OTHER(S)

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> The Coryphaeus : *"The will of heaven has many faces. Often men were unprepared for the acts of the gods. What was foreseen never came to be, whereas Heaven opened the way to the unforeseen."* [1]

Introduction

The present text attempts to approach the work through the aspects that make it different, rather than those that make it familiar. The five themes that made up the essential experimental material at the disposal of the psychologists constitute the familiar aspects of *The Angel of Death*. We will strive to interpret the work on the basis of all the elements that fall outside the thematic framework of reference. The subject of this investigation will be everything that is "other". The "other", in *The Angel of Death*, appears in three different forms: reversal structure, variation and *otherness*. The first form, following the example of the ancient tragedies, governs the structure on the large scale. The second constitutes a tool for exploiting and transforming the thematic materials. The third breaks away from the unity of the work and constitutes a kind of opposing force. Some of these "nonessential" elements had a considerable impact on the way the piece was conceived and received. Above all, we will speak of *Other,* the passage which is the most "foreign" to the piece. This element, by taking on an unforeseen degree of importance, in a manner of speaking escapes from the control of its creator and imposes itself on the dramatics. Its radical otherness causes the center of gravity of the work to tilt away from the balanced world of the Apollonian to the intoxicating one of the Dionysian.

1. The Reversal Structure

There are many ways to conceive the dramatics of a literary or musical work. One of the oldest approaches is to generate a situation reversal that upsets the course of events and changes destiny. In his *Poetics,* Aristotle defines two types of reversal: the peripeteia and recognition. The peripeteia, according to Aristotle is "the reversal of the situation, a change by which the action veers round to its opposite, subject always to our rule of probability or necessity", and recognition is "a change from ignorance to knowledge, producing love or hate between the persons destined by the poet for good or bad fortune".[2] Aristotle saw in Oedipus a model for the tragedy in which "the finest example of recognition is coincident with a reversal of the situation."[3] In order for a "reversal" to take place, the tragedy has to bring about the situation in which a hitherto ignored fact is now recognized, a fact that will influence the course of events and/or make the action change direction. Reversal-type structures produce a formal schema in which positive values are transposed into negative values from the point of rupture onwards.

Although this writing technique is typical of Greek tragedy, and consequently also typical of classical tragedy, music, and not only opera, has often made use of this kind of structure. In instrumental music, reversal structures have tended to develop in "free" forms (often based on extra-musical arguments) such as the fantasia or the symphonic tone poem. In the 20th century, the laws of the series (concerning recurrence and inversion) as well as the emancipation of form opened the way to absolute structural changes. The Viennese School produced works in mirror form, works that would become famous and remain famous. However, it was Berg who was able to combine that formal mirror structure with a heightened sense of drama, as in the third movement of the *Lyric Suite*, or in the interlude of the second act of *Lulu.*

In the compositions of Reynolds there are several pieces the dramatics of which are

based on reversal type structures, such as *Transfigured Wind II* (1984), *The Behavior of Mirrors* (1986), *Variation* (1988), *On the Balance of Things* (1996), and *Watershed IV* (1995). However, each of these pieces exploits this structure type in its own way. The dramatics that are created as a result, depend on many factors and notably the kind of unexpected event chosen by the composer. Before examining the implementation of the reversal structure in *The Angel of Death*, we will look at two prior examples that illustrate this dramatic technique in different ways.

The ambivalent figure of Dionysos, as depicted in Euripides' *Bacchantes,* served as a source of inspiration for the composition *Dionysus* (1990) for chamber orchestra (an octet divided into two contrasting quartets). Man and God, masculine and feminine, violent and sensual, arrogant and seductive, the dual figure of Dionysos governs all the dimensions of the piece whether it be the solo parts (the piccolo, energetic to the point of hysteria, the trumpet, full of anguish and then sweet and expressive) or the two layers of the accompaniment with their contrasting rhythms and registers. The composition's form is articulated around growing exasperation and tension building up to breaking point (which occurs almost exactly in the middle of the piece, at 467 seconds). The peripeteia is depicted by the instrumentation being inverted: the clusters played by the flute, the clarinet, the piano and the double bass are now taken over by the trumpet, the horn, the bass trombone and the marimba, and vice versa. At the same time, the harmonic texture of the first half is suddenly replaced by unraveling clusters laid out in succession like so many time-stretched ostinati.

Figure 1. Pages 27 & 28 of the score of *Dionysus*

In order to manage the composition's reversal structure, Reynolds used a scientific model which itself includes the notion of reversal. The bifurcation diagram developed by Robert May in order to explain the chaotic variations in animal populations allows the composer to simulate highly unpredictable phenomena on the local scale, to generate regular formal divisions and to determine the location of the breaking point in such a way that the dramatics of the piece reflect the ambivalent behavior of the Greek god.[4]

The reversal structure in *Ariadne's Thread* (1994) for string quartet and computer-generated sound is based on a peripeteia closely resembling the myth that inspired the piece.[5] The seven sections in the form of an asymmetrical arch represent Theseus' journey to the interior of the labyrinth, his combat against the Minotaur, the way out of the labyrinth, and the influence of Dionysos. This double movement is illustrated by the name given to each section: Finding the Path (S. 1), Pressing inwards (S. 2), Animated Line (S. 3), Extremity (S. 4, the center of the labyrinth), Exuberant Line (S. 5), Desparate Line (S. 6) and Line of Desire (S. 7). The texture of the piece is divided into three layers: one layer made up of solo passages corresponding to the four characters,[6] a layer dedicated to the non-solo instruments that weave the continuity of the magic thread, and the labyrinth layer represented by seven electronic passages. The proportions, which are derived from two logarithmic series[7], via compression or expansion, influence the temporal nature of each section. They express the growing tension as the journey progresses into the labyrinth, until it reaches the center section (at 56 seconds long) and then progressive relaxation until Theseus finds his way out again (see following figure).

Figure 2. Logarithmic series, proportions of the sections and the subsections in *Ariadne's Thread* (the sections are separated by a white lines, and the subsections by dotted lines).

As in *Dionysus,* the breaking point divides the piece into asymmetrical halves, but in the case of the *Dionysus* the broken symmetry gives rise to a fragmented process whereas the

linear character of *Ariadne's Thread* leads to a much more directional and continuous process. The melodic line (second layer) which unfolds throughout *Ariadne's Thread* subtends the linear character of the process and the reversal structure. In fact, the latter is made up of a palindromic melodic chain structure played in unison or distributed among the three non-solo instruments. This chain is interrupted only in the central section, by sliding clusters. From the fifth section onwards, the chain, now in retrograde form, resumes its course until the end of the seventh section. Thus the same pathway is followed in reverse. However after having been to the other side of the looking glass, the vision is no longer the same, reality is distorted.

The reverse structure of *The Angel of Death* refers back to two extra-musical notions that inspired the poetry in the work: fate and the alternative way. Reynolds, in his sketchbook, mentions the Etruscan civilization as one built entirely on the notion of fate. All of their political, social, legal and religious organizations came under the domination of cosmological cycles.[8] Natural catastrophes, epidemics and extraordinary events were considered as signs from heaven marking the beginning and the end of each historical period. These fatalistic beliefs explain why the Etruscans, at the end of their civilization did nothing to change destiny: their disappearance was inevitable and had always been foreseen. In *The Angel of Death*, fate is represented by the intrusion of the computer layer. Whatever the version chosen, S-D (Sectional part followed by Domain part) or D-S, the computer layer can only occur in the second part of the piece. The electronic sounds were imagined, at the start of the project, by Reynolds as being a shadow, a cloud that progressively stretches out and moves down over the instrumental part. Metaphorically speaking, the "electronic angel" in the composition depicts a superior will, a kind of messenger, who decides whether or not life will be prolonged a little further.

The notion of an alternative way, of a respite, a second chance, is associated, in the sketchbook, with the myth of Asklepios. Hesiod and Pindarus tell us the story of this god of Medicine who was so famous in antiquity that even the Romans adopted him and idolized him under the name of Aesculapius. Many were the sick, the blind and the infirm who came to his sanctuaries, most notably at Epidaurus, begging to be healed or to be relieved of their suffering. Asklepios would then appear to them in a dream and reveal to them the remedy that would give them back their health. His main emblem was the serpent, an image of renovation and revitalization. In *The Angel of Death*, the alternative way is represented by the return of the same theme material in the second part of the composition, the process of ecdysis *[Translators note: in insects, the periodic shedding of the skin]* having transformed and renewed it. Thus the fatality of death is pushed back, but only at the price of a mutation.

The two ingredients necessary to reverse structure – peripeteia and recognition – are indeed present in the large-scale structure of *The Angel of Death*:

- The composition is divided into two halves, called *Section* and *Domain*. They correspond to two opposite types of writing (which we will examine further on) by reversing the instrumentation of the themes (played by the piano in one half and taken up by the ensemble in the other half and vice versa). The passage from *Section* to *Domain* or from *Domain* to *Section*, according to the order chosen by the conductor, constitutes an unforeseen event, a change of value.
- In either case the computer layer comes in near the end of the first part and is present throughout the second part. The appearance, and the recognition of this new character (insofar as the electroacoustic material triggers recognition) brings about a veritable reversal of the situation which not only contributes an element of surprise — because the ensemble is halted for a long while during which only the electroacoustic layer is heard — but in addition changes the entire perspective.

Figure 3 shows a global view of *The Angel of Death* and more particularly the "parting of the waters" located at the moment where the electronic sequence D10 appears.

Figure 3. Overall plan of The Angel of Death, Section/Domain, top and Domain/Section, bottom.

The arrival of the computer layer symbolically represents the sudden intrusion of fate and constitutes the breaking point after which the entire perspective is changed. Not only does another (invisible) layer get added to those made of the piano and the instrumental ensemble, but the latter brings with it a spatial dimension that makes the sounds travel through the six diffusion points spread around the listeners. The dramatics of the piece are therefore centered around the change wrought by the transition to the second half, in which the identity of the scene material is disrupted by the reversal of the instrumentation and by the change in writing (*Section* versus *Domain*). The alternative way is only possible because fate intervenes.

As with the two halves of *Dionysus* and *Ariadne's Thread*, those of *The Angel of Death* are asymmetrical in time. Although *Section* and *Domain* possess identical overall proportions, the second half of the composition is longer because of the two electronic sequences on either side of it (D10 and S7). However, contrary to *Dionysus* and *Ariadne's Thread*, in which the breaking point is located at the highest moment of tension, in *The Angel of Death* this corresponds to the tension found "in the trough of the wave". When the piano and the instrumental ensemble fall silent and allow the electroacoustics to be heard, the dynamics, the density, the tangibility of the extremely soft sound of the computer layer confers upon the resulting tension an introverted quality, a feeling of surprise at a world of sound that has sprung from nowhere.

2. Variation

One of the cornerstones in the Reynolds aesthetic is a rethinking of the basic principles of the Western variation technique. Traditionally, the variation form is a linear process that starts out from a single theme which is then followed by series of melodic, harmonic, rhythmic, dynamic, and instrumental transformations. *Archipelago* (1982-3)[9] for orchestra and computer-generated sound was the first Reynolds composition that drastically renewed the variation form. Its formal structure is that of a "giga" variation: 15 themes and their variations make up as many layers distributed over the entire composition.[10] The time structure itself is completely overthrown. On one hand, the variations are no longer linked to a fixed frame;[11] they can undergo elongation or contraction in time.[12] On the other hand the way in which the themes and their variations are distributed no longer obeys the laws of linear succession. Variations may now precede the theme or follow it. Contrary to tradition, where a theme and its variations are always kept together, in *Archipelago* they are separated by zones of silence of varying lengths. Thus, the 15 series of themes and variations make up waves of duration that are superimposed, that dovetail and that branch out in a global texture. Reynolds calls this form a "transformational mosaic". Figure 4 allows us to comprehend the mosaic at a glance.

Figure 4. Temporal widths of each series, progression of the duration and the distribution of the "tiles" inside each series, position of the core element (shown by a black square) inside each series in the overall structure of *Archipelago*. (S=solo, D=duet, T=trio, Q=quartet, QT=quintet)

Although this type of formal organization is used in many of Reynolds' compositions, often in a less complex form, this is not the formal strategy that was chosen for *The Angel of Death*. The reason for this lies mainly in the compositional constraints imposed by the

4

psychologists for experimental needs. The goal of these experiments was above all the study of perceptual variance and invariance as applied to musical material. In other words, to what extent does the recognition of similarities, and the establishment of associative links in the listener's memory contribute to formal cohesion in a work? Can the transformation of musical material convey a sense of "going somewhere" over an extended duration?

The challenge for the composer was to write a composition that, without sacrificing a certain degree of complexity and without renouncing any of his own aesthetic attributes, would nevertheless meet the psychologists' requirements. It was therefore decided that the thematic material destined to undergo variations and computer-processed transformations would be limited in number to five themes. Although certain techniques belonging to "the transformational mosaic" are indeed present in the formal concept (the use of a core element as a point of convergence and divergence within a theme, of logarithmic series for determining proportions and placing thematic elements, and time expansion and contraction) the variation techniques used in *The Angel of Death* are not at all typical of Reynolds. In spite of the terms reminiscent of a more traditional type of writing (transition, combination, interlude, epilog) these variation techniques are handled in specific ways. We discerned three types of variation: variation by heterogenization *(Section* and *Domain)*; variation by continuous transformation *(Transition* and *Combination)*, and variation by derivation (*RepStrat, Interlude* and *Epilog)*.

Variation by heterogenization
Variation by heterogenization is carried out by changing instrumentation and writing techniques that differentiate *Section* and *Domain*. The change in instrumentation of the themes between Section and Domain invariably brings about a change in the degree of homogeneity of the material. When the scenes are played by the orchestra, not only the timbre but also the balance between the dynamics and texture change its morphology and by so doing change its identity. It is not surprising that the psychologists observed a negative effect on theme recognition when the <u>instrumentation was changed</u>, especially when going from piano to orchestra. [Lien vers Poulin-Charronnat et al.].

The change in writing techniques between *Section* and *Domain* is another factor that changes the degree of homogeneity. Whereas *Section* calls for circumscribed and clearly marked zones, that of *Domain* challenges the identity of each of the sections. The difference between the two types of writing can be likened to the difference in focusing: the composer adjusts his lens so as to show the material with a greater or lesser degree of clarity, a greater or lesser degree of fuzziness. The *Section* type of writing tends to be more homogeneous than the *Domain* type of writing, in which time stretching and the time proximity of themes brings about overlapping, favors fusion, and therefore tends towards greater heterogeneity.[13]

The relationship between the core element and its theme is very different in *Section* from what it is in *Domain*. In the first case, thematic cohesion is reinforced at each stage as we approach the core, whereas in the second case, a field of characteristics, strong in the center, gradually loses its force. Generally speaking *Domain* was written as a free variation even though it was constrained by the metric framework upon which the composer had decided. Only the more dominant themes were reused. Certain subsections were thus eliminated although the sequential order was kept the same.

Figure 5. Difference between *Section* and *Domain*

If we add the effect of the instrumentation and the change in writing, the themes played

by the piano in *Section* (T1 and T3) in theory are those that undergo the highest degree of heterogenization. The transition from *Domain* to *Section* and vice versa appears less crucial for the other themes (T2, T4, T5). Figure 6 presents the variations in heterogeneity according to the instrumentation and the type of writing

Figure 6. Variations in heterogeneity according to instrumentation and type of writing (P = piano, E = ensemble, S = Section, D = Domain, T = theme).

Nevertheless, the core element contributes to preserve the identity of the themes between *Section* and *Domain*. Its duration and its location in *Domain* are identical to what they are in *Section*. In addition the other layers are interrupted when the core element appears, to avoid it being masked.

Variation by continuous transformation

The regions called *Transitions* (TR) and *Combinations* (CB) are intermediate regions whose function is to "comment" on the thematic material and to make the action "move forward". To make a comparison with opera, those regions are to the themes what recitatives are to arias. Right from the earliest of the formal plans (February 1998) Reynolds planned on having two transitions and three combinations (Figure 7). These five elements were to be the varied counterpart to the five themes. With the addition of *Other,* the total number of sections in the piece went up to 11, a key number in the composition.[14]

Figure 7. Transitions and combinations in the initial plan. The bars indicate thematic materials that are combined or between which transitions are created.

When the electronic part was created between September 2000 and January 2001, it turned out that the density of some of the electronic sequences did not fit in well, or were redundant, in certain combinations. Reynolds therefore decided to suppress a certain number of them. Thus in *Section*, the region CB3/5, which normally unfolds at the same time as the region TR2/4, was removed so as not to interfere with the sense of direction of the transition. In *Domain*, which is meant to be heterogeneous rather than directional, the combination CB3/5 with TR2/4 was maintained. The region CB1/2/3, normally placed squarely in the middle of T5 was replaced by *RepStrat* and a brief piano interlude that anticipates the *Epilog*.

The region CB2/4, which was maintained during the unfolding of T3, is interrupted by the arrival of the core element. In the definitive version of the composition, there are therefore two transitions: one of them follows Theme 2 (TR1/3, bars 66 to 92), the other follows *Other* (TR2/4, bars 178 to 288) and a single combination (CB2/4, bars 88 to 115) that begins at the end of TR1/3, is interrupted during T3, and then resumes until the silence that precedes *Other*. The transitions and the combinations are present in both *Section* and *Domain*, however in keeping with the nature of the second half, they are more diluted than in *Domain*.

The notion of transition as applied in *The Angel of Death* is a directional process. The transition must give the impression of evolving from one state to another via a continuous process. TR1/3 is made up of two superimposed layers, corresponding to elements from T1 and T3. The initial plan as seen in the sketches was that the upper layer would comprise four time-expanded segments (15 – 15 – 24.5 – 40) and that the lower layer would comprise five time-contracted segments (28.2 – 27.6 – 14.1 – 14.1 – 13.3) (Figure 8). However in the score, it is more a case of a dialogue between T1 and T3 material. The process is built up as a sort of fade-in/fade-out: the elements from T1, very present in the beginning are progressively submerged by the elements from T3.

Figure 8. Proportions of TR1/3 provided for in the sketches; T1 : upper layer, T3 : lower layer.

As in the preceding transition, the initial sketch showed TR2/4 comprising two layers, one of the four segments being time stretched and another time compressed (Figure 9). Contrary to the diagram, the lower layer only enters progressively (bars 210 to 225, 256 to 258, 271 to 273, 277 to 288) and only in a supporting role. Then at the end it goes into ascending and descending sweeps heralding the entry of T4.

Figure 9. Proportions of TR2/4; the framework of the ensemble (upper layer) and of the piano (lower layer).

The notion of combination, corresponds to the recombination of thematic material. This is a sort of mixture that has the function of intermediary presentation, in which the identity of the thematic fragments is overthrown by unpredictable interactions. Thus, the texture of CB2/4 (bars 88 to 115) is a set of interlocking chords borrowed from T2 and of note runs taken from T4. The mixture, however, is by no means static, starting out from a continuous texture, and evolving towards rhythmically convergent repeated notes. As with Theme 2, which tends to contradict Theme 1's directionality, this region (which first enters at the end of TR1/3) disrupts the transition curve. After a stop, during T3, the region increases in tension, creating a first climax that is suddenly cut by the eleven-second silence that comes before the region *Other*.

Variation by derivation

Variation by derivation uses short fragments of a theme to create new material. The regions that include this type of variation, *RepStrat, Interlude* and *Epilog,* are not there for the purpose of transition, or of development, but rather to reinforce or ease dramatic tension as required. The *RepStrat* region begins after the nine-second silence that follows T4, and then stops suddenly, giving way to the calm atmosphere of *Interlude.* The texture of *RepStrat* is made up of three layers of repeated and accentuated note patterns of similar rhythmical values (they contain superimposed 16th notes, quintuplets and sextuplets). The region can be divided into four subsections:

1) (bars 310-315) note reiterations + string *glissandi sul ponticello,*
2) (bars 316-321) note reiterations + wind trills,
3) (bars 322-325) note reiterations + flutter tongue being played by the trumpets with mutes,
4) (bars 326-355) note reiterations + held crescendo note played by the winds and the strings. The ensemble is punctuated by three woodblocks.

The general impression given by this passage is one of rapidity, velocity and discontinuity. In *Section,* the note reiterations are played by the piano, whereas in *Domain,* it is the ensemble that plays all the material, the piano only coming in at the very end of the passage, almost completely masked by the ensemble. Here the piano plays Theme 5. When *RepStrat* comes back during the second part of the piece, the impression of rapidity and above all of acceleration is energetically reinforced by the computer sequence S8, *Centrifugal Explosion,* which is built on the principle of an ever-increasing density of accumulated material.

As with *RepStrat*, the *Interlude* and the *Epilog,* the original plan (February 1998) provided for the piece ending with the electronic sequence S7. However, while this sequence was being created, the idea was born of creating a kind of trajectory that would lead from auditory hallucination to reality. This is achieved by subjecting the sequence to sound processing that diminishes progressively. Quite naturally the piece ends with the solo instrument, in "flesh and blood". The *Epilog* fulfils a double role: not only does it end the piece, it also completes sequence S7. The latter recapitulates the main thematic materials but,

notably, does not recapitulate Theme 5, and that is why the *Epilog,* with its evanescent fading chords, reminiscent of the core of Theme 5, generates a feeling of completion. As for the *Interlude*, the material of which is similar to that of the *Epilog,* it acts as a "decompression chamber" after the accumulated tension in the *RepStrat* region and the passage that prepares the entry of Theme 5. In the second part of the piece, these two moments of meditation, the *Interlude* and the *Epilog* form a bridge to the culminating point of the drama: the final appearance of Theme 5 (with sequence D9) followed by the recapitulative computer image S7.

The three types of variation that we have just examined – variation by homogenization (*Section* and *Domain*), variation by continuous transformation (*Transition* and *Combination),* variation by derivation *(RepStrat, Interlude* and *Epilog)* – have differing capacities for transformation. Although variation by heterogenization inverts the instrumentation, razes a few subsections and makes borders disappear, it nevertheless preserves the theme core elements intact, as well as the identity of the themes. Variation by continuous transformation has a more marked tendency to erode thematic identity. Only the most salient characteristics survive, prior to processing by fade-in/fadeout or by superimposition. Identities tend to melt into one another. As for variation by derivation, it only preserves the more "abstract" attributes of the themes, such as a set of pitches, a rhythm or a particular harmonic density. The material is transformed to such an extent that the original identity is wiped out. However, we have still to consider the element that is the least thematically standardized of all, but which nevertheless has a decisive influence on the dramatics of the piece: *Other.*

3. The *peripeteia* in the recording of *Other*

The process of composition is often the result of complex interactions between many different factors. Conscious and observable thought processes sometimes work hand-in-hand with, sometimes clash with, unconscious forces. The unconscious is stimulated by compositional activity, and in return, the latter is subjected to various influences coming from obscure layers of the psyche. At times, it is the external world that comes to bear on the process of composition. A unexpected event may sometimes provide the solution to a problem. For example, it was while listening to the organ playing the "Resurrection" chorale at Hans von Bülow's funeral that Mahler saw how he might finish his second symphony. Varèse completely rewrote *Arcana* after having dreamt of the trumpets of the Apocalypse during a sea voyage to France. There are many accounts of external or internal events intervening to modify the composition process or even turn it upside down. This was the case with *The Angel of Death.*

The initial sketches (February/March 1998) provided for a region called *Other* that was to be kind of "wildcard". The main idea was to create a unique moment, totally divorced from the rest of the piece, a monolithic section that would lack all directionality. The composer chose to use a texture made up of out-of-phase *ostinati.* The sketchbook contains an idea for a texture made up of three *ostinati* chained together (Figure 10). The first ostinato contains three ascending five-note cells with very large pitch intervals. The second ostinato contains three 9-note cells, and the third contains six five-note cells. The entire ostinato cycle contains 27 notes. The purpose was to create a complex tangle of interlocking notes that would give the impression of being irregular and unpredictable on the local scale.

Figure 10. Sketch of *Other* (3 ostinato cycles)

Reynolds had planned on 11 ostinato layers. However, in the face of the already considerable complexity in the sketch, that number of layers was reduced to seven. Initially the idea – exactly as in the case of the themes – was that there would be a piano version (in

Section) and an orchestral version (in *Domain)*. But the passage's rhythmical complexity, already difficult for the piano, caused Reynolds to relinquish the idea of a version for orchestra. The five themes, in their piano and then in their orchestral versions, as well as *Other,* were composed between August 1998 and January 1999, with the recording being planned in February and March 1999. The piano part was recorded by Jean-Marie Cottet. Whereas the recording of the five themes went off without a hitch, *Other* turned out to be unplayable at the planned tempo (MM=150). After a number of trials, it was decided that the recording would be made at a much slower tempo (MM = 92). Reynolds then attempted to time compress the recording in such a way as to maintain the original 99.5 seconds duration so that the proportions of the formal plan would stay the same (*Other* was of the same duration as T5, the longest of all the themes). However, the difference in duration was too great, making it impossible to obtain a time compressed version of satisfactory quality. Neither could *Other* simply be cut short: there were the ostinato cycles. The composer finally settled on the new 161 second duration, a choice that was to have considerable consequences for the weight of the region upon the global form and upon the dramatics of the work.

Figure 11 is a visualization of the extent of the changes in proportion with the lengthening of *Other*. The added 61.5 seconds make this region into the longest of all the sections (along with TR2/4). Moreover, the reiteration of Theme 2 by the instrumental ensemble, which so interferes with the unfolding of *Other*, was suppressed. As a result, this region occupies a central position in the plan, whereas originally it was merely one section among others.

Figure 11. Comparison of the *Section* plan, 1998 sketch and 2001 version.

Prolonging the section was also to have the effect of upsetting the formal balance of the overall form. As can be seen in Figure 12, in the 1998 version the thematic elements were distributed among two groups of 99.5 and 161 seconds, and a further group of 23.5 and 161 seconds. These numbers were determined using the logarithmic series as a basis for the formal proportions. The first structural silence (lasting 11 seconds) was placed between the first and second group, just before the appearance of *Other*. Moreover, this specific moment nearly corresponds to the golden section.[15] Prolonging *Other* disrupted the formal balance*,* which was never regained in the final version.

Figure 12. Time proportions of the *Sectional* part in the 1998 sketch. (Nombre d'or=Golden section)

However, the "perfect" balance of the first version, thanks to the *unexpected event* or *peripeteia* in the recording, gave way to "another" balance that was at once richer, clearer and more diversified. *Other*, an irrational and undisciplined creature, so to speak, escaped the control of its creator. In an unexpected manner, it infiltrated and disrupted the composition process, breaking into the integrity of the work in such a way as to take over and dominate the entire composition.

4. The otherness of *Other*
What is it that causes the otherness of *Other?* Mainly three things: first, this region is fundamentally foreign to the rest of the work; secondly, it initiates and encourages ambivalence; and thirdly, it is unclassifiable. The otherness of *Other* is the result of the composer's deliberate desire for a nonstandard element, in other words not derived from thematic material. In his sketchbook Reynolds noted the following: "There was also the (slightly inexplicable) decision to have a deliberate outsider that would be unique and not take

a direct part – as material – in the overall structure: *Other* (not a theme)".[16] Having one or more "foreign" elements at the heart of a composition is by no means new in Reynolds' compositions. In … *from behind the unreasoning mask…* (1975), the magnetic tape opposes the instrumental parts. It also modifies the proportions of the plan. In *Watershed III* (1995), the "oddities" are the foreign elements intruding in the normal panoply of percussion instruments. Nevertheless, in these pieces, there is a constant and back and forth relationship between the foreign and the indigenous. But in *The Angel of Death* the morphology of *Other* does not have any relationship to the thematic material, except for one or two pitch resources that they have in common. Its texture is unique within the composition. Its post-recording tempo (MM = 92), contrary to the tempi of the other themes and derived elements (transitions, combinations etc), is not a multiple of 30.[17] *Other* is the only long passage to be played only by the piano, both in *Section* and in *Domain*. It is also the longest region entirely given over to the solo instrument. From the formal standpoint, *Other* causes a break in the presentation and development of the thematic material because of its static nature and because of the silence that precedes it. It is the strangest and most heterogeneous of all the characters in the drama.

In spite of all this, *Other* bears a strange resemblance to the core element of Theme 5, and consequently to the Epilog and Interlude. The closeness in tempo (MM = 90 and MM = 92), the appoggiatura-type ornaments, the use of resonance, the low dynamic levels and the floating feeling common to both passages partly explain why the ear confuses them in such a curious way. It is also possible that the strangeness and the unpredictability of the chorale from the core element within Theme 5 is evocative of the abrupt intrusion of *Other* in the first half of the piece. The impression of ambivalence and confusion generated by this message is the result of the constant rhythmic instability. It is like watching someone dance on burning coals. The effect is heightened by the computer processing applied to the recording of *Other*, presented in the second part of the piece in the same position as the live piano version in the first part. [Lien vers mon article sur l'électronique]. The way the sound source is dislocated into separate images, slightly separated in time, only adds to the murkiness of the image.

But perhaps what gives *Other* its otherness more than anything else is the fact that it refuses to be easily classified. It is at once serene and tense, unpredictable on the local scale but stable on the global one. The writing is neither orchestral, nor particularly pianistic. Transcribing the passage for the instrumental ensemble turned out to be impractical mainly because of the texture. In addition, although the mordants, the appoggiaturas, the repeated notes, the *glissandi*, and the constant use of the pedal, are all typical of writing for the keyboard, other characteristics such as the large interval jumps that necessitate large lateral movements, and the tangled rhythmical complexity are not really pianistic (and for that matter, at the limit of feasability). *Other* is paradoxical in that it is the longest passage for the solo instrument and yet is the least pianistic. *Other* is not a variation, nor is it an alternative. It cannot be said to be an antithesis, because thesis and antithesis attract each other by repelling each other. They belong to a whole, they can be included in a single synoptic glance. In the opinion of Emmanuel Levinas, that otherness, the radical heterogeneity of *Other*, only becomes possible when there is a break in totality. "The break in totality," he says, "is not a simple thought process, obtained by simply distinguishing between terms that have a mutual attraction or at least a reciprocal alignment. The void that breaks away from the totality cannot oppose the process of thought – it is necessarily all-embracing and synoptic, unless the thought process in question finds itself opposing an unclassifiable *Other*."[18] In contrast to the Self, which seeks to meld with all that surrounds it, to find its identity in everything that happens to it, the outward aspect of the *Other* rejects any system of reference. *Other*, being a radical heterogeneous entity, breaks away from the totality of the work. *Other* is otherness itself.

5. Conclusion: the Apollonian and Dionysian nature of *The Angel of Death*

If Nietzsche is to be believed, "the entire development of art is linked to the duality between the Apollonian and the Dionysian".[19] The drive behind artistic creation springs from the internal conflict between those two opposing tendencies, the plastic against the musical, the dream against exhilarated intoxication, symbolized by two different Greek divinities. The philosopher saw the Attic tragedy as a possible means of reconciling two aesthetically opposing worlds. But then, does not every work of art carry this conflict within itself? And can it be resolved by means of a balancing act? Does not the process inescapably lead to one of the opposing entities dominating the other? At the very heart of the dramatic workings of the Bacchantes, Euripides relates the impossible reconciliation between the Apollonian and the Dionysian. In the play, Dionysos is opposed to King Pentheus, whose city had been founded under the aegis of Apollonius. The young tyrant, who wants to defend his city against the disorderly troublemakers, ends up being "bewitched" by the tricks of the god disguised as a bacchante.

Generally speaking, any musical work, in its essence, carries within itself the conflict between the Apollonian and the Dionysian. Whether the conflict takes place between the time and space aspects, between the material and the form, or between rationality and intuition, both inherent in the composition process, the music is born out of antagonizing forces. The rivalry between the Apollonian and the Dionysian is also at the heart of *The Angel of Death*. Reynolds did not use The Bacchantes as a model, neither did it influence him, nevertheless there are numerous analogies between the two works. In the first place, the dramatics of each is based on a reversal structure. At the start of the play, Dionysos is a disguised stranger, then is pursued and imprisoned. Pentheus appears in all his majesty, full of the force and arrogance of youth.

In the second act, it is Pentheus this time who is disguised, who leaves the city and tries to hide himself away. When he returns, it is in the form of a mutilated corpse. Dionysos, for his part, is triumphant in his revenge. Thus the destinies of the two protagonists are reversed. As mentioned earlier, the passage from *Section* to *Domain*, as against *Domain* to *Section*, makes up the peripeteia in *The Angel of Death*. The material undergoes a value reversal through the changes in instrumentation and writing. The entry of the electronics part, which triggers the situation reversal, makes up the second ingredient of the reversal structure: recognition.

The story of Dionysos is centered around the dialectics between identity and otherness, between the native and the foreign. In the same way, *The Angel of Death* bases its dramatics on dialectics between identity and otherness, not only on the formal level of the opposition between *Section* and *Domain*, but also on the level of the conflict between the thematic (and allied) material and *Other*. "The otherness of Dionysos", says Jean-Pierre Vernant, "also arises from the fact that, in spite of his dramatic arrival, in spite of the bold classifications, the clear-cut black and white opposites instead of remaining distinct and mutually exclusive, attract each other, meld and fuse together."[20] Thus, the ideal of *Domain* can be said to be Dionysian, contrary to that of *Section* which is Apollonian in essence. The heterogeneous, fuzzy, free-flowing nature of the first opposes the homogenous, clear, well marked out and strict nature of the second. *Other* is in every way opposite to the thematic material. Its otherness maintains the difference, the ambivalence, and the refusal to be classified. Within the very framework of the Apollonian and *Domain*, a Dionysian element manages to install itself and upset the balance between the two tendencies. As in The Bacchantes, the impossible reconciliation between the Apollonian and the Dionysian, in the end, favors the latter.

Born from the thigh of Jupiter, Dionysos is the only god with a mortal mother allowed to go among the Olympians.[21] He is the god that comes from without, who is always seen as a

stranger to the city, a threat to its stability. Arriving from elsewhere, Dionysos thrusts his imperious, demanding and intrusive presence upon the city. He is the outsider to whom the city must yield at certain times of the year, and who is a reminder that rationality has its limits. In the same way that the Dionysos of The Bacchantes subjects humans to his own law, *Other* irresistibly subjects the composition to its own presence. The peripeteia in the recording has modified the course of the creative process. The tempo change, by greatly modifying the duration of *Other*, brought about profound change in the dramatics. The force of this region is thereby increased, and the formal balance of the work challenged. Certain sections ceased to be, others came into being.

Did this presence also manage to impose itself upon the listener? Were listeners receptive to the Apollonian character of *Section*, and to the Dionysian character of *Domain*? The two measuring scales used by the psychologists during the real-time in-concert experiment - that of familiarity and that of emotional force - made it possible to dynamically observe what was experienced by the listeners. The familiarity profiles that were obtained by analyzing the data showed a high degree of correspondence with the structure of the piece, both in the case of the thematic regions, and of the transition, combination, and other regions. Above all the replies given by the listeners were more definite in *Section* than in *Domain*, showing that they had indeed perceived the different nature of the two halves. Of all the material of the composition, *Other* turned out to be the region that possesses the highest familiarity profiles, both in the SD and the DS versions. This was observed to be true in the familiarity profiles obtained at the Paris concerts as well as those obtained at the La Jolla concert. Might this be due to the extreme heterogeneity of *Other* by comparison with the rest of the material? Might it be due to the calm, balanced atmosphere? Or is it because this is the longest of the solo passages for the piano? Whatever the case, *Other* is the element that listeners best recognized.

However, the familiarity was not felt in the same way during the second half of the piece. When *Other* is played in the first half, the familiarity profiles follows a mounting curve, both in the S and the D versions. This would seem to indicate that listeners were more influenced by a global tendency to stability and absence of change then by a local tendency to change. But when *Other* is played in the second half, the curve tends to go down rather than up. The difference would seem to arise out of the difference in performance, live piano being played in the first half, whereas in the second half it is the computer that plays. Listeners seem to have been sensitive to the novelty, to the charged atmosphere of strangeness, contributed by the <u>computer processing</u>. [Lien vers mon article sur l'électronique] This influence is further confirmed by the emotional force profiles, which are stronger and more variable during the second appearance. Thus, the Dionysian nature of *Other* produces a magical influence that upsets the outer aspects of all things. "Dionysos is there," says Jean-Pierre Vernant, "when the stable world of familiar objects, of reassuring figures, is turned upside down and becomes a phantasmagoric or illusory game, when the impossible and the absurd become reality". [22]

Perhaps it is this aspect of Dionysian influence that accounts for the greater amplitude of the emotional force profiles observed in the D-S version. The global difference between the two versions was confirmed by remarks coming from a large number of listeners, who preferred the D-S version. Could it be that the S-D version is more Dionysian than the D-S version? Insofar as the time trajectory moves from a stable and well-defined state towards one that is unstable and nebulous, might it not be that the negative impressions generated by the S-D version arise out of the elusive and disturbing nature of Dionysos?

[1]   Euripides, *The Bacchantes*, in *Greek Tragedians, Aeschylus, Sophocles, Euripides*.

[2]   Aristotle, *Poetics*.

[3]   Ibid.

[4]   Reynolds used a bifurcation diagram, which in the theory of chaos was employed to model the behavior of populations that possessed varying degrees of fertility. The general model is as follows: when the system becomes chaotic, at unpredictable moments there is a sudden "clarification"—instead of having an enormous scale of chaotic values, the graphically represented variable will suddenly possess only 2, 4, 8 , or 16 possible values. The values then begin to increase afresh, and just as suddenly, there will be a return to chaos. Thus the system begins to imitate itself: global behavior is mimicked on the local scale.

[5]   The myth tells the story of how Theseus enters the labyrinth, dwelling place of the murderous Minotaur, and of how the latter is put to death. In exchange for a promise of marriage, Ariadne, the Minotaur's half sister, gives Theseus a ball of magic thread that leads him to the monster and then allows him to come out of the labyrinth. On the way back to Athens, Theseus, tricked by Dionysos, abandons Ariadne on Naxos. The latter cries out to the gods for vengeance and ends up by marrying Dionysos after all.

[6]   The memory of Ariadne (second violin), the intention of Theseus (cello), the anguish of the Minotaur (solo viola) and the anticipation of Dionysos (first violin).

[7]   The numerical series were obtained by drawing straight lines on semi-logarithmic paper.

[8]   Thus, the age of the universe was determined at 12 000 years, during which time, in succession, heaven and earth, the firmament, the seas and water, the stars, all living creatures and finally Man were created – Man having only 6000 more years of existence. The life-span of each human being was in turn divided into 12 cycles each lasting seven years. After the age of 70, a man became the plaything of fate, and after the age of 84 years, he turned into a "living dead" creature whose soul was separated from its body.

[9]   This piece was created at IRCAM with the assistance of Thierry Lancino.

[10]   The 15 themes are divided into five groups: 5 solos, 4 duets, 3 trios, 2 quartets and 1 quintet. Each of the solos has two variations, the duets have three variations, the trios have four variations, the quartets have five variations, and the quintet has six variations.

[11]   The themes and the variations range in duration from 6 to 126 seconds.

[12]   For example the theme called "quintet" lasts for 42 seconds, and the duration of its variations increases logarithmically: 50, 60, 72, 87, 104, 126 seconds.

[13]   In D, the time occupied by T1 is multiplied by 2.8, T2 by 4, T3 by 6.8, T4 by 7.4.

[14]   11 is the 4th term of the derived numerical series used to set up certain quantizations (the number of notes of the chords, the number of superimposed ostinati, etc). The series is of the Fibonacci type: 1, 3, 4, 7, 11, 18, 29, …

[15]   In the 1998 version, the piece was supposed to last 705.5 seconds (minus the two silences). 705.5 x 0.618 = 435.9. 705.5 – 435.9 = 269.6. *Other* was intended to start at 271.5.

[16]   Red sketchbook, p 81.

[17]   The tempi of the themes are as follows: T1 n. = 120/150/120, T2 n. = 150, T3 n. = 60, T4 n. = 180, T5 n. = 90.

[18]   Emmanuel Lévinas, *Totalité et infini. Essai sur l'extériorité, [Totality and the Infinite. An Essay on Exteriority]*. Paris, Le livre de poche, 1971, p. 30.

[19]   Friedrich Nietzsche, *La naissance de la tragédie, [The Birth of Tragedy]* Paris, Gallimard, 2000, p.17.

[20]   Jean-Pierre Vernant & Pierre Vidal-Naquet, *Mythe et tragédie en Grèce ancienne, [Myth and Tragedy in Ancient Greece]* Volume II, Paris, Editions La découverte & Syros, 2001, p. 255.

[21]   Dionysos was born out of the adulterous union between Zeus and Semele, daughter of Cadmos, King and founder of Thebes. Originally, Dionysos did not belong to the Olympians, but then gained access to Olympia through having been able to reconcile Hephaistos and his mother Hera.

[22] Jean-Pierre Vernant and Pierre Vidal-Naquet, *Mythe et tragédie en Grèce ancienne, [Myth and Tragedy in Ancient Greece]* Volume II, Paris, Editions La découverte & Syros, 2001, pp. 254-255.