressing forward or prolonging them. Obvious examples are the use of Neapolitan sixths at cadences. They serve to delay the cadence (which might be inevitable due to the logic of the composition) and thus open up areas of tonal space to be exploited by the composer. I believe that the addition of new material in Pousseur's new versions also enables him to control events in this manner.

If I adopt a deliberately provocative stance for a moment I would question the correspondence between the listening skills that musicians develop as they interact with a 'real' physical system (the instrument) in 'real' time, in front of a 'real' audience' and those of laptop 'performers'. The latter are not so concerned with the shaping of individual notes at the lowest level of structure or, on a higher structural level, the shaping of phrases. They are more concerned with re-configuring, placing sounds in new juxtapositions and layers (though this can perhaps be compared to a pianist playing *Klavierstück XI?*). I must stress that I do not mean any criticism of 'laptop' performance practices. Traditional musicians should not colonise sound – just because a person uses sound as their 'medium' it does not mean they become a musician nor even that they want to become one. Non-musicians, 'noisicians'... whatever name they wish to adopt, have the right to assert their status as 'sound artists' with all the complexity, confusion and excitement of this role without being told they should carry the weight of music history on their shoulders. I am perfectly happy to carry this burden but I wouldn't force it on others!

In conclusion, whether we describe Pousseur's *Paraboles-Mix* from the *Huit Etudes Paraboliques* as 'mixes' or 'remixes' seems ultimately fairly unimportant. The fact that Pousseur's music and his thinking can be adopted today and re-appropriated by contemporary artists is a testament to his creativity and his intelligence. In conjunction with Fine Art students at Middlesex University I hope to realize more *Paraboles-Mix* which I hope he would have approved of as much as the new versions we did of *Scambi*. Unfortunately, it is with great sadness that now I can never have confirmation of such approval from this most generous composer.

## References

AYREY Craig, "Pousseur's *Scambi* (1957), and the new problematics of the open work", 2007, [www.scambi.mdx.ac.uk/documents.html](http://www.scambi.mdx.ac.uk/documents.html) (last accessed 09/14),

POUSSEUR Henri, *Musique, Sémantique, Société*, Paris, Casterman, 1972.

POUSSEUR Henri, *Scambi and Paraboles-Mix*, on *Henri Pousseur: Electronic Works*, BV Haast Records – CD 9010, 1990.

POUSSEUR Henri, *Komposition und Musikwissenschaft im Dialog II (1999)*, *Henri Pousseur: Parabeln und Spiralen, Zwei Hauptaspekte eines Lebenswerks*, Münster, LIT Verlag, 1999.

POUSSEUR Henri, *Paraboles-Mix mit Höllenlektionen*, CD included in *Komposition und Musikwissenschaft im Dialog II (1999)*, *Henri Pousseur: Parabeln und Spiralen, Zwei Hauptaspekte eines Lebenswerks*, Münster, LIT Verlag, 1999.

POUSSEUR Henri, *8 Etudes Paraboliques*, Sub Rosa, SR 174, 2001.

POUSSEUR Henri, *4 Parabolic Mixes*, on *Pousseur-Main-Jeck-Oval*, Sub Rosa, SR 199, 2001.