

RHYTHMIC STRUCTURE IN THE MUSIC OF JEAN GUILLOU:

“AGNI-IGNIS” FROM *HYPERION* (1988)

Ju Yeon Lee, B.M., M.M.

Dissertation Prepared for the Degree of

DOCTOR OF MUSICAL ARTS

UNIVERSITY OF NORTH TEXAS

August 2008

APPROVED:

Jesse Eschbach, Major Professor and  
Division of Keyboard Studies Chair  
Graham Phipps, Minor Professor and Director  
of Graduate Studies in the College of  
Music  
David Schwarz, Committee Member  
James C. Scott, Dean of the College of Music  
Sandra L. Terrell, Dean of the Robert B.  
Toulouse School of Graduate Studies

Lee, Ju Yeon, Rhythmic structure in the music of Jean Guillou: "Agni-Ignis" from *Hyperion* (1988). Doctor of Musical Arts (Performance), August 2008, 99 pp., 24 tables, 49 examples, references, 45 titles.

In 1988, Jean Guillou composed *Hyperion* on a commission from the French oil company, Société Nationale Elf Aquitaine, to celebrate its discovery of oil. He developed this theme of fire using his imagination, European philosophical concepts, and various myths. As with Messiaen, rhythm becomes a significant element in Guillou's organ music to convey a heightened dramatic story of an exaltation of fire and to represent the fourth movement of "Agni-Ignis."

For aspects of rhythmic structure, I developed new methodology to analyze rhythm in six sections of "Agni-Ignis." Guillou uses experimental rhythmic techniques such as rhythmic subdivision, cycling, rhythmic ostinato, durational contrast, and rhythmic crescendo to build the musical structure of the piece. Among them, the primary subdivision of 16<sup>th</sup>-note groups organizes throughout the piece as a cyclic theme to convey the powerful and vivid mood of fire. This rhythmic group creates many pitch patterns as thematic transformation to provide both rhythmic and harmonic complexities. The two types of rhythmic ostinato, which is variable and invariable type, juxtapose below the manual's skillful rhythm to provide variety and unity. The other notable features of rhythm appear at the border of each section, such as rhythmic crescendo, durational contrast, 32<sup>nd</sup>-note groupings, rest and fermata to build tension and relaxation. The rhetorical figure of pitch D, which is another "fire theme" in the pitch aspect dominates the core section which has a much slower rhythm with sustained notes. In general, Guillou has been influenced by his predecessors such as his teacher,

Messiaen, and Stravinsky. However, he is uniquely suited to explore the limitless possibilities of the organ in a more secular and avant-garde style. The purpose of this study is to give the performer new insight to guide his or her performance.

Copyright 2008

by

Ju Yeon Lee

## ACKNOWLEDGEMENTS

I dedicate my doctoral dissertation to my mother, Mi Ja Bae, who has continuously given me creative inspiration and encouragement. I would like to express my sincere appreciation to Dr. David Schwarz, Dr. Jesse Eschbach, and Dr. Graham Phipps for their support and guidance.

## TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS .....	iii
LIST OF EXAMPLES .....	vi
LIST OF TABLES.....	ix
CHAPTER 1 THE EVOLUTION OF COMPLEX RHYTHMS IN FRENCH ORGAN MUSIC OF THE LATE TWENTIETH CENTURY .....	1
CHAPTER 2 FORMAL STRUCTURES IN “AGNI-IGNIS” FROM <i>HYPERION</i> :.....	9
Rhetorical Concept .....	9
General Background .....	14
Formal Structure of “Agni-Ignis” .....	14
Formal Structure of the A Sections .....	15
Formal Structure of the B Sections .....	17
CHAPTER 3 RHYTHMIC STRUCTURES IN “AGNI-IGNIS” FROM <i>HYPERION</i> .....	21
Introduction: Selected Techniques of Rhythmic Analysis from the Twentieth Century .....	21
Rhythmic Structure .....	26
The A Sections.....	27
Rhythmic Subdivision.....	27
Rhythmic Cycling .....	40
Pitch Patterns.....	45
The B Sections.....	49
Rhythmic Subdivisions and Patterns.....	49

Core Section .....	53
Rhythmic Treatment Between Sections .....	55
Thirty-second-note Groups .....	56
Rhythmic Crescendo.....	58
Durational Contrast .....	61
Rhythmic Ostinato a.....	63
Rhythmic Ostinato b.....	65
CHAPTER 4. CONCLUSION .....	67
APPENDIX A. QUESTIONNAIRE .....	70
APPENDIX B. A BIOGRAPHICAL SKETCH OF JEAN GUILLOU .....	75
APPENDIX C. GENERAL STRUCTURE OF <i>HYPERION</i> CHART 1.....	79
APPENDIX D. FORMAL STRUCTURE OF <i>HYPERION</i> CHART 2.....	81
APPENDIX E. FORMAL STRUCTURE OF "AGNI-IGNIS," <i>HYPERION</i> CHART 3.....	83
APPENDIX F. FORMAL STRUCTURE OF THE A SECTIONS IN "AGNI-IGNIS" FROM <i>HYPERION</i> CHART 4 .....	85
APPENDIX G. RHYTHMIC SUBDIVISIONS OF THE A SECTIONS IN "AGNI-IGNIS" FROM <i>HYPERION</i> CHART 5 .....	87
APPENDIX H. RHYTHMIC ANALYSES OF "AGNI-IGNIS" CHART 6.....	89
SELECTED BIBLIOGRAPHY.....	96
Books, Úeriodicals, and Öissertations .....	96
Musical Scores .....	98
Discography .....	99

## LIST OF EXAMPLES

All examples of “Agni-Ignis” from *Hyperion* by Jean Guillou are © 1997 by Wayne Leupold Editions, Inc., and are used by permission.

	Page
Example 1. <i>Super flumina Babilonis</i> , Palestrina, mm. 39-44.....	2
Example 2. <i>Suite No. 7 in F dur</i> , Boehm, mm. 1-8. ....	3
Example 3. <i>Suite No.7 in F dur</i> , Boehm, mm. 1-7. ....	4
Example 4. “Sacrificial Dance” from Stravinsky’s <i>The Rite of Spring</i> . ....	5
Example 5. <i>Hyperion</i> , “Agni-Ignis,” A <sup>1</sup> section, mm. 1-4.....	16
Example 6. <i>Hyperion</i> , “Agni-Ignis,” A <sup>2</sup> section, mm. 15-18.....	17
Example 7. <i>Hyperion</i> , “Agni-Ignis,” B section, mm. 37-42.....	18
Example 8. <i>Hyperion</i> , “Agni-Ignis,” B’ section, mm. 77-83.....	19
Example 9. Designation of ordered set and of unordered set with symbols.....	22
Example 10. Designation of ordered set with symbols.....	22
Example 11. Rhythm described with methodology developed for this study.....	23
Example 12. <i>Hyperion</i> , “Agni-Ignis,” mm. 1-4.....	25
Example 13. Half-note subdivisions in mm. 1-15 in the A sections.....	29
Example 14. <i>Hyperion</i> , “Agni-Ignis,” mm. 1-4.....	33
Example 15. <i>Hyperion</i> , “Agni-Ignis,” mm. 1-4.....	36
Example 16. <i>Hyperion</i> , “Agni-Ignis,” mm. 61-66.....	39
Example 17. <i>Hyperion</i> , “Agni-Ignis,” m. 2.....	42
Example 18. <i>Hyperion</i> , “Agni-Ignis,” m. 10.....	42
Example 19. <i>Hyperion</i> , “Agni-Ignis,” m. 33.....	43
Example 20. Subdivision 7, <i>Hyperion</i> , “Agni-Ignis,” m. 4.....	44



Example 21. Subdivision 8, <i>Hyperion</i> , “Agni-Ignis,” m. 20.....	44
Example 22. Pitch Patterns 6-1 and 6-2, <i>Hyperion</i> , “Agni-Ignis,” m. 67 .....	47
Example 23. Pitch Patterns 6-3, <i>Hyperion</i> , “Agni-Ignis,” m. 15 .....	47
Example 24. Pitch Patterns 6-4 and 6-5, <i>Hyperion</i> , “Agni-Ignis,” m.100 .....	47
Example 25. Pitch Patterns 6-5, <i>Hyperion</i> , “Agni-Ignis,” m. 73 .....	48
Example 26. <i>Hyperion</i> , “Agni-Ignis,” mm. 37-42.....	50
Example 27. <i>Hyperion</i> , “Agni-Ignis,” mm. 45-58.....	53
Example 28. <i>Hyperion</i> , “Agni-Ignis,” mm. 15-16.....	57
Example 29. <i>Hyperion</i> , “Agni-Ignis,” mm. 33-38.....	58
Example 30. <i>Hyperion</i> , “Agni-Ignis,” mm. 28-29.....	59
Example 31. <i>Hyperion</i> , “Agni-Ignis,” mm. 57-58.....	60
Example 32. <i>Hyperion</i> , “Agni-Ignis,” m. 83.....	61
Example 33. <i>Hyperion</i> , “Agni-Ignis,” mm. 46-47.....	61
Example 34. <i>Hyperion</i> , “Agni-Ignis,” mm. 100-102.....	62
Example 35. <i>Hyperion</i> , “Agni-Ignis,” mm. 13-14.....	63
Example 36. <i>Hyperion</i> , “Agni-Ignis,” mm. 13-14.....	63
Example 37. <i>Hyperion</i> , “Agni-Ignis,” m. 19.....	64
Example 38. <i>Hyperion</i> , “Agni-Ignis,” m. 21.....	64
Example 39. <i>Hyperion</i> , “Agni-Ignis,” mm. 26-27 .....	64
Example 40. <i>Hyperion</i> , “Agni-Ignis,” mm. 28-29.....	64
Example 41. <i>Hyperion</i> , “Agni-Ignis,” m. 33.....	64
Example 42. <i>Hyperion</i> , “Agni-Ignis,” mm. 73-74.....	64
Example 43. <i>Hyperion</i> , “Agni-Ignis,” mm. 74-75.....	64

Example 44. <i>Hyperion</i> , “Agni-Ignis,” mm. 75-76.....	65
Example 45. <i>Hyperion</i> , “Agni-Ignis,” mm. 100-102.....	65
Example 46. <i>Hyperion</i> , “Agni-Ignis,” mm. 65-67.....	65
Example 47. <i>Hyperion</i> , “Agni-Ignis,” mm. 89-91.....	65
Example 48. <i>Hyperion</i> , “Agni-Ignis,” mm. 91-92.....	65
Example 49. <i>Hyperion</i> , “Agni-Ignis,” m. 38.....	66

## LIST OF TABLES

	Page
Table 1. Hodant's Visualization of Three Categories of Guillou's Compositions .....	11
Table 2. Titles of Four Movements of <i>Hyperion</i> .....	12
Table 3. Formal Structure of "Agni-Ignis" from <i>Hyperion</i> .....	15
Table 4. Similar Measures in the A Sections.....	16
Table 5. Formal Structure of the B sections, "Agni-Ignis" from <i>Hyperion</i> .....	20
Table 6. Durational Value in the Rhythmic Analysis.....	23
Table 7. Abbreviations in the Analysis.....	23
Table 8. Rhythmic Construction .....	25
Table 9. Rhythmic Subdivisions on a Half Note <16> .....	30
Table 10. Rhythmic Subdivisions on a Quarter Note <8>.....	32
Table 11. Various Rhythmic Subdivision in m. 4, "Agni-Ignis" from <i>Hyperion</i> .....	34
Table 12. Prominent Rhythmic Subdivisions on a Half Note in the A Sections .....	34
Table 13. Rhythmic Subdivisions in mm. 1-4 in "Agni-Ignis" .....	37
Table 14. Six Categories of Rhythmic Cycling in the A Sections.....	40
Table 15. Direct Cycling and Internal Cycling Examples.....	42
Table 16. Category 3 of Rhythmic Cycling in "Agni-Ignis" .....	43
Table 17. Pitch Patterns in "Agni-Ignis," <i>Hyperion</i> .....	45
Table 18. Rhythmic Subdivision in the B Sections of "Agni-Ignis" .....	51
Table 19. Four Different Rhythmic Patterns in the B Sections of "Agni-Ignis" .....	52
Table 20. Rhythmic Pattern in the B Sections of "Agni-Ignis" .....	52
Table 21. Rhythmic Subdivision in the Core Section.....	54

Table 22. Rhythmic Treatment Between Sections in “Agni-Ignis” .....	55
Table 23. Appearance of Thirty-second-note Groups in “Agni-Ignis” .....	56
Table 24. Use of Rhythmic Crescendo in “Agni-Ignis” .....	59

## CHAPTER 1

### THE EVOLUTION OF COMPLEX RHYTHMS IN FRENCH ORGAN MUSIC OF THE LATE TWENTIETH CENTURY

Complex rhythmic structure is one of the most significant characteristics of late twentieth-century French organ music. Olivier Messiaen (1908-1992) was one of the leading composers of organ music in his time, and is best known for his innovative use of rhythm. He explained his individual rhythmic language in his two treatises: *Technique de Mon Langage Musical* (1944) and *Traité de Rythme, de Couleur, et d'Ornithologie* (1949-1992). In *Technique de Mon Langage Musical*, Messiaen experimented with several rhythmic techniques such as augmented or diminished rhythms, rhythmic pedal,<sup>1</sup> and rhythmic canon, as well as Hindu rhythms. Messiaen published the other treatise, *Traité de Rythme, de Couleur, et d'Ornithologie* (1949-1992), in which he showed his particular interest of rhythmic concepts more extensively, especially focusing on those techniques used from 1949 to 1992 after *Technique de Mon Langage Musical*.

Messiaen's use of these experimental rhythmic techniques influenced the next generation of French organ composers such as Jean Guillou (b. 1930), Naji Hakim (b. 1955), and Thierry Eschaich (b. 1965), who have been active from the later part of the twentieth century. These composers saw the unlimited possibilities of the organ much in the same way as Messiaen did. Therefore, it is not surprising that many of the same interests of Messiaen were also taken seriously by this new generation as is evident through a shared and heightened interest in non-Western rhythms and serial methods

---

<sup>1</sup> This is identical to rhythmic ostinato. It is a short, constantly repeated rhythmic pattern.

as well as many other well-known contemporary techniques. Nevertheless, from the twentieth century to the present, there remain a number of notable differences between the practice of this new generation and those of Messiaen.

Contrasting these rhythmic practices, traditional rhythmic paradigms have grown from two sources: linguistic practice and dance. Both of these practices at times engender extremely complex rhythms. For example, language can be closely related to the rhythm of the piece, as shown in *Super flumina Babilonis* (1581) by Giovanni Pierluigi da Palestrina (1525-1594), where Palestrina attempts to fit musical rhythm into standard language patterns as they would be normally spoken. In the fourth line of the text, in mm. 39-44, from the words *in salicibus* and *medio*, the second syllable, *li*, and the first syllable, *me*, are given longer note values, imitating speech pattern (Ex. 1).

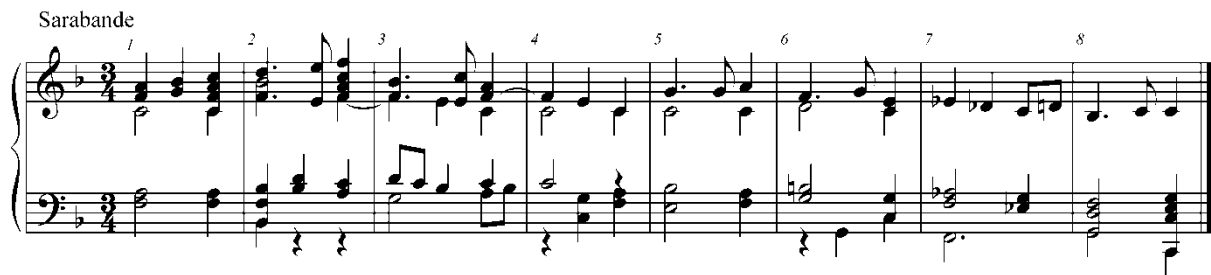
The image shows a musical score for four voices: CANTUS, ALTUS, TENOR, and BASSUS. The score is in G major and 4/4 time. The lyrics are: CANTUS: on: in sa-li-ci-bus in.....me-di-o e-; ALTUS: on: in sa-li-ci-bus..... in me-di-o, in sa-li-ci-bus in....; TENOR: on: in sa-li-ci-bus in me-di-o..... e-jus, in me-di-o e; BASSUS: in sa-li-ci-bus in me-di-o e-jus, The measure numbers 39, 40, 41, 42, 43, and 44 are indicated above the CANTUS line.

Example 1. *Super flumina Babilonis*, Palestrina, mm. 39-44. Edizione Fratelli Scaler, 1941.

Text:

*Super flumina Babylonis,  
illic sedimus, et flevimus,  
Dum recordaremus tui, Sion:  
In salicibus in medio ejus,  
Suspendimus organa nostra.*

Another paradigm of the traditional rhythmic concept is the dance. Certain movements of a suite bear the titles of dances; the tempo, rhythm, meter, phrasing, and character of each are implied by their title.<sup>2</sup> For example, in his *Suite No. 7 in F dur*, Georg Boehm (1661-1733) composed five movements based on dances: allemande, courante, sarabande, double, and gigue. In the sarabande, Boehm sets the 3/4 meter in a slow tempo to present the majestic and distinctive features of rhythm (Ex. 2).



Example 2. *Suite No. 7 in F dur*, Boehm, mm. 1-8. Permission to reprint requested from Kalmus/Warner Bros. Publications.

This suite concludes with a fast movement, the gigue,<sup>3</sup> whose 4/4 meter brings out the animated character of the gigue (Ex. 3).

---

2 Mary Cyr, *Performing Baroque Music* (Portland, Oregon: Amadeus Press, 1992), 42.

3 A fast Baroque dance movement written in binary form. It is usually the last movement of the mature suite, usually written in 6/8 or 6/4, or sometimes in a duple meter. It is of English origin and is similar to the loure but faster in tempo.



Example 3. *Suite No.7 in F dur*, Boehm, mm. 1-7. Permission to reprint requested from Kalmus/Warner Bros. Publications

The performer needs to play the gigue at a fast tempo to show liveliness and imitate the short, light bow strokes of string players.<sup>4</sup> Like dance music of the Baroque era, this type of genre dictates the meter and tempo as well as mood.

Music based on these traditional rhythmic concepts began to evolve in nontraditional ways through the nationalist composers of the nineteenth century who adopted rhythms from Eastern Europe.<sup>5</sup> Among these nationalist composers, Igor Stravinsky (1882-1971) did much to revitalize rhythmic diversity in Western music in the early twentieth century. One of the most famous examples of this style was found in *The Rite of Spring* (1913). In this work, Stravinsky demonstrated a method for reorganizing traditional European rhythmic structure. For example, in the last piece of the work,

---

4 Cyr, 44.

5 “A great impetus towards the freshening of rhythm began from the nationalist schools of the nineteenth century. Rhythms drawn from Polish, Hungarian, Bohemian, and Norwegian folk dance enlivened the standard patterns of the older musical cultures.” (Machlis, 31).



“Sacrificial Dance,” metric changes occur in almost every measure. This movement in particular contains a large number of unpredictable and jarring syncopations that alter the listener’s perception of time.

The image displays a page of a musical score for the "Sacrificial Dance" from Stravinsky's *The Rite of Spring*. The score is arranged in two systems, with measures 142 and 143 clearly marked. The instruments listed on the left include Oboe (Ob.), Clarinet in G (Cl. in G), Clarinet in B-flat (Cl. in Bb.), Cor Anglais (Cor. Angl.), Flute (Fl.), Violin I (Vn. I), Violin II (Vn. II), Viola (Vla.), Violoncello (Vcl.), Double Bass (Cb.), Trumpet in D (Tr. in D), Trumpet in C (Tr. in C), Trumpet in E-flat (Tr. in Eb), Trombone (Tr.), and Timpani (Timp.). The score is characterized by complex, syncopated rhythms and frequent metric changes. Performance instructions such as *sempre sf*, *sempre ostinato sf*, *con sord.*, *stacc.*, *div.*, and *non div.* are present throughout the score. The notation includes various rhythmic values, including eighth and sixteenth notes, and rests, often with complex groupings and accents.

Example 4. “Sacrificial Dance” from Stravinsky’s *The Rite of Spring*. Dover Publications, Inc., 1989.

Messiaen continuously developed the rhythmic complexities in his organ music. Among his fourteen solo organ pieces, Messiaen’s fourth organ cycle, *Messe de la*

*Pentecôte*, composed in 1950, was written to accompany various parts of the low mass of Pentecost Sunday. It shows good example of rhythmic evolution in the second half of the twentieth century. According to Gillian Weir, “The work is indeed a collage of Messiaen’s techniques and obsessions, with birdsong, water drops, plainsong, imaginative registrations, serialization in various forms, and Greek and Hindu rhythms [used] in new ways.”<sup>6</sup> *Messe de la Pentecôte* includes Hindu and Greek rhythms, that are used in more experimental ways than in his previous organ works, *La Nativité du Seigneur* (1935) and *Les Corps Glorieux* (1939)<sup>7</sup>. Here are rhythmic characteristics used in *Messe de la Pentecôte*.

The first movement, “Entrée: Les Langues de Feu,” evokes imagery from the biblical passage Acts 2:3: “Tongues like as of fire sat upon each of them.” The formal structure is divided into three sections: A, B, and A’. The rhythmic ostinato in the pedal, which is the main theme of this movement, symbolizes the utterance of the apostle. It is repeated seven times in both A sections, but is varied each time in melody and rhythm.<sup>8</sup>

Three Hindu rhythms of *trītiya*, *caturthaka*, and *nihçankalīla* are treated as *personnages rythmiques* (rhythmic characters)<sup>9</sup> in the second movement, “Offertoire.”<sup>10</sup>

---

6 Peter Hill, ed. *The Messiaen Companion* (Portland, Ore.: Amadeus Press, 1995), 354.

7 Robert S. Johnson, *Messiaen* (Berkeley: University of California Press, 1975), 37.

8 Clyde Barrington Holloway, “The Organ Works of Olivier Messiaen and Their Importance in His Total Oeuvre” (S.M.D. diss., Union Theological Seminary, 1974), 405.

9 Johnson, 35.

10 Messiaen augmented or diminished note value, which is akin to manipulating an actual, living character. Messiaen said, “Let’s imagine a scene in a play in which we place three characters: the first one acts, behaving in a brutal manner by striking the second; the second person is acted upon, his actions dominated by those of the first; finally, the third character is simply present at the conflict and remains inactive. If we transport this parable into the field of rhythm, we obtain three rhythmic groups: the first, whose note values are ever increasing, is the character who attacks, the second, whose note-values

The character of these three Hindu rhythms either remains the same or is transformed by augmentation and diminution based on the principle of added values, that is, by the addition or withdrawal of a note, rest, or a dot.<sup>11</sup> Messiaen derived his idea of *personnages rythmiques* from Stravinsky's *The Rite of Spring*, especially from the "Sacrificial Dance," from which Messiaen took and expanded his idea of rhythmic cells.<sup>12</sup> In the "Sacrificial Dance," Stravinsky expands or reduces the basic unit of rhythm to produce the rhythmic complexities within a meter, while Messiaen freely augments or diminishes his rhythm in an ametric sense.

Messiaen's use of rhythmic complexities influenced, Jean Guillou, who followed the traditions of his teacher but developed his own way. His use of innovative rhythmic techniques such as irregular rhythmic patterns and ostinatos<sup>13</sup> provides a hallmark style of drama, color, and energy.<sup>14</sup> His highly personal and experimental approach to rhythm led him to write *Hyperion or the Rhetoric of Fire, Op. 45 for Organ* in 1988, wherein he expanded his use of rhythm to communicate his idea of "fire."

In spite of his importance in the French organ literature in the twentieth century, very limited studies have been done on Guillou's music. The major focus of this study is

---

decrease, is the character who is attacked; and the third, whose note-values never change, is the character who doesn't move." (Samuel, 71).

11 Olivier Messiaen, *Technique de Mon Langage Musical*, Vol. I, II. (Paris: Alphonse Leduc, 1944), 18.

12 Johnson, 36.

13 "As a composer Guillou often uses angular lines and pungent sonorities in an atonal idiom; his style is also characterized by obsessive ostinatos, and complex cross-rhythms demanding acute rhythmic precision on the part of the performer." In Barry Millington & Paul Hale: 'Guillou, Jean', *Grove Music Online* ed. L. Macy (Accessed 11 March 2008), <http://www.grovemusic.com>

14 Janet Thomas, "Contemporary Music and the Avant-Garde -- An Introduction: Part II. The Continent and Some Hints on Performance," *Organists' Review* 69 (August 1985): 31.

to examine the rhythmic characteristics used by Guillou in his major organ work, “Agni-Ignis” from *Hyperion*. This study will examine the formal and rhythmic structures to show how these features are interrelated and how the rhythm becomes a main element in this piece. I will pay particular attention to several significant rhythmic techniques including rhythmic subdivision, rhythmic cycling, as well as pitch patterns within a rhythmic group from section to section. Other significant rhythmic characteristics, such as rhythmic pedal, rhythmic crescendo, durational contrast, rhythmic treatment of boundary sections, and other frequently used contemporary compositional processes, will be examined. Given the complexities involved in a contemporary rhythmic analysis, an original attempt to understand this work is necessary. Here, I have created my own method based on certain twentieth-century techniques of analysis, to analyze not only rhythmic structure but also pitch contents of “Agni-Ignis.” This result will prove how rhythm becomes the main structure to provide thematic and motivic elements and how these combines with the rhetorical meaning of fire, which is a main theme of “Agni-Ignis.” The basic intention here is to inform successful performance practice. Ultimately, a study of this type aims to highlight the overall aesthetic and technical coherence in Guillou’s treatment of rhythm.

## CHAPTER 2

### FORMAL STRUCTURES IN “AGNI-IGNIS” FROM *HYPERION*:

#### Rhetorical Concept

In 1988, Guillou composed *Hyperion* on a commission from the French oil company named the Société Nationale Elf Aquitaine to celebrate the discovery of oil near the French city of Comminges, where the work was premiered by the composer in August 1989 in the cathedral Saint-Bertrand de Comminges. Typical of Guillou’s previous efforts, the work is not merely about a simple correlation between oil and fire. Guillou himself commented about the theme of “fire” in *Hyperion*:

My idea was to illustrate the idea of the fire as it developed in the human mind during the ages. It has always been a symbol. So, the fire was like a very mysterious, almost a magic force which existed in all material, in stones...<sup>15</sup>

Guillou developed his own imagination of “fire,” which always has been an important subject for human history for centuries. He was also inspired by various sources, such as European philosophical concepts and myths from the past centuries to communicate his individual ideas of “fire.”<sup>16</sup> Guillou gives a detailed explanation related to the rhetorical meaning of “fire” and how he described it in his music:

This work takes as its point of departure the concept of “Fire.” By this single word I mean to imply combative fire, the fire of friction among ideas, of struggle, of liberation, the fire of human warmth, fire that brings rebirth and, above all else, the fire of enthusiasm, of the creative urge, of poetic furor. . . . At the core of my reflections on the subject of Fire and the numerous myths it has engendered, it was upon the idea of Human Fire that I decided to build this music dedicated to the Titan Hyperion, the hero of Fire as an active agent, by whom Hölderlin as well once let himself be guided. This musical ballad, as it were, strives to shed light on various phases which might be deemed “the mutations of Fire,” not so

---

15 Guillou Letter of Nov. 16, 2007, to Ju Yeon Lee.

16 Guillou Letter of Nov. 16, 2007, to Ju Yeon Lee.

much in the way it manifests itself in terms of physical reality but such as it has taken shape in the human mind across the centuries' civilizations, and, occasionally, as elicited by certain strains of Bachelardian thought.<sup>17</sup>

Guillou dedicated this piece to the Titan Hyperion,<sup>18</sup> the hero of Fire in the Greek mythology. Guillou also derived his ideas from Johann Christian Friedrich Hölderlin's (1770-1843)<sup>19</sup> novel, *Hyperion*, and Gaston Bachelard's (1884-1962)<sup>20</sup> book, *The Psychoanalysis of the Fire* (1938). In his novel *Hyperion*, Hölderlin observed that two aspects of human life symbolize the essence of the human condition: freedom and unity.<sup>21</sup> Guillou was also greatly inspired by Bachelard, a famous French philosopher from the first half of the twentieth century, who also chooses the same of subject of fire in his book.<sup>22</sup>

Jean Philippe Hodant<sup>23</sup> suggested in his doctoral dissertation that Guillou made an attempt to connect his musical works with literature. He postulated that Guillou's art consisted of creating an autonomous musical rhetoric comparable to a literary discourse – a musical narrative that also enclosed and contained dramatic gestures, becoming a dramaturgical stylization that produced a perfectly structured language and merged in a

---

17 Guillou, 6.

18 Hyperion is a Titan, the son of Gaia (Earth) and Uranus *Helios Hyperion*, "Sun High-one."

19 Johann Christian Friedrich Hölderlin (1770-1843) was a major German lyric poet. His work bridges the Classical and Romantic schools.

20 Gaston Bachelard (1884-1962) was a French philosopher who rose to some of the most prestigious positions in the French academy.

21 Freedom is represented as "all-desiring, all-subjugating dangerous side of man," and the unity is represented as "most beautiful condition he can achieve" (preface to *Hyperion* in *Thalia*, 1794).

22 Guillou Letter of Nov. 16, 2007, to Ju Yeon Lee.

23 Jean-Philippe Hodant. "Rhetorique et Dramaturgie Musicales dans l'oeuvre de Jean Guillou." Ph.D. dissertation, Université de Paris-Sorbonne, 1992.

single poetic gesture.<sup>24</sup> Hodant made three categories to show a relationship to literature by exemplifying three major pieces of Guillou in his study. The first category suggested that Guillou composed his works based on pre-existing materials. For example, Guillou composed *La Chapelle des Abîmes* (The Chapel of the Abysses) based on Julien Gracq's novel, *Au Château d'Argol* (Castle of Argol). Another type of relationship to literature can be found in his *Judith-Symphony* for mezzo-soprano and full orchestra, which is also a musical rendering functioning as an anthem for the biblical heroine. Guillou mixes voices and orchestra in *Judith-Symphony* and carries the real presence of the literary text in his music. *Hyperion*, however, is contrastingly written using pure musical essay, without any preliminary literary impulses.<sup>25</sup>

Table 1. Hodant's Visualization of Three Categories of Guillou's Compositions

Work	Description
<i>La Chapelle des Abîmes</i>	Underlying Text (texte latent) -----→ Organ Music
<i>Judith-Symphony</i>	Presented text (texte présent) -----→ Voice and orchestra
<i>Hyperion</i>	Organ Music (texte latent) -----→ No Present Text to Organ Music

*Note:* From Jean-Philippe Hodant. "Rhetorique et Dramaturgie Musicales dans l'oeuvre de Jean Guillou." Ph.D. dissertation, Université de Paris-Sorbonne, 1992, p. 9. Reprinted with permission.

Now we move to examine the titles of each movement of *Hyperion* to get the more detailed rhetorical ideas of the composer. Looking at the titles of each movement, one can perceive the composer's various thoughts on the subject of fire:

24 "Jean Guillou, International Performer of the Year 1982," Website of New York City Chapter, American Guild of Organists. (Accessed February 15, 2008) <http://www.nycago.org/html/POTY/Guillou.html>

25 Hodant, 7-8.

Table 2. Titles of Four Movements of *Hyperion*

Movement	Description
First	Hermes: The Messenger of Fire, conveying Life, Vivacity
Second	The Fires of Silence: Latent Fire, insinuating, “this heart is like the covered fire.” This work takes as its ideas the concept of “Fire”
Third	Phlogiston <sup>26</sup> [Fire] of the Soul: The Inflamed Soul, Subtle Fire, Penetrating Spirit
Fourth	Agni-Ignis: Fire of Exaltation

In his remarks on each movement of *Hyperion*, Guillou wrote:

The initial movement describes “Fire as Messenger,” sprightly and nimble. It reveals itself through jocular rhythmic impulses, numerically in constant opposition. In response to these impulses, muffled, breathless bass figures are heard . . . . The movement, “Phlogistic Fire of the Soul” is more complex. If I have chosen to use a notion that is no longer current—that of the materialization of Fire -- I do so with the understanding that it is immediately to be transmuted into a double metaphor that emphasizes its abstract nature. Here we have at once a description of “Subtle Fire,” “Fire of Insightful Knowledge,” and of “Absorptive Fire,” portrayed by an involved set of sequences that become the terms of a “Rhetoric of Fire.” This is immediately followed by “Fires of Exaltation” which is the triumph of gesture and of potent action.”<sup>27</sup>

In the fourth movement of *Hyperion*, Guillou utilizes creativity and musical rhetoric in naming “Agni-Ignis.” Guillou evokes references to different sources from several cultures to name this final movement. The name invokes the double fire of the poetic fury,<sup>28</sup> by connecting the Indian name for the god of fire, *Agni*, with *Ignis*, the Greek name for fire.<sup>29</sup> Greek and Vedic gods, Greek language, poetic quotations from

---

26 An imaginary element formerly believed to cause combustion and to be given off by anything burning.

27 Guillou, 6.

28 Hodant, 746.

29 Guillou Letter of Nov. 16, 2007, to Ju Yeon Lee.



the beginning of the twentieth century, and old concepts of chemistry are some of the various subjects of the essay from which musical speech developed its rhetoric and various figures. Amalgamation of such references is designed to draw bonds between literature and musical rhetoric.<sup>30</sup>

Hodant also suggested that the whole fourth movement was built on a single rhetoric D note figure. The D pitch dominates this fourth movement as the main note and as the rhetorical symbol as well. According to him, “This fire creation, the fire of poetic fury is exalted through an analogy in the rhetoric figure, which is in this single ‘D.’ It is the source of magnetic energy that shines in the core section and permeates into two poles which encircle it.”<sup>31</sup> These two poles can be interpreted as sections I and II, which proceed and follow the core section, respectively (See Chart 3, Appendix 5). This middle centered core section dominates the whole piece as a provider of energetic power.

Although Hodant considers the pitch D as the rhetoric theme of fire in his dissertation, I believe rhythm is more prominent in representing the dramatic image of “fire” in Guillou’s atonal music of “Agni-Ignis.” Although Guillou was influenced by various sources such as mythology, philosophical impression and writings from the past to the present, he skillfully developed his own imagination of the “fire” in this program music.

---

30 Hodant, 746.

31 Hodant, 759.

## General Background

*Hyperion* can be examined through meter, tempo, form, texture, dynamics, and rhythmic features (See Chart 1, Appendix 3). The first and third movements include changes of meter throughout and those are reminiscent of *The Rite of Spring* by Stravinsky. However, the second and fourth movements each retain a regular meter: 3/4 and 2/2 respectively. In the second movement, "Fires of Silence," Guillou sets a slow tempo such as *molto adagio* and *molto più lento* in a soft sonority to describe the silent and dreamy mood of fire. He chooses soft sound of solo stop and accompaniment one, which are krummhorn or oboe 8 with larigot 1 1/3 or 1 3/5 with a tremolo over 16' and 8' foundation stops at the beginning of the piece.

Rhythm is the vital element in expressing Guillou's concept of "fire" in all four movements of *Hyperion*. Guillou uses a number of rhythmic techniques including rhythmic variation, ostinato, and crescendo to characterize the various phases of "fire" (See Chart 1, Appendix 3). The first and third movements have rhythmic ostinatos in the bass, as in the fourth movement. Guillou also iterates the basic rhythmic patterns and repeats them during the piece as a thematic material in all four movements.

### Formal Structure of "Agni-Ignis"

For a closer look for musical structure, the form is examined here. The fourth movement of *Hyperion*, "Agni-Ignis," is divided into six sections (A-B-core-A'-B'-A") forming an arch. Table 3 shows the formal structure of "Agni-Ignis."

Table 3. Formal Structure of “Agni-Ignis” from *Hyperion*

Arch form	6 Sections (A – B – Center -- A'-- B' – A’')	
Part I		
A	mm. 1-36	A half-note pulse; Ostinato a
A <sup>1</sup>	mm. 1-15	
A <sup>2</sup>	mm. 16-34a	
Bridge	mm. 34b-36	
B	mm. 37-42	A quarter-note pulse; Ostinato b
Bridge	mm. 43-46	
Center (core) <sup>32</sup>	mm. 47-58	Core of energy
Part II		
A'	mm. 59-76	A half-note pulse; Ostinato a
B'	mm. 77-83	A quarter-note pulse; Ostinato b
A''	mm. 84-102	A half-note pulse; Ostinato a

The A and B sections all related in structure but are distinguished from each other by their organization. The A section is further divided into two sections, A<sup>1</sup> and A<sup>2</sup>, each similar in length to the later A' and A'' sections. This section has half-note pulses and has a variable type of ostinato *a*. The B sections are also similar to each other in length and have quarter note pulses with an invariable type of ostinato *b*.

#### *Formal Structure of the A Sections*

The A sections is repeated three times, each time with variations of A, A', and A''. The first A section is divided into sections A<sup>1</sup> and A<sup>2</sup>, these sections are also similar in length, providing a sense of unity and balance. Table 4 illustrates the measures which similar in both sections, where they share the same rhythm and pitch (see Chart 4, Appendix 6).

---

<sup>32</sup> Hodant calls the center section the core, which is based on the rhetoric figure of note D in mm. 47-58, representing fire.

Table 4. Similar Measures in the A Sections

Sections	A <sup>1</sup> (mm.1-15)	A <sup>2</sup> (mm.16-36)	A' (mm.59-76)	A'' (mm.84-102)
Similar measures	mm. 1-3 (≈)	mm. 16-18		
	mm. 8-14 (≈)	mm. 21-27		
		mm. 30-32 (=)	mm. 68-70	
			mm. 59-65 (=)	mm. 84-89

Note: (=) identical; (≈) almost identical

Sections A<sup>1</sup>, A<sup>2</sup>, A', and A'' closely resemble each other and resemble most closely the neighboring A sections. For example, apart from the first beat of m.16 as a bridge, the A<sup>1</sup> section of mm. 1-3 is almost identical to mm. 16-18 in the A<sup>2</sup> section (Ex. 5 & Ex. 6)

**Vivacissimo**

Example 5. *Hyperion*, "Agni-Ignis," A<sup>1</sup> section, mm. 1-4

Example 6. *Hyperion*, “Agni-Ignis,” A<sup>2</sup> section, mm. 15-18

Section A<sup>2</sup> actually begins on the second beat of m.16 after the short thirty-second-note grouping, which provides the rhythmic climax in the ascending figure in one voice before entering into the next section of A<sup>2</sup>.

#### *Formal Structure of the B Sections*

The B and B' sections are also similar to each other in length having many similar passages. Examples 7 and 8 below show the similar structures between these two B sections.

37

Fonds 16', 8'  
Foundations 16', 8'

*mf*

Fonds 32', 16', 8'  
Foundations 32', 16', 8'

39

40

41

*simile*

42

WL600060

Example 7. *Hyperion*, "Agni-Ignis," B section, mm. 37-42

77  
 Foras 16', 8'  
 Fondations 16', 8'

*mf*

Fonds 32', 16', 8'  
 Fondations 32', 16', 8'

78  
*simile*

79

80

81

82

83

Example 8. *Hyperion*, "Agni-Ignis," B' section, mm. 77-83

Sections B and B' are identical except for m. 37 of the B section and mm. 82-83, which are added to the end of the B' section and also share the same rhythm and pitches.

Table 5 below shows the similar structures of the B and B' sections.

Table 5. Formal Structure of the B sections, "Agni-Ignis" from *Hyperion*

Location	Function	Location	Function
B (mm. 37-42)		B' (mm. 77-83)	
m. 37	Bridge to B section (Transition)		
m. 38		m. 77 (=38)	
m. 39		m. 78 (=39)	
m. 40		m. 79 (=40)	
m. 41		m. 80 (=41)	
m. 42		m. 81 (=42)	
		m. 82	Extension
		m. 83	Extension

The A and B sections are comparable to other measures in their respective sections in organization and length, but the B sections are more similar to each other than those of the A sections (see Chart 4, Appendix 6). Through this, Guillou uses the formal structure to organize his music as a whole by either identical or similar measures, and to provide a basic frame for rhythmic structure, as will be examined in the following chapter.



## CHAPTER 3

### RHYTHMIC STRUCTURES IN “AGNI-IGNIS” FROM *HYPERION*

#### Introduction: Selected Techniques of Rhythmic Analysis

##### From the Twentieth Century

The purpose of this chapter is to elucidate Guillou's various approaches to rhythm and the devices used in the elaboration of these rhythmic analyses within his works. Having examined several important rhythmic analysis methods, I have combined the methods of Edward Pearsall<sup>33</sup> and Elizabeth West Marvin<sup>34</sup> to create my own process of analyzing the rhythmic structures found in “Agni-Ignis.”

Pearsall adopted a set-theoretical approach to rhythm in order to identify durational equivalence in both ordered and unordered contexts.<sup>35</sup> He defined a duration set as a collection of proportions using whole numbers (integers) to represent durational proportions.<sup>36</sup> Pearsall assigned the number 1 to a quarter note and all other notes or rests received values based on their proportional relations. He used braces { } to designate unordered-sets in order to differentiate them from ordered-sets, which are bound by angle brackets < >. Example 9 below shows the rhythmic duration by applying Pearsall's method.

---

33 Edward Pearsall, “Interpreting Music Durationally: A Set-Theory Approach to Rhythm,” *Perspective of New Music* 35, no. 1 (winter 1997): 205-230.

34 Elizabeth West Marvin, “The Perception of Rhythm in Non-Tonal Music: Rhythmic Contours in the Music of Edgard Varèse,” *Music Theory Spectrum* 13, no. 1 (Spring 1991): 61-78.

35 Pearsall, 208

36 Ibid, 209.



Ordered set  $\langle 1/2 \ 1/6^3 \ 1 \rangle$

Unordered set  $\{1/6^3 \ 1/2 \ 1\}$

Example 9. Designation of ordered set and of unordered set with symbols

In this rhythmic group as shown in example 9, one-half represents an eighth note and one-sixth represents a triplet sixteenth note<sup>37</sup> and this rhythm can be grouped in either the ordered set or unordered set. Employing Pearsall's method is effective for matching rhythm with number to visualize, but sometimes it is difficult to recognize the integer.

Another twentieth-century theorist, E.W. Marvin, also tried to relate rhythmic duration to whole numbers by the relative length of rhythmic duration. For example, he suggested using 0 to represent the shorter note and the number 1 to represent the longer note in the ordered sets, but this method only shows the relative length of the rhythm instead of exact length of the rhythm. If Marvin's method is applied to example 9, the result would be as shown below (Ex. 10).



Ordered set  $\langle 1 \ 0 \ 2 \rangle$

Example 10. Designation of ordered set with symbols









From the aforementioned methods of analysis, the author created her own method to analyze not only rhythmic structure but also pitch contents of the piece. If the

---

<sup>37</sup> Ibid, 209-210.

smallest note value in “Agni-Ignis,” a thirty-second note, becomes 1, then a sixteenth note will be 2, a quarter note will be 8, and so on. Considering the relative importance of the musical rest in this analysis, the rest gets the same value with a note and is represented by the letter R. As with Pearsall’s method, each rhythmic group of ordered series within one measure is bound by angle brackets (Table 6).

Table 6. Durational Value in the Rhythmic Analysis

Sign	Durational Value			
Note	 = 2	 = 4	 = 8	 = 16
Rest	 = 2R	 = 4R	 = 8R	 = 16

$$\langle \text{32nd note} \ \text{16th note} \ \text{8th note} \ \text{quarter note} \rangle = \langle 2 \ 4 \ 8 \ 8 \rangle$$

$$\langle \text{32nd note} \ \text{16th note} \ \text{16th rest} \ \text{8th rest} \rangle = \langle 2 \ 4 \ 4R \ 8R \rangle$$

Example 11. Rhythm described with methodology developed for this study  
Accordingly, the following outline of the rudiments is provided for reference throughout this analysis (Table 7).

Table 7. Abbreviations in the Analysis

Terminology	Abbreviation
Thirty-second note	1
Sixteenth note	2
Eighth note	4
Quarter note	8

*(table continues)*

Table 7 (continued)

Terminology	Abbreviation
Half note	16
Dotted half note	24
Whole note	32
Thirty-second rest	1R
Sixteenth rest	2R
Eighth rest	4R
Quarter rest	8R
Half rest	16R
Dotted half rest	24R
Whole rest	32R
Ordered series	< >
Same pitch group	( )
Pitch pattern	_____
Different pitch in the same rhythmic group (circled number)	②
Rhythmic pulse group (separated stem)	,
Triplet	{ } <sup>3</sup>
Quintuplet	{ } <sup>5</sup>
Sextuplet	{ } <sup>6</sup>
Original	O
Primary	P
Subdivision	Sd
Right hand	r.h.
Left hand	l.h.
Manual	man.
Pedal	ped.

Using this method, the basic rhythmic pulse, a half note, creates many rhythmic subdivisions and patterns. One of the most common patterns here is eight sixteenth notes repeating the same pitches, except for the third pitch of the group, which is

marked as a circled number or x below. Notes of the same pitch within one measure are bound by parentheses ( ).

Table 8. Rhythmic Construction

Order	Meter	Rhythm	Rhythmic subdivision
0	2/2	<♩ ♩>	<16 16>
1	2/2	<♩♩♩♩♩♩♩♩>	<2 2 2 2 2 2 2 2 16>
2	2/2	<♩♩ x ♩♩♩♩♩♩>	<(2 2 ② 2 2 2 2 2) 16>

As in the figure above, (2 2 ② 2 2 2 2 2) means the same pitches of sixteenth notes and chords are repeated eight times with the exception of the third. The same pitch content is shown with an underscore \_\_\_\_\_, this denotes patterns that include the same notes and/or chords. Example 12 below explains the rhythmic subdivisions, pitch patterns, and contents of mm. 1-4 in “Agni-Ignis.”

Example 12. *Hyperion*, “Agni-Ignis,” mm. 1-4

The repetitive sixteenth-note group, <2 2 ② 2 2 2 2 2>, is used most frequently in this passage in the manuals and pedal until measure 3. In m. 4-a, the rhythm of the manuals changes into <2 2 4, 2 2 2 2>, where the rhythm divides into two quarter notes for the first time in this movement, shown here by a comma to separate a stem. The pitch pattern <(2 ② 2 2 2 2 2 2)> also deviates in the second position of the rhythmic group for the first time in this piece.

There are some pitch patterns in m. 2-b that consist of two chords, where the right hand has C-E-C; D-F-D, and the left hand has G#-D#-F#, E♭-G♭-A. However, the right hand and left hand share the same rhythmic subdivision of <6 4 4 2>. The next section and the appendix will provide a thorough rhythmic analysis based on author's method (See Chart 6, Appendix 8).

### Rhythmic Structure

The author has analyzed the rhythmic structure in this movement by using my own methodology and will continue to relate the proportional durations of the rhythms used as seen in Chart 6 in Appendix 8. Here, a detailed analysis reveals many of the techniques that Guillou uses to organize the rhythmic structure of the piece.

These techniques are grouped into three categories: (1) rhythmic subdivision, cycling, and pitch pattern; (2) rhythmic treatment between sections (thirty-second-note group, rhythmic crescendo, durational contrast, long note values, rest, fermata); (3) rhythmic ostinato, and other frequently used rhythmic techniques in this movement. These categories contain the motivic and thematic devices that are significant to the

structural organization of the work. What follows is a detailed description of their components.

## The A Sections

### *Rhythmic Subdivision*

The composer thinks rhythm is always iterating, like diverse events in human world, so it can be always movable like a living object. He describes his perception of rhythm as:

Every motive, every rhythmic happening are like human relationship, with discussions, interruptions, contradictions or love, or enmity, hostility and war[e] and peace. My music can only develop with passion or intimate relation. And therefore, the rhythm is very important and always changing.<sup>38</sup>

Based on Guillou's concept of "humanistic fire," the rhythm is always varied based on certain note values in A sections of "Agni-Ignis." According to Guillou:

About the rhythmical numbers, we have, for the first three measures on manual and pedal always 3 and 5. Then, on 4<sup>th</sup> measure: 4, 4, 3, 5 then on 5<sup>th</sup> measure the same as beginning, on 6<sup>th</sup>: 4, 3, 1, 4, 4. On 7<sup>th</sup> measure the same as beginning, on 8<sup>th</sup>: 3, 3, 2, 4, 4. and so on . . . This perpetual change gives the life and the dramatic evolution."<sup>39</sup>

This composer's idea agrees with this analysis, because of continuous changes and variation of certain note values and rhythmic duration. The half note becomes the main note value in the A sections, while the B sections have a quarter note as the primary value. Guillou divides this original note into various subdivisions to create irregular and asymmetric gestures in the A sections. These rhythms always vary within a stable meter of 2/2. In m. 1, a half note subdivides into eight sixteenth notes, as

---

38 Guillou Letter of Nov. 16, 2007, to Ju Yeon Lee.

39 Guillou Letter of Nov, 16, 2007, to Ju Yeon Lee.

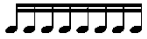
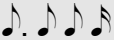

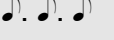


demonstrated in subdivision 1 <2 2 2 2 2 2 2>. It can also divide into subdivision 2 <6 4 4 2>, as found in m. 2, and subdivision 3 <6 4 6> in m. 3, and so forth. In m.15, the half note is finally divided sixteen times into a series of thirty-second notes, <1 1 1 1 1 1 1 1, 1 1 1 1 1 1 1 1 1>: subdivision 30. Example 13 shows the various uses of half-note values in mm. 1-15 from which smaller subdivisions come. This basic note value iterates into thirty-one rhythmic subdivisions on a half-note value and into nine subdivisions on a quarter note value throughout the A section.

Tables 9 and 10 show all the rhythmic subdivisions based on half and quarter notes, respectively, used in this section as thematic and motivic materials, and the abbreviations used to denote them.





Table 9. Rhythmic Subdivisions on a Half Note &lt;16&gt;

Sd	Location	Rhythm	Half-note sd	Quarter-note sd
1(P)	m.1-3, 5, 10, 16-18, 29, 34, 60-62, 64, 66, 75, 85-87, 93, 96		<2 2 2 2 2 2 2 2>	<2 2 2 2>
2	m. 2-b, 17-b		<6 4 4 2>	
3	m. 10-a, 23-a		<4 4 2 6>	<4 4>+ <2 6>
4	m. 33-b		<4 2 4 6>	
5	m. 3-b, 18-b		<6 4 6>	
6	m. 8-a		<6 6 4>	
7	m. 4-a, 14-b		<2 2 4, 2 2 2 2>	<2 2 4>+ <2 2 2 2>
8	m. 8-b, 20-b, 72-a		<4 2 2, 2 2 2 2 >	<4 2 2>+ <2 2 2 2>
9	m. 12-b, 25-b		<2 4 2, 2 2 2 2>	<2 4 2>+ <2 2 2 2>
10	m. 65-b(ped.), 89-b		<2 2 2 2, 4 2 2>	<2 2 2 2>+ <4 2 2>
11	m. 12-a, 25-a		<2 2 2 2, 4 4>	<2 2 2 2>+ <4 4>
12	m. 28-b(ped.)		<4 4, 2 2 2 2>	<4 4>+ <2 2 2 2>
13	m. 6, 72-b, 95-b, 97-b		<4 4, 2 4 2>	<4 4 >+ <2 4 2>
14	m.7-a(ped.), 11-b(l.h.), 24-b(l.h.)		<4 2 4 2 2 2>	
15	m. 26-b(ped.), 100-b(ped.)		<4 2 4 4 2>	
16	m. 75-a (p), 76-a (ped.)		<4 2 4 2 4>	

*(table continues)*

Table 9 (continued).

Sd	Location	Rhythm	Half-note sd	Quarter-note sd
17	m. 13-b		<2 4 4 4 2>	
18	m. 73-b		<4 4, 4 2 2 >	<4 4>+ <4 2 2>
19	m. 28-a, 95-a		<4 4, 4 4>	<4 4>
20	m. 20-b		<2 2 2 2, 2 6>	<2 2 2 2>+ <2 6>
21	m. 64-a, 65-a, 88-a, 89-a(ped.)		<8, 2 2 2 2>	<2 2 2 2>
22	m. 16-b, 29-b, 91-b		<2 2 2 2, 8>	<2 2 2 2>
23	m. 19-b		<8, 4 2 2>	<4 2 2>
24	m. 74-a		<2 4 2, 8>	<2 4 2>
25	m. 97-a		<4 4, 8>	<4 4>
26	m. 90-b		<8, 4 4>	<4 4>
27	m. 61-a, 62, 86-a, 87, 90-a, 92-a		<8, 8>	
28	m. 16-a, 19-a		<1 1 1 1 1 1 1 1, 2 2 2 2>	<1 1 1 1 1111> + <2 2 2 2>
29	m. 83		<{4 4 4} <sup>3</sup> >	
30	m. 15, 35, 36		<1 1 1 1 1 1 1 1, 1 1 1 1 1 1 1 1>	<1 1 1 1 1 1 1 1>
31	m. 34, 36		<{1 1 1 1 1 1 1 1, 1 1 1 1 1 1 1 1 1 1} <sup>19</sup> >	

Table 10. Rhythmic Subdivisions on a Quarter Note <8>

Sd	Location	Rhythm	Quarter-note sd	Rhythm	Eighth-note sd
I	m. 21-b, 29-b, 31-a, 32-a		<2 2 2 2>		<2 2>
II	m. 4-a, 14-b		<2 2 4>		<2 2>
III	m. 8-b, 19-b, 20-b, 21-a, 65-b, 72-a, 73-b, 89-b		<4 2 2>		<2 2>
IV	m. 6, 12-b, 25-b, (26), 72-b, 74-a, 95-b, 97-b		<2 4 2>		
V	m. 6, 10-a, 12-a, 23-a, 25-a, 28, 72-b, 73-b, 90-b, 95, 97		<4 4>		
VI	m. 10-a, 20-b, 23-a		<2 6>		
VII	m. 14-a		<2 2 2 2 2 2> <sup>6</sup>		
VIII	m. 29-a, 46-b, 91-a		<2 2 2 2 2> <sup>5</sup>		
IX	mm. 15-16, 19, 46-a		<1 1 1 1 1 1 1 1>		<1 1 1 1>

Note: sd =subdivision, ped.= pedal, ( ) = variation of the pitches

Example 14 below shows the rhythmic subdivisions used in m. 4, where several subdivisions occur simultaneously to explain the hierarchy of rhythmic division in “Agni-Ignis.” Circled numbers indicate those that differ from in pitch within a rhythmic group.









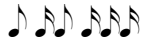
this rhythmic method, the most frequent rhythmic subdivisions on a half note in the A sections are displayed in table 12.

Table 11. Various Rhythmic Subdivision in m. 4, “Agni-Ignis” from *Hyperion*

Rhythmic sd	Subdivision	Note level	Functional role
<2 2 4, 2 2 2 2, 2 ② 2 2 2 2 2 2>		Whole-note level	Thematic element
<2 2 4, 2 2 2 2>+ <2 ② 2 2 2 2 2 2>	Sd (7+ 1)	Half-note level	Thematic element
<2 2 4>+ <2 2 2 2>+ <2 ② 2 2>+ <2 2 2 2>	Sd (II+ I+ I+ I)	Quarter-note level	Motivic element

Note: sd = subdivision, r.h.= right hand

Table 12. Prominent Rhythmic Subdivisions on a Half Note in the A Sections

Frequency (out of 73 measures)	Location	Rhythm	Rhythmic Sd	Sd
60 times	mm. 1-11, 13, 16-24, 26, 28-34, (43-45), 59-64, 66-70, 72-76, 84-88, 92-94, 96-101		<2 2 2 2 2 2 2 2>	P
6 times	m.61, 62, 86, 87, 90, 92		<8 8>	27
4 times	m.6, 72, 95, 97		<4 4 2 4 2>	13
4 times	m.64, 65, 88, 89		<8 2 2 2 2>	21
3 times	m.15, 35-36,		<1 1 1 1 1 1 1 1, 1 1 1 1 1 1 1>	30
3 times	m. 8-b, 20-b, 72-a		<4 2 2 2 2 2 2>	8
3 times	m. 7-a, 11-b, 24-b		<4 2 4 2 2 2>	14

(table continues)

Table 12 (continued).

Frequency (out of 73 measures)	Location	Rhythm	Rhythmic sd	Sd
3 times	m. 16-b, 29-b, 91-b		<2 2 2 2 8>	22
2 times	m. 2-b, 17-b		<6 4 4 2>	2
2 times	m. 10-a, 23-a		<4 4 2 6>	3
2 times	m. 3-b, 18-b		<6 4 6>	5
2 times	m. 4-a, 14-b		<2 2 4 2 2 2 2>	7
2 times	m. 12-b, 25-b		<2 4 2 2 2 2 2>	9
2 times	m. 65-b, 89-b		<2 2 2 2 4 2 2>	10
2 times	m. 12-a, 25-a		<2 2 2 2 4 4>	11
2 times	m. 26-b, 100-b		<4 2 4 4 2>	15
2 times	m. 75-a, 76-a		<4 2 4 2 4>	16
2 times	m. 28-a, 95-a		<4 4 4 4>	19
2 times	m. 34, 36		<{1 1 1 1 1 1 1 1, 1 1 1 1 1 1 1 1 1 1 1}> <sup>19</sup>	31

Note: sd = subdivision

Among the thirty-one subdivisions based on the original note value, subdivision 1 <2 2 2 2 2 2 2 2> is the most frequently used throughout the A sections, followed in frequency by these subdivisions: 27 <8 8>, 13 <4 4 2 4 2>, 21 <8 2 2 2 2>, and 30 <1 1 1 1 1 1 1 1, 1 1 1 1 1 1 1 1>. Therefore, subdivision 1 is designated as the primary subdivision (P). Subdivisions 27 <8 8> and 21 <8 2 2 2 2> start to appear from m. 61 of the A' section, because the quarter note <8> has a tendency to appear in the later part of the piece. Subdivision 30 <1 1 1 1 1 1 1 1, 1 1 1 1 1 1 1 1> appears during

several important formal points in this piece, such as at the end of the A<sup>1</sup> and A<sup>2</sup> sections, playing a significant role in the musical structures. The following is a detailed study of two frequently occurring subdivisions in "Agni-Ignis."

*Subdivision 1(P)* <2 2 2 2 2 2 2 2>

Subdivision 1(P) occurs in mm. 1-11, 13, 16-24, 26, 28-34, (43-45), 59-64, 66-70, 72-76, 84-88, 92-94, 96-101. This primary subdivision is presented sixty times in seventy-three measures in the A sections as a cyclic thematic material. This recurring rhythm can be also understood metaphorically as the "theme of fire, because they add a powerful energy and dramatic gesture as "fire." The primary subdivision opens the piece in the manual followed by the pedal in rhythmic imitation from m. 1 to 3 as shown in example 15 below.

The image shows a musical score for the first four measures of "Agni-Ignis" in 2/2 time. The score is divided into two systems. The first system (measures 1-2) is labeled "Theme of Fire" and features a treble clef with a melodic line and a bass clef with a rhythmic accompaniment. The second system (measures 3-4) continues the piece. Rhythmic subdivisions are indicated by numbers and symbols (circles with dots) below the notes. The subdivisions for the first system are: <(2 2 2 2 2 2 2 2)>, 16< and <(2 2 2 2 2 2 2 2)>, 6 4 4 2>. The subdivisions for the second system are: <16R, (2 2 2 2 2 2 2 2)>, <16R, (2 2 2 2 2 2 2 2)>, <(2 2 2 2 2 2 2 2)>, 6 4 6>, <2 2 4, 2 2 2 2, (2 2 2 2 2 2 2 2)>, <2 2 4, (2 2 2 2, 2 2 2 2 2 2 2 2)>, <16R, (2 2 2 2 2 2 2 2)>, <(2 2 2 2)>, 8R, and <(2 2 2 2 2 2 2 2)>.

Example 15. *Hyperion*, "Agni-Ignis," mm. 1-4

Table 13 below shows all the rhythmic subdivisions used in mm. 1-4.



Table 13. Rhythmic Subdivisions in mm. 1-4 in "Agni-Ignis"

Location	Man, ped	Rhythmic sd (1st pulse)	Rhythmic sd (2nd pulse)	Sd (1st pulse)	Sd (2nd pulse)
m. 1	Man.	<(2 2 ② 2 2 2 2 2)>	<16>	P	<16>
	Ped.	<16R>	<(2 2 ② 2 2 2 2 2)>	<16R>	P
m. 2	Man.	<(2 2 ② 2 2 2 2 2)>	<6 4 4 2>	P	2
	Ped.	<16R>	<(2 2 ② 2 2 2 2 2)>	<16R>	P
m. 3	Man.	<(2 2 ② 2 2 2 2 2)>	<6 4 6>	P	5
	Ped.	<16R>	<(2 2 ② 2 2 2 2 2)>	<16R>	P
m. 4	Man.	<2 2 4, 2 2 2 2>	<(2 ② 2 2 2 2 2 2)>	7	P
	Ped.	<(2 2 2 2), 8R>	<② 2 ② 2 2 2 2 2>	I+8R	P

Note: sd = subdivision, man = manual, ped = pedal

However, this primary rhythmic pattern on a half note also iterates into several different variations in mm. 1-4. It changes into subdivision 2 <6 4 4 2> in m. 2-b and into subdivision 5 <6 4 6> in m. 3-b. The rhythm alters into subdivision 7<2 2 4, 2 2 2 2> in the first pulse of m. 4, combining with a primary subdivision again, but this time moves the location to the second pulse to break the regularity. The pedal's different rhythm also supports the possibility of breaking the expected pattern. What is heard are the same rhythmic subdivisions shared by both hands in mm. 1- 4. In m. 4-b, the manual and pedal have the same subdivision for the first time, however, they differ in pitch contents to enrich both the harmonic and rhythmic complexity. Accordingly, the manual's syncopated rhythm contrasts with the pedal's straight rhythm.

Related to the performance suggestions, when performing "Agni-Ignis," the organist needs to play an exact duration of meaningful, repeated note and chord

patterns to provide accuracy and set the mood for the metaphorical rhythmic theme of "fire." To play a rhythmic pattern precisely, a performer can change the fingering and pedaling for those repeated notes or chords, which requires a technical virtuosity in organ playing. By doing so, the performer can distribute power more evenly. However, he/she needs to be careful not to change the stress of the beat when changing the fingering or pedaling, since the stress is intended to fall only on the first or third beat in the measure of 2/2 meter. As seen in mm. 1- 4, there is a tendency for the manual and pedal to have opposite rhythms, while both hands play the same rhythm. This rule generally applies to the rest of the piece and adds rhythmic relaxation and tension at the same time, providing a sense of the paradoxical simplicity and complexity of the work. This primary subdivision has an important role to provide the unity and regularity to the piece as a main theme of "fire" in rhythm.

*Subdivision 27 <8 8>*

Subdivision 27 occurs in m. 61, 62, 86, 87, 90, 92. The quarter-note division starts to appear in the later part of the piece. While the sixteenth notes of the primary subdivision continue throughout, quarter notes are presented for the first time in m. 61 of the A' section (Ex. 16).

Example 16. *Hyperion*, “Agni-Ignis,” mm. 61-66

In mm. 61-64, both hands continue to sound long note values of one <8>, two <16>, or three beats <24>. Here, the rhythm keeps moving by the pedal’s regularity of the “theme of fire,” <2 2 2 2 2 2 2>. In this passage, the performer needs to play the exact rhythmic duration in the pedal to drive the piece forward.










The rhythmic climax is shaped by contrasting duration of a note and a pitch in m. 65. The whole note appearing for the first time in this piece, besides in the core section, is in the manual, but is later imitated by the pedal in m. 66. The manual holds the whole note <36> while the pedal plays the sixteenth-note group. Again, the opposite tendency of the manual and pedal is presented here. Here Guillou also highlights rhythmic climax

along with the pitch. An ascending melodic line in the right hand, which starts from a<sup>2</sup> and ends on g<sup>3</sup> (a<sup>2</sup>-b<sup>2</sup>-c<sup>3</sup>-d<sup>3</sup>-e<sup>3</sup>-g<sup>3</sup>) in stepwise motion in mm. 64-65, contrasts the pedal's descending contour from f#<sup>1</sup> to C in m. 65-66. The length of notes used in the rhythm has a tendency to grow towards the end of the piece, as is the case in example 16, of subdivision 27. In this example, the musical climax is achieved by the duration of notes and ascending pitches.

### *Rhythmic Cycling*

Guillou uses another rhythmic variation technique, rhythmic cycling, in “Agni-ignis.” This cycling is achieved by changing the order of the rhythmic values within a group, thereby creating different rhythms. Table 14 illustrates the rhythmic cycling of six different categories of rhythmic subdivisions found within the work.

Table 14. Six Categories of Rhythmic Cycling in the A Sections

Category	Sd	Rhythmic sd	Location	Rhythm
(1)	2	<6 4 4 2>	m. 2-b, 17-b	
(1)	3	<4 4 2 6>	m. 10-a, 23-a	
(1)	4	<4 2 4 6>	m. 33-b	
(2)	5	<6 4 6>	m. 3-b, 18-b	
(2)	6	<6 6 4>	m. 8-a	
(3)	7	<2 2 4 2 2 2 2>	m. 4-a, 14-b	
(3)	8	<4 2 2 2 2 2 2>	m. 8-b, 20-b, 72-a (Retrograde of sd-7)	
(3)	9	<2 4 2,2 2 2 2 >	m. 12-b, 25-b	
(3)	10	<2 2 2 2, 4 2 2>	m. 65-b(p), 89-b	

*(table continues)*

Table 14 (continued)

Category	Sd	Rhythmic sd	Location	Rhythm
(3)	11	<2 2 2 2 4 4>	m. 12-a, 25-a	
(3)	12	<4 4 2 2 2 2>	m. 28-b	
(3)	13	<4 4 2 4 2>	m. 6, 72-b, 95-b, 97-b	
(3)	14	<4 2 4 2 2 2>	m. 7-a(ped.), 11-b(l.h.), 24-b(l.h.)	
(3)	15	<4 2 4 4 2>	m. 26-b(ped.), 100-b(ped.)	
(3)	16	<4 2 4 2 4>	m. 75-a(ped.), 76-a(ped.)	
(3)	17	<2 4 4 4 2>	m. 13-b	
(3)	18	<4 4 4 2 2 >	m. 73-b	
(4)	21	<8, 2 2 2 2>	m. 64-a, 65-a, 88-a, 89-a(ped.)	
(4)	22	<2 2 2 2 8>	m. 16-b, 29-b, 91-b	
(5)	23	<8 4 2 2>	m. 19-b	
(5)	24	<2 4 2 8>	m. 74-a	
(6)	25	<4 4 8>	m. 97-a	
(6)	26	<8, 4 4>	m. 90-b	

Note: sd = subdivision

The first category of rhythmic cycling produces three different subdivisions: subdivision 2 <6 4 4 2>, subdivision 3 <4 4 2 6> and subdivision 4 <4 2 4 6>. They share the same duration of <6>, <4>, and <2> in their group. Subdivision 2 <6 4 4 2> simply moves duration <6> to the end of the group, becoming subdivision 3 <4 4 2 6> in m. 10. This study refers to this concept as “direct cycling.” In subdivision 3 <4 4 2 6>,

the middle part of group, with rhythmic values <4> and <2>, switches its order to become subdivision 4 <4 2 4 6>. This rearrangement is known as “internal cycling” (Ex. 17-19)

Table 15. Direct Cycling and Internal Cycling Examples

Pattern	Sd	Rhythmic sd	Rhythm
Original	2	<6 4 4 2>	
Row 1 (Internal Cycling)	3	<4 4 2 6>	
Row 2 (Direct Cycling)	4	<4 2 4 6>	

Example 17. *Hyperion*, “Agni-Ignis,” m. 2

Example 18. *Hyperion*, “Agni-Ignis,” m. 10

33

Example 19. *Hyperion*, “Agni-Ignis,” m. 33

The third category of group also generates twelve different rhythmic varieties by changing the duration of the rhythmic values of <4> and <2>: <2 2 4 2 2 2 2>, <4 2 2 2 2 2>, <2 4 2, 2 2 2 2>, <2 2 2 2, 4 2 2>, <2 2 2 2 4 4>, <4 4 2 2 2 2>, <4 4 2 4 2>, <4 2 4 2 2 2>, <4 2 4 4 2>, <4 2 4 2 4>, <2 4 4 4 2>, <4 4 4 2 2>. Among them, subdivision 7 <2 2 4 2 2 2 2> becomes a retrograde of subdivision 8 <4 2 2 2 2 2 2> as shown in examples 20 and 21.

Table 16. Category 3 of Rhythmic Cycling in “Agni-Ignis”

Pattern	Sd	Rhythmic sd	Rhythm
Original	7	<2 2 4 2 2 2 2>=	
		<2 2 4>+ <2 2 2 2>	
Retrograde	8	<4 2 2 2 2 2 2>=	
		<4 2 2>+ <2 2 2 2>	

Note: sd = subdivision

Example 20. Subdivision 7, *Hyperion*, “Agni-Ignis,” m. 4

Example 21. Subdivision 8, *Hyperion*, “Agni-Ignis,” m. 20

Subdivision 8, <4 2 2 2 2 2>, divides into two rhythmic segments. The first half of this rhythmic segment, based on a quarter note, is subdivision III <4 2 2>, which then becomes subdivision II <2 2 4>. This combines accordingly with the same subdivision I <2 2 2 2> to create a rhythmic retrograde.

The rhythmic cycling within the subdivisions becomes one of the fundamental methods used to create various patterns by simply changing the order of rhythm within groupings. As a structural element, rhythmic cycling is another method employed to create various thematic and motivic materials.



### Pitch Patterns

Subdivision and cycling are related to pitch patterns and contents in this analysis. The primary subdivision <2 2 2 2 2 2 2 2>, the “theme of fire,” can be altered to create seventeen different pitch patterns. This cyclic “theme of fire” has a obvious pitch pattern, because it repeats the notes and chord groupings. Pattern 1 <2 2 ② 2 2 2 2 2> has different a note or chord in the third position of the pattern, which is marked by ② in the group. Since it is used most often in the A sections of “Agni-Ignis,” this pattern 1 is labeled as the original (O). The deviating chord can be found in the second position of the group, as in pattern 2 <2 ② 2 2 2 2 2 2> or at the beginning of the group, as in pattern 3 <② 2 2 2 2 2 2 2 2>. Table 17 below illustrates seventeen different pitch patterns based on the primary subdivision.

Table 17. Pitch Patterns in “Agni-Ignis,” *Hyperion*

Pattern	Location	Rhythmic sd	Pitch pattern
1(O)	m. 1-3, 5, 16-19, 29, 34, 43, 60, 62, 64, 66, 74-75, 85, 87, 88, 93, 96	<(2 2 ② 2 2 2 2 2)>	<x x y x x x x x>
2	m. 4-b	<(2 ② 2 2 2 2 2 2)>	<x y x x x x x x>
3	m. 31, 59-b,69-b ,84-b	<(② 2 2 2 2 2 2 2 2)>	<y x x x x x x x>
4	m. 59-a, 84-a	<(②② 2 2 2 2 2 2)>	
5-1	m.74-b, 75-b	<(②②② 2 2 2 2 2)>	<y y y x x x x x>
5-2	m. 28-b, 43-a, 74-b,75-b	<(②②② 2 2 2 2 2)>	<y y z x x x x x>
5-3	m. 9-a, 22-a	<(②②② 2 2 2 2 2)>	<y z a x x x x x>
6-1	m. 62-b, 66-a, 67-a, 87-b	<(②②②② 2 2 2 2)>	<y y y y x x x x>
6-2	m. 26-a, 67-a	<(②②②② 2 2 2 2)>	<y y z z x x x x>

(table continues)

Table 17 (continued).

Pattern	Location	Rhythmic sd	Pitch pattern
6-3	m. 15-a	<(②②②② 2 2 2 2)>	<y z z z, x x x x>
6-4	m. 11-a, 24-a, 100-a	<(②②②② 2 2 2 2)>	<z a y y x x x x>
6-5	m. 6-b, 73-a	<(②②②② 2 2 2 2)>	<y z a b x x x x>
6-6	m. 6-b	<(②②②② 2 2 2 2)>	<y z a y x x x x>
7	m. (28-a)	<(2 2 2 2 ②②②②)>	<x x x x z y y y>
8	m. 4-b	<② 2 ② 2 2 2 2 2>	<y x y x x x x x>
9	m. 20-a	<2 ② 2 2 2 ② 2 ②>	<x y x x x y x y>
10	m. 20-b	<2 2 2 2 2 ②②②>	<x x x x x y y y>
11	m. 59-a, 84-a, 92-b	<(2 2 ②②②②②②)>	<x x y z z a b b>
12	m. 33-a, 60-b, 85-b	<(2 2 ② 2,2 ② 2 2)>	<x x x y y y z z>
13	m. 7-b, 8-a	<(2 ②② 2 ②② 2 ②)>	<x y z x y z x y>
14	m. 9-b, m.22-b	<(2 2 ② 2 ② 2 ② 2)>	<x x y x y x y x>
15	m. 32-b, 70-b, 101	<(② 2 ② 2 ② 2 ② 2)>	<y x y x y x y x>
16	m. 61-b, 86-b	<( ②②②② 2 2 2 2)>	<y y x y x x x x>
17	m. 4-b, 7, 10, 13, 19-b, 21-a, 23-a, 24-b, 26, 61-a, 63, 64-b, 67-b, 72-76, 86-a, 88-b, 94, 96-98, 100-102	<(2 2 2 2 2 2 2 2)>	<x x x x x x x x>

Note: The relationship in pitch content between x, y, z, a, and b is not the same between patterns.

Patterns only based on the primary subdivision <2 2 2 2 2 2 2 2>

x: most frequently repeated pitch

y, z, a, b: other frequently repeated pitches by order

One pitch pattern can have several different pitch contents in their group. For example, pattern 6, <(② ② ② ② 2 2 2 2)>, has six different pitch patterns based on a half-note level: 6-1 <y y y y x x x x>, 6-2 <y y z z x x x x>, 6-3 <y z z z, x x x x>, 6-4 <z a y y x x x x>, 6-5 <y z a b x x x x>, 6-6 <y z a y x x x x>. Examples 22-25 show six different pitch contents of pattern 6.

67

<y y z z, x x x x> <x x x x, x x x x>

<y y y y, x x x x> <x x x x, x x x x>

Detailed description: This musical score is for Example 22, starting at measure 67. It consists of three staves. The top staff is in treble clef with a key signature of two sharps (F# and C#) and a 3/2 time signature. It contains a series of chords, with a key signature change to one flat (Bb) after the first measure. The middle staff is in treble clef and contains a series of eighth-note chords. The bottom staff is in bass clef and contains a series of eighth-note chords. Below the staves, there are two lines of pitch patterns in angle brackets. The first line is "<y y z z, x x x x> <x x x x, x x x x>" and the second line is "<y y y y, x x x x> <x x x x, x x x x>".

Example 22. Pitch Patterns 6-1 and 6-2, *Hyperion*, "Agni-Ignis," m. 67

15

<y z z z, x x x x>

Detailed description: This musical score is for Example 23, starting at measure 15. It consists of two staves. The top staff is in treble clef with a key signature of two sharps (F# and C#) and a 3/2 time signature. It contains a series of eighth-note chords. The bottom staff is in bass clef and contains a series of eighth-note chords. Below the staves, there is one line of pitch patterns in angle brackets: "<y z z z, x x x x>".

Example 23. Pitch Patterns 6-3, *Hyperion*, "Agni-Ignis," m. 15

100

<y z a b, x x x x> <x x x x, x x x x>

<z a y y, x x x x> <x x x x, x x x x>

Detailed description: This musical score is for Example 24, starting at measure 100. It consists of three staves. The top staff is in treble clef with a key signature of two sharps (F# and C#) and a 3/2 time signature. It contains a series of chords. The middle staff is in treble clef with a key signature of one flat (Bb) and a 3/2 time signature. It contains a series of chords. The bottom staff is in bass clef and contains a series of eighth-note chords. Below the staves, there are two lines of pitch patterns in angle brackets. The first line is "<y z a b, x x x x> <x x x x, x x x x>" and the second line is "<z a y y, x x x x> <x x x x, x x x x>".

Example 24. Pitch Patterns 6-4 and 6-5, *Hyperion*, "Agni-Ignis," m.100

73

The image shows a musical score for Example 25, measure 73. It consists of three staves. The top staff is a treble clef with a 3/4 time signature. The middle staff is a grand staff (treble and bass clefs) with a 3/4 time signature. The bottom staff is a bass clef with a 3/4 time signature. The score includes various rhythmic patterns and pitch notations. The notation includes notes, rests, and accidentals. The pitch patterns are indicated by letters and 'x' symbols: <y z a b, x x x x> and <x x x x, x x x x>.

Example 25. Pitch Patterns 6-5, *Hyperion*, “Agni-Ignis,” m. 73

Examples 22, 23, 24, and 25 show the various alterations of pattern 6 <② ② ② ② 2 2 2 2>. In example 22, both hands have two different pitch patterns simultaneously: the right hand plays pattern 6-2, <y y z z x x x x> in ascending motion and the left hand plays pattern 6-1<y y y y x x x x>, both of which create complex harmonic effect. These patterns combine with pattern 17 <x x x x x x x x> in the second pulse of the same measure, which repeats another important pitch, E $\flat$ , in the right hand. This E $\flat$  pitch, which is only a half step above the rhetoric figure D, dominates this passage along with other neighboring notes of C, C $\sharp$ , and E in this measure.

In example 23, pattern 6-3 <y z z z, x x x x> also repeats important pitches in a bridge section of m. 15-a. The *chamades* 8' repeats the D rhetoric figure and C $\sharp$  notes obsessively just before shifting to the thirty-second-note group. In example 24, the left hand plays pattern 6-4 <z a y y, x x x x>, while the right hand plays the pattern 6-5 <y z a b, x x x x>. These regular rhythms of the “theme of fire” in the manual have a strong juxtaposition with pedal’s irregular rhythm of an ostinato in a contrary motion. Example 25 shows another instance of pattern 6-5 <y z a b, x x x x> in both hands. However,

the pattern in the left hand is a variation of pattern 6-5 because of the missing pitch E in the chord of the second beat. Here, Guillou also repeats important pitches of D# (E♭), C, and E, which are neighboring tones of the rhetoric figure D.

Various uses of pitch patterns transform the cyclic theme of “fire” throughout the A sections of “Agni-Ignis.” It adds the strong effect of harmonic complexities as well as rhythmic one to the piece. The significant use of rhythmic and melodic techniques, such as subdivision, cycling, and pitch patterns are important tools that provide variety and contrast throughout the A sections. These techniques are also used as structural elements to create various kinds of thematic and motivic elements.

## The B Sections

### *Rhythmic Subdivisions and Patterns*

In the B sections, the rhythmic structure is simple in contrast to the A sections; the rhythm in the manual varies on a quarter note and the rhythm in the pedal plays the same one as an ostinato (Ex. 26).

37 Fonds 16', 8'  
Foundations 16', 8'

39 Fonds 32', 16', 8'  
Foundations 32', 16', 8'

40

41 simile

42




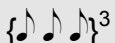
WL600060

Example 26. *Hyperion*, "Agni-Ignis," mm. 37-42

The rhythms in the manuals are all based on subdivision I <4 4>, while the pedal is all based on subdivision II <{2 2 2 2 2 2}><sup>6</sup> of ostinato *b* that is used

throughout the B section. The sextuplet group in the pedal uses almost the same pitch contents even though the pitch is altered by small intervals. This invariable type of ostinato *b* circulates around E $\flat$ (D $\sharp$ ) and C $\sharp$ , which are the half step away from the rhetoric figure D.<sup>40</sup> As shown below, four different rhythmic subdivisions develop the formal structure in the B sections of “Agni-Ignis.”

Table 18. Rhythmic Subdivision in the B Sections of “Agni-Ignis”

Sd	Location	Rhythm	Rhythmic sd on a quarter note	Rhythmic sd on an eighth note
V	mm. 38- 42, 77-83		<4 4>	<4>
VII	mm. 37-42, 77- 83		<{2 2 2 2 2 2} <sup>6</sup> >	N/A
VIII	m. 37		<{2 2 2 2 2} <sup>5</sup> >	N/A
X	m. 83		<{4 4 4} <sup>3</sup> >	N/A

Note: sd = subdivision

The B (mm.37-42) and B' (mm. 77-83) sections share the same rhythm except in m. 37 of the B section and mm. 82-83 in the B' section. The rhythmic subdivision I <4 4>, which is used in the manual, is modified resulting in four different patterns: Pattern 1, a quarter rest (8R); pattern 2, an eighth note and eighth rest (4 4R); pattern 3, an eighth rest and eighth note (4R 4); and pattern 4, two eighth-notes (4 4). These patterns are basically a variety of combinations of eighth notes and eighth rests (Table 19).

---

40 Hodant, 718.

Table 19. Four Different Rhythmic Patterns in the B Sections of “Agni-Ignis”

Pattern	Rhythmic sd	Rhythm
1	<8R>	< ˘ ˘ ˘ ˘ ˘ ˘ ˘ ˘ >
2	<4 4R>	< ˘ ˘ ˘ ˘ ˘ ˘ ˘ ˘ >
3	<4R 4>	< ˘ ˘ ˘ ˘ ˘ ˘ ˘ ˘ >
4	<4 4>	< ˘ ˘ ˘ ˘ ˘ ˘ ˘ ˘ >

Table 20 illustrates variations of subdivision V <4 4> in the manual of the B sections.

Table 20. Rhythmic Pattern in the B Sections of “Agni-Ignis”

B (mm. 37-42)	Rhythmic pattern	B'(mm.77-83)	Rhythmic pattern
m. 37			
m. 38	p-1, p-2, p-1, p-4	m. 77	p-1, p-2, p-1, p-4
m. 39	p-1, p-4, p-3, p-3	m. 78	p-1, p-4, p-3, p-3
m. 40	p-2, p-3, p-1, p-2	m. 79	p-2, p-3, p-1, p-2
m. 41	p-4, p-3, p-3, p-4	m. 80	p-4, p-3, p-3, p-4
m. 42	p-3, p-4, p-4, p-2	m. 81	p-3, p-4, p-4, p-2
		m. 82	p-2, p-4, p-2, p-4
		m. 83	p-4, p-4, p-1

Guillou continuously makes a variation on a quarter note in the B sections. He arpeggiates a chord in the manual, while the performer plays a circular motion of the ostinato pattern in the pedal. This circular ostinato in a sextuplet also reflects Guillou’s notable virtuosity and brilliant pedal technique. The rhythmic features in the B sections have a more regular and simple shape than those of the A sections. Organists need to



play this pedal figure, which might present technical difficulty, with even rhythmic duration for a successful performance.

### Core Section

The core section of “Agni-Ignis” is unique rhythmically and rhetorically. According to Hodant, “The rhetoric figure, the core of the piece, source of energy and center of gravitation for the musical material of this fourth movement, appears with the pedal in the tutti of the organ.”<sup>41</sup> This fifty-three and 4/5 beat pedal tone is the most important pitch in “Agni-Ignis,” a rhetoric figure representing fire. The tone holds D for thirteen bars, connecting from the previous measures with a tie from m. 46 (Ex. 27).







Example 27. *Hyperion*, “Agni-Ignis,” mm. 45-58

41 Hodant, 708.

Besides having the longest duration, this pitch D in the 32' register is also distinguished by the effective application of dynamic changes. The intensity continuously swells from *pianissimo* to *fortissimo* and back to *pianissimo* again in mm. 47-53: *tutti – pp – fff – pp – fff -- pp*. Besides that, the texture is enhanced from one voice to nine voices in the manual and the tempo also changes to *più lento* from *vivacissimo*. Guillou highlights the rhythm along with the pitch and dynamic contrast, as well as by the texture and tempo.

As seen in table 21 below, several rhythmic subdivisions are used in the core section, based on half and quarter notes.

Table 21. Rhythmic Subdivision in the Core Section

Sd	Location	Rhythm	Rhythmic sd of a half note	Rhythmic sd of a quarter note
1	mm. 43-45		<2 2 2 2 2 2 2 2>	<2 2 2 2>
32	m. 46-a		<2 2 2 2, 1 1 1 1 1 1 1 1>	<1 1 1 1 1 1 1 1>
33	m. 46-b		<{1 1 1 1 1}^5 4, 8>	<{1 1 1 1 1}^5, 4>
34	m. 58-a		<1 1 6, 4 4>	<1 1 6>, <4 4>
35	m. 58-b		<2 2 2 2, {2 2 2}^3 4>	<{2 2 2}^3 4>
36	m. 59		<8, 2 6>	<2 6>

Note: sd = subdivision

The bridge section in mm. 43-46 adopts the motives from the A section, where the rhythm divides into a primary subdivision <2 2 2 2 2 2 2 2>, subdivision 32 <2 2 2, 1 1 1 1 1 1 1 1 1>, and 33 <{1 1 1 1 1}<sup>5</sup> 4, 8>. Subdivisions 32 and 33 reach the rhythmic climax by using thirty-second-note groups, and then connecting to the rhetoric figure, which is the longest note value in “Agni-Ignis.” The longest duration of the most important pitch, D, makes the core section significant in rhythm, pitch and rhetoric as the center of “Agni-Ignis.”

The dramatic and rhetorical imagery are achieved in the core section; the dramatic settings of rhythmic duration and the soft sound of flute stops make this section unique. Moreover, the contrast of dynamics, registration, texture, tempo, and rhythm, as well as the pitch of the rhetoric figures, set this core section apart from rest of the piece as a main section.

#### Rhythmic Treatment Between Sections

Guillou either builds a rhythmic climax or allows a rhythmic relaxation between sections as a transition, which is presented as a long note value, rest, fermata, and/or thirty-second notes. Table 22 delineates Guillou’s rhythmic treatments between sections.

Table 22. Rhythmic Treatment Between Sections in “Agni-Ignis”

Section	Location	Rhythmic features
A <sup>1</sup>	mm.13-16	Thirty-second notes (Rhythmic crescendo)
A <sup>2</sup>	mm.34-37	Fermata, rest, half note, thirty-second note group (durational contrast, rhythmic crescendo)
B	m.42	Rest

*(table continues)*

Table 22 (continued).

Section	Location	Rhythmic features
Bridge	m.46	Thirty-second notes (durational contrast)
Core	mm.57-58	Thirty-second notes (rhythmic crescendo), fermata
A'	m.76	Fermata, rest
B'	m.83	Rhythmic crescendo, rest
A''	mm. 101-102	Rest, thirty-second notes (durational contrast)

#### *Thirty-second-note Groups*

One of the distinctive rhythmic features between sections deals with the thirty-second notes, which usually appear at essential moments in the musical structure. That usually interacts with a rhythmic crescendo or an even durational contrast before proceeding to the next section. As shown in table 23, these thirty-second notes appear five times in "Agni-Ignis."

Table 23. Appearance of Thirty-second-note Groups in "Agni-Ignis"

Location	Function
mm.15-16	As a bridge at the end of A <sup>1</sup> section
mm.34-37	As a bridge at the end of A <sup>2</sup> section (duration contrast, rhythmic crescendo)
m.46	As a bridge before core (durational contrast, rhythmic crescendo)
m.58	As a bridge before A' section (rhythmic crescendo)
m.102	At the end of the piece (durational contrast)

Such short notes appear for the first time in the later part of m. 16 of the A<sup>1</sup> section as a part of bridge to enter the A<sup>2</sup> section, where they last for three beats. The tones in these ascending passages revolve around E and E♭ (D#), C# which are neighboring tones of the rhetoric D (Ex. 28).

Example 28. *Hyperion*, “Agni-Ignis,” mm. 15-16

This rhythmic figure employs rhythmic climax and tension to prepare for the next section, A<sup>2</sup>. Such techniques are used again in mm. 34-38 as a bridge passages at the end of the A<sup>2</sup> section. It extends to ten beats with nineteen thirty-second notes in the space of sixteen to create rhythmic crescendo. It ends on a half-note value of E♭, a half-step away from rhetoric figure (Ex. 29).

All the active progress has a temporary rest on E♭ on a half note in m. 38. Guillou uses this important pitch of E♭ as an effect similar to the long duration of rhetoric figure D. It is accompanied by a fermata to provide time for the performer to prepare the transition into the next section, B, and to gradually build the speed from quintuplet ( $\{2\ 2\ 2\ 2\ 2\}^5$ ) to sextuplet ( $\{2\ 2\ 2\ 2\ 2\ 2\}^6$ ) to prepare for the perpetual motion of the ostinato *b* throughout the section. In m. 38, Guillou uses a half note with a fermata followed by a natural effect of rhythmic crescendo, which has a glissando motion of thirty-second notes in the pedal.



Table 24. Use of Rhythmic Crescendo in “Agni-Ignis”

Section	Location	Rhythmic sd	Function
A <sup>1</sup>	mm. 13-14 (man)	<2 2 2 2 2 2 2 2> <{2 2 2 2 2}⁶>	End of A <sup>1</sup> section
A <sup>2</sup>	mm. 28-29 (ped)	<4 4, 2 2 2 2> <{2 2 2 2 2}⁵>	Pedal ostinato
A <sup>2</sup>	m. 34	<2 2 2 2, 2 2 2 2> <{1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1}¹⁹>	End of A <sup>2</sup> section (Bridge)
A <sup>2</sup>	m. 36	<1 1 1 1 1 1 1 1> <{1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1}¹⁹>	End of A <sup>2</sup> section (Bridge)
B	m. 37 (ped)	<16> <{2 2 2 2 2}⁵ {2 2 2 2 2}⁶>	Beginning of B section (Bridge)
Bridge	m. 46	<2 2 2 2, 1 1 1 1 1 1 1 1, {1 1 1 1 1}⁵ 4>	Prelude to the core section
A'	mm. 57-58 (man)	<8, 2 6> <1 1 6, 4 4> <2 2 2 2, {2 2 2}³ 4>	Prelude to the A' section
B'	m. 83 (man)	<4 4> <{4 4 4}³>	End of B' section
A''	m. 91 (reverse)	<{2 2 2 2 2}⁵, 2 2 2 2, 8> <8, 8, 16>	Variation of pedal ostinato

The rhythmic crescendo occurs in mm. 28-29, the quarter note divides from an eighth-note group into sixteenth notes and then to a quintuplet of sixteenth notes juxtaposing above the manual: <4 4, 2 2 2 2> <{2 2 2 2 2}⁵>. In mm. 28-29, this pedal ostinato creates dramatic effect juxtaposing above the manual’s straight rhythm (Ex. 30).

<4R, 4 4 4, 4 4, 2 2 2 2, {2 2 2 2 2}⁵>

Example 30. *Hyperion*, “Agni-Ignis,” mm. 28-29

Rhythmic crescendo also occurs in left hand in mm. 57-58 at the end of the core section. All the stopped rhythmic movement gradually moves again in m. 57 as it seeks to find a definite answer in the next section of A' (Ex. 31).<sup>42</sup>

Example 31. *Hyperion*, "Agni-Ignis," mm. 57-58

The rhythm can divide into two segments: <8, 2 6, 1 1 6> and <4 4, 2 2 2 2, {2 2 2}<sup>3</sup> 4>. The first segment of the rhythm divides a quarter note <8> into sixteenth notes <2>, then into thirty-second notes <1>, returns to the eighth-note group of <4 4>, dividing again to sixteenth notes <2>, then into a triplet of sixteenth notes <{2 2 2}<sup>3</sup>>.

Section B' finishes with a rhythmic crescendo and a quarter rest <8R> in m. 83. The rhythm in the manual changes from subdivision V <4 4> to X <{4 4 4}<sup>3</sup>>, which establishes the natural effect of an accelerando. Here, the eighth-note groupings change into a triplet to add a feeling of tension and with the rest to produce a sensation of relaxation before entering the next A" section (Ex. 32).

---

<sup>42</sup> Guillou Letter of Nov, 16, 2007, to Ju Yeon Lee.



Example 32. *Hyperion*, “Agni-Ignis,” m. 83

*Durational Contrast*

Durational contrast happens at several points of “Agni-Ignis”: mm. 34-37, 46, 101-102 (see table 23). It mostly interacts with the thirty-second note groups. In m. 46, it happens before the core section. The longest note value in “Agni-Ignis” continues through mm. 47-58, the core section, and lasts for fifty-three and  $4/5$  beats: fourteen bars. The sustained pitch D is in dramatic contrast to the descending thirty-second-note quintuplet group, which is composed of the shortest note value  $\langle\{1\ 1\ 1\ 1\ 1\}\rangle$  in this piece in m. 46 (Ex. 33).

Example 33. *Hyperion*, “Agni-Ignis,” mm. 46-47

As in example 34 below, contrasts of rhythmic duration are also found at the end of the piece in m. 102 to conclude it more effectively and dramatically (Ex. 34).

Example 34. *Hyperion*, “Agni-Ignis,” mm. 100-102

The manual holds for a duration of <40> for five beats, the third longest note value in this movement, using the effect of a natural crescendo by sustaining manual notes. Meanwhile, the pedal alternates between E and C#, wandering around rhetoric figure D. This is then followed by two thirty-second notes <1> (Ex. 34). It combines with a dotted eighth rest to add the dramatic effect to the end of the piece.

This use of long-note values, either toward the end of the piece to build the rhythmic tension, at transitional sections to release, or to highlight an important note as a climax, plays vital role in building the rhythmic structure of “Agni-Ignis.”

Important rhythms, such as a long note value, a thirty-second-note grouping, a rest or a fermata appear at the boundary section. The thirty-second-note group usually involves either durational contrast with the long note or rhythmic crescendo by rhythmic subdivision. These techniques can build either tension or relaxation at the end or beginning of each section. This rhythmic treatment between sections shows that Guillou uses rhythm as an important structural element in his music.

*Rhythmic Ostinato a*

As seen in the previous chapter, Guillou uses the rhythmic pedal in both A and B sections; variable ostinato *a* in the sections A and invariable ostinato *b* in the sections B. There are also two types of ostinato *a* in the A sections: ostinato  $a^1$  and  $a^2$ . The first one,  $a^1$ , usually starts on the upbeat and creates great deal of the syncopation. The second one,  $a^2$ , has a more straight rhythm than the first. The variable ostinato *a* is also modified by augmentation or diminution throughout the A section in a metrical sense. Example 35 shows the first ostinato  $a^1$  in section A of “Agni-Ignis.”

Example 35. *Hyperion*, “Agni-Ignis,” mm. 13-14

This pedal ostinato  $a^1$  creates dramatic motion that contrasts with the rhythm in the manual. The pedal’s syncopated rhythmic ostinato is juxtaposed below the manual’s straight rhythm, which descends by leaps and is altered rhythmically and melodically each time. Examples 36-48 below show thirteen rhythmic ostinatos  $a^1$  and  $a^2$  used in sections A of “Agni-Ignis.” (Ex. 36).

*Ostinato a<sup>1</sup>*

<8R, 4 4, 2 4 4 4 2, {2 2 2 2 2}>

Example 36. *Hyperion*, “Agni-Ignis,” mm. 13-14

19

<16R, 8, 4 2 2>

Example 37. *Hyperion*, "Agni-Ignis," m. 19

21

<8R, 2 4 4 2 2>

Example 38. *Hyperion*, "Agni-Ignis," m. 21

26

<8R, 4R 4, 4 2 4 4 2, 8>

Example 39. *Hyperion*, "Agni-Ignis," mm. 26-27

28

<4R, 4 4 4, 4 4 4 2 2 2 2, {2 2 2 2}5>

Example 40. *Hyperion*, "Agni-Ignis," mm. 28-29

33

<6R, 6 4, 4 2 4 6>

Example 41. *Hyperion*, "Agni-Ignis," m. 33

73

<16R, 4R 4, 4 2 2, 2 4 2, 8>

Example 42. *Hyperion*, "Agni-Ignis," mm. 73-74

74

<16R, 8R, 4R 4, 4 2 4 2 4>

Example 43. *Hyperion*, "Agni-Ignis," mm. 74-75



These two types of rhythmic ostinatos provide dramatic gestures of variety and unity at a same time, and are used as an important tool to unify the piece as a whole.

38

<8R, 4, 4R, 8R, 4, 4>

ostinato b

6 6 6 6

<{2 2 2 2 2 2}6, {2 2 2 2 2 2}6, {2 2 2 2 2 2}6, {2 2 2 2 2 2}6>

Example 49. *Hyperion*, "Agni-Ignis," m. 38

## CHAPTER 4

### CONCLUSION

The goal of this study is to show the importance of rhythm in Guillou's "Agni-Ignis" from *Hyperion*, in which it forms the structural foundation and around which Guillou organized the subject of "fire" using musical rhetoric, philosophical concepts, and the myths from several centuries. To Guillou, rhythm is as varied as diverse events in the human world.<sup>43</sup> His idea of changeable and passionate rhythm based on "humanistic fire" was mainly achieved by innovative rhythmic techniques such as rhythmic subdivision, cycling, rhythmic ostinato, and pitch patterns in "Agni-Ignis." Guillou expressed the concept of fire using primary subdivision <2 2 2 2 2 2 2 2> as a cyclic theme. This theme has organized the piece with various pitch patterns through thematic transformation.

Given that a fundamental need exists for performers to understand this work from a rhythmic perspective, these pitch patterns should be understood as an analysis that has the potential to function as a powerful pedagogical tool. This pitch pattern can help the performer to easily recognize the location of different notes or chords within similar patterns such as <(2 2 ② 2 2 2 2 2)>, <(② 2 2 2 2 2 2 2)>, or <(② ② 2 2 2 2 2 2 2)>. Once it becomes possible to delineate the patterns found within the overall rhythmic goals of this work, it then becomes easier for the performer to incorporate this understanding into an overall mastery of the work's performance.

---

<sup>43</sup> Guillou Letter of Nov. 16, 2007, to Ju Yeon Lee.

Two basic note values of the A and B sections, which are a half note in section A and a quarter note in section B, continuously vary or stay with the same rhythm throughout the piece to provide unity and variety as a thematic and motivic materials. These rhythms in the manual are juxtaposed above two kinds of skillful rhythmic ostinatos in the pedal, where they also add unity and variety. The significant rhythm occurs at the boundary sections of "Agni-Igni" to provide the tension and relaxation as an important element of musical structure. Indeed, Guilou uses the rhythm as a main component in his musical structure.

In many ways, Guilou is regarded as a maverick even though he was educated and influenced by traditional musicians such as Messiaen and Dupré. Nevertheless, he struck out on his own and has developed a wholly unique style that resists easy interpretation. The asymmetrical and irregular rhythmic patterns are reminiscent of Stravinsky's *The Rite of Spring*, creating a complexity and an active energy to the piece. Guilou's varied and dexterous rhythmic pedal in an imaginative timbre that recalls Messiaen's "Offertoire" from *Messe de la Pentecôte*. Guilou composed *Hyperion* from his own vision, whereas Messiaen usually gained inspiration from Bible verses. The rhythms of the manual and pedal usually imitate each other, demonstrating Bach's contrapuntal influences in a rhythmic way rather than melodic way.

Guilou achieves the idea of the "Exaltation of Fire" by the energetic and dramatic use of rhythmic gestures. The results of this study suggest that Guilou, indeed, considers rhythm as the primary structure in this work because it provides variety and unity to organize the work as a whole. He combines these experimental rhythmic



techniques with pitch, sonority, musical rhetoric, and drama in "Agni-Ignis" to create an innovative model of organ literature for the latter part of the twentieth century.

APPENDIX A  
QUESTIONNAIRE

Jean Guillou's Letter (Nov. 16, 2007)

This letter from Jean Guillou, the composer of *Hyperion*, answers questions I asked him specifically about the piece and his musical world.

*Ju Yeon:* Can you explain about your musical world, goal or language? How rhythm is important in your music?

*Guillou:* It is just like the human world. Every motive, every rhythmic happening are like human relationship, with discussions, interruptions, contradictions or love, or enmity, hostility and war[e] and peace. My music can only develop with passion or intimate relation. And therefore, the rhythm is very important and always changing.

*Ju Yeon:* What kind of rhythmic techniques are used in "Agni-Ignis," *Hyperion*? In mm. 47-58 in "Agni-Ignis," I think this is very important moment in this movement (core, according to Hodante's dissertation). Do you have any special meaning such as rhetoric figures?

*Guillou:* About the rhythmical numbers, we have, for the first three measures on manual and pedal always 3 and 5. Then, on 4<sup>th</sup> measure: 4, 4, 3, 5 then on 5<sup>th</sup> measure the same as beginning, on 6<sup>th</sup>: 4, 3, 1, 4, 4. On 7<sup>th</sup> measure the same as beginning, on 8<sup>th</sup>: 3, 3, 2, 4, 4. and so on. And, for instance, the second measure of page 43 (m. 20), we have: 2, 3, 3, 5, 3. And later, we have a moment of 6 on the Pedal with heavy arpeggios on manual. This perpetual changes gives the life and the dramatic evolution. And in the middle, there is a long D, with crescendo-decrescendo (mm. 47-58) which stops totally the movement and is suddenly, is like waiting for a definitive answer to all this dramatic evolution, a departure of poetic attempt where no evolution can be given, as long as the magic answer will be given for the final evolution, eventually by the Phoenix.

*Ju Yeon:* What is Phoenix (answering magic force)?

*Guillou:* Phoenix is a mythological bird who used to go into fire and to reborn from his own cinders, his own ashes. It is an image of creation and inspiration.

*Ju Yeon:* About the theme of fire in *Hyperion*, what inspire you to compose this piece? What kind of rhetorical meanings relating to “fire” and how do you describe it in the music?

*Guillou:* My idea was to illustrate the idea of the fire as it developed in the human mind during the ages. It has always been a symbol. So, the fire was like a very mysterious, almost a magic force which existed in all material, in stones, in the idea for the 3<sup>rd</sup> movement, which is the most developed. The other movements took the combative fire, fire of struggle or liberation, fire of silence, the poetic fire and finally, fire of exaltation. All these ideas were in the philosophical concepts and the myths from the past centuries.

*Ju Yeon:* There are rhythmic variations based on a half note in the B sections of "Agni-Ignis." Is it basically related to the improvisational techniques or just a rhythmic variation?

*Guillou:* There is no “improvisational technique,” because improvisation should be like composition which is made in the moment and for which we are the interpreter. Improvisation should be as conscious as composition (which is not always the case. unfortunately!). Improvisation should be made only by composers, like before Bach, Mozart, Liszt used to improvise.

*Ju Yeon:* Are you influenced by your teachers such as Dupré, Duruflé, and Messiaen? How do they influence you in the aspect of rhythm or in general?

*Guillou:* I don't think I got any influence of Dupré, Duruflé, and Messiaen. My language is totally different, in not tonal or modal and also my idea about organs has nothing to do with the instrument as it was used by any of them. To know more about that, you should read my book *L'Orgue, Souvenir et Avenir* (Bachet-Chastel edition) or in German *Die Orgel, Erinnerung und Zukunft* or also *Jean GUILLLOU, Colloques*, both books by Dr. J. Butz edition.

*Ju Yeon:* What does mean "Agni-Ignis"?

*Guillou:* Indian name for fire, and Ignis, the Greek name.

*Ju Yeon:* What does it mean "Bachelardian thought"?

*Guillou:* Bachelard was a French philosopher from the first part of the 20<sup>th</sup> century, who wrote a book called "The Psychanalysis of the Fire" which was a great inspiration for my work.

*Ju Yeon:* Could you explain more about those of philosophical concepts and the myths from the past centuries? (Maybe related to the Titan Hyperion [according to preface of Hyperion])? Is there relationship between your Hyperion and Hölderlin's novel *Hyperion*?

*Guillou:* Of course, my work is related to Titan Hyperion, and also to the Hölderlin's novel. I will explain it later.

*Ju Yeon:* I think accurate rhythmic playing is very important to play *Hyperion*. Do you have any suggestions like fingering or pedaling (I use different fingering to play repetitive notes [m.1] like piano technique, pedaling)?

*Guillou:* For fingering and pedaling, I think, every organist has for himself to decide. For example, I don't use different fingerings to play the repetitive notes on the pedal, but I understand if you feel better doing it. The articulation must be very accurate.

APPENDIX B

A BIOGRAPHICAL SKETCH OF JEAN GUILLOU

## A BIOGRAPHICAL SKETCH OF JEAN GUILLOU

As well as a pianist, pedagogue, and organ designer, Jean Guillou (b. 1930) is one of the most accomplished organist-composer-improvisers in France today.

According to Alexia Tye,

After the traditional “symphonic organ” and the “contemplative organ” of Messiaen, Guillou has been said to represent a new revolution -- that of the “dramatic organ.” In any case, do not pigeonhole Jean Guillou in the “French organ tradition,” as he views himself as an international artist with eclectic horizons. He opens new possibilities for organ composition using experimental formations and concepts beyond those normally associated with religious organ music.<sup>44</sup>

Guillou was born in Angers, France, on April 18, 1930,<sup>45</sup> into a nonmusical family. He taught himself to play a piano when he was four years old.<sup>46</sup> When he was twelve years old, he started his career as an organist at the church Saint-Serge in Angers. Thanks to a critic from *Le Figaro*,<sup>47</sup> Guillou was introduced to Marcel Dupré, with whom he would later study organ at Conservatoire de Paris. It was there that he studied harmony with Maurice Duruflé, and musical analysis with Olivier Messiaen from from 1945 to 1955.<sup>48</sup> He won first prize in performing, fugue, and composition during his studies there and would eventually become a substitute organist for his teacher, Dupré, at Saint-Sulpice.

---

44 Alexia Tye, “Organ Design Innovation: Back to the Future with Jean Guillou,” *The American Organist* 40, no. 8 (August 2006): 67.

45 In Barry Millington & Paul Hale: ‘Guillou, Jean’, *Grove Music Online* ed. L. Macy (Accessed 11 March 2008), <http://www.grovemusic.com>

46 William Zagorski, “Jean Guillou and the Organizing of Inspiration,” *Fanfare* 13, no. 5 (May-June 1990):80.

47 One of the leading French morning daily newspapers.

48 Ibid.



After he graduated from Conservatoire de Paris, he was appointed professor of Organ at the Instituto de Alta Cultura (Sacred Music Institute) in Lisbon. Even upon this appointment, he continued his career as a performer throughout Europe and North America. In 1958, after giving up teaching, Guillou moved to West Berlin for the next five years to dedicate his time to composing and performing. It was the Berlin Festival where his first works for organ and for piano were performed. Leaving Berlin, Guillou returned to Paris to accept an appointment as the principal organist at the Church of Saint-Eustache, a position he has held since 1963. He has also become the artistic director of Saint-Eustache's Festival as well as that of A.R.G.O.S.<sup>49</sup>

A prolific composer, Guillou has written more than sixty works to enrich the repertoire for organ using various formations of genres for solo organ and various ensembles with organ. He has also done a number of more conventional works in his transcriptions for such works as Bach's *Musical Offering*, *Goldberg Variations*, Liszt's *Orpheus*, and Mussorgsky's *Pictures at an Exhibition* as well as for Rachmaninoff, Stravinsky, and Tchaikovsky.<sup>50</sup>

As a performer, Guillou has also distinguished himself with his virtuosity. He has won numerous awards, including the international prize for International Performer of the Year awarded by the New York chapter of the American Guild of Organists, and the Grand Prix du Disque Liszt by the Liszt Academy in Budapest, both in 1982. He also won a number of accolades for his recordings. In France, he received a great many honors for his recording of the complete works of César Franck (1822-1890), as

---

49 Association pour le Rayonnement des Grandes Orgues de l'église Saint-Eustache.

50 Guillou, *Hyperion*, 4.

well as for the transcriptions of *Pictures at an Exhibition* by Modest Mussorgsky (1839-1881) and “Three dances” in *Petrouchka* by Stravinsky. Guillou’s fifty recordings can be found on the Philips, CBS, Dorian and Festivo record labels. Finally, as a concert pianist, he gave the English and French premieres of Julius Reubke’s (1834-1858) long-forgotten *Piano Sonata in B-flat minor*.

Guillou is also well-known as being an avant-garde designer of organ. His engagement in organ building has led to collaborations with several organ builders in the construction of many instruments, including those at Saint-Eustache, the Kleuker-Steinmeyer organ of the Tonhalle in Zürich, the Kleuker organ of Notre-Dame des Neiges, Alpe d’Huez in Brussels, the Conservatory in Naples, and most recently, the Auditorium de Tenerife in Santa Cruz in the Canary Islands. The recently installed auditorium organ is designed with eight cases and twelve sound bodies, and is nearing completion of the variable structure organ (*orgue à structure variable*) construction.<sup>51</sup> For proof of his expertise in modern organ building, one need not look further than his book *L’Orgue, Souvenir, et Avenir (The Organ, Retrospect, and Prospect)*<sup>52</sup> published in Germany and France. Guillou’s great virtuosity as a concert performer and his highly personal approach to organ as a composer has gained him a worldwide reputation.<sup>53</sup>

---

51 Tye, 66.

52 Jean Guillou, *L’Orgue, Souvenir et Avenir*, 3d ed. (Paris: Buchet-Chastel, 1996).

53 Guillou, 4.

APPENDIX C  
GENERAL STRUCTURE OF *HYPERION*  
CHART 1

Chart 1. The General Structure of *Hyperion*

Mvt	Time	Tempo	Form	Texture	Dynamics	Rhythmic Features
I	Irregular: Alternating between 3/4 and 4/4	<i>Molto animato</i>		1-8 voices	<i>f</i>	Rhythmic variation, rhythmic ostinato, rhythmic accelerando
II	Regular: 3/4 (no meter change)	I. <i>Molto adagio</i> II. <i>Molto più lento</i> III. <i>Tempo primo</i>	3 sections:		<i>p-ppp</i>	Rhythmic variation
III	Irregular: 2/4- 4/4- 12/16- 6/16- 2/4- 3/4- 12/16	<i>Ansioso ;</i> <i>Con moto;</i> <i>Andante;</i> <i>Tenebroso;</i> coma primo; <i>Ansioso;</i> <i>Con moto;</i> <i>Allegramente</i> ; <i>Con moto</i>	Introduction + 7 sections		<i>p-fff</i> at the end	Rhythmic variation, rhythmic ostinato
IV	Regular: 2/2 (no meter change)	<i>Vivacissimo</i>	6 sections (arch form)		<i>ff-fff</i>	Rhythmic variation, two rhythmic ostinatos

APPENDIX D  
FORMAL STRUCTURE OF *HYPERION*  
CHART 2

Chart 2. The Formal Structure of *Hyperion*

Mvt	Form
I	<p>9 sections: Form is divided by tempo sign</p> <p>I. mm. 1-23 3/4 <i>Molto animato</i> (♩=69)</p> <p>II. mm. 24 4/4</p> <p>III. mm. 25-38 3/4</p> <p>IV. mm. 39-43 4/4</p> <p>V. mm. 44--67 3/4</p> <p>VI. m. 68 4/4</p> <p>VII. mm. 69- 81 3/4</p> <p>VIII. m. 82 4/4</p> <p>IX. mm. 83-87 3/4</p>
II	<p>3 sections: Form is divided by tempo sign and double bar line (3/4)</p> <p>I. mm. 1-28 <i>Molto adagio</i> (♩=46)</p> <p>mm. 44 <i>Come primo</i></p> <p>II. mm. 45-52 <i>Molto più lento</i></p> <p>III. mm. 53-64 <i>Tempo primo</i></p>
III	<p>Introduction + 7 sections: Form is divided by double bar line and tempo sign</p> <p>Introduction mm. 1-6 2/4; <i>Ansioso</i> (♩=44)</p> <p>I. mm. 7-35 2/4; 9 against 6</p> <p>II. mm. 36-50 4/4; <i>Con moto</i> (♩=108)</p> <p>III. mm. 51-73 12/16-6/16; <i>Andante caloroso</i> (♩=56-60)</p> <p>IV. mm. 74-118 2/4; <i>Tenebroso</i> (♩=50)- <i>coma primo</i></p> <p>V. mm. 119- 144 2/4: <i>Ansioso</i> (♩=44)- 4/4 <i>Con moto</i> (♩=108)</p> <p>VI. mm. 145-196 3/4: <i>Allegramente</i>; 4/4: <i>Con moto</i> (♩=66)</p> <p>VII mm. 197- 220 12/16: <i>Con moto</i> (♩= 80); <i>fff</i> at the end</p>

APPENDIX E

FORMAL STRUCTURE OF "AGNI-IGNIS," *HYPERION*

CHART 3

Chart 3. Formal Structure of "Agni-Ignis," *Hyperion*

Pole 1			Core (D)	Pole 2		
Segment A	Center 1	Segment B		Segment C	Center 2	Segment D
{Waves devices; Incantation} - manual {Approaches of the core} - pedal	Ostinato of sexuplets more closely encircles the core	Waves devices	Core of energy, rhetoric figure	{Waves devices; Incantation} - manual {Approaches of the core} - pedal	Ostinato sextuplets more closely encircles the core	Waves devices approaches end of the piece (mi-do#) Towards a new energy
mm. 1-36	mm. 37-42	mm. 43-46	mm. 47-58	mm. 59-76	mm. 77-83	mm. 84-101

*Note.* From Jean-Philippe Hodant, "Rhetorique et Dramaturgie Musicales dans L'oeuvre de Jean Guillou." Ph.D. dissertation, Université de Paris-Sorbonne, 1992, p. 768. Reprinted with permission.



APPENDIX F  
FORMAL STRUCTURE OF THE A SECTIONS  
IN "AGNI-IGNIS" FROM *HYPERION*  
CHART 4

Chart 4. Formal Structure of the A Sections, “Agni-Ignis” from *Hyperion*

A (mm. 1-36)		A' (mm. 59-77)	A'' (mm.84-102)
A <sup>1</sup> (mm. 1-15)	A <sup>2</sup> (mm. 16-36)		
		m.59	m.84 (=59)
m.1	m.16 (≈1)	m.60	m.85 (=60)
m.2	m.17 (=2)	m.61	m.86 (=61)
m.3	m.18 (=3)	m.62	m.87 (=62)
m.4	m.19	m.63 (Insertion)	
m.5(=1)	m.20	m.64	m.84 (≈64)
m.6		m.65	m.89 (=65)
m.7		m.66	m.90
m.8	m.21 (≈8)	m.67	m.91
m.9	m.22 (=9)		m.92
m.10	m.23 (=10)		m.93
m.11	m.24 (=11)		m.94
m.12	m.25 (=12)		m.95
m.13	m.26 (≈13)		m.96
m.14 (Bridge)	m.27 (≈14)		m.97
m.15	m.28		m.98
	m.29		m.99 (Coda)
	m.30	m.68 (=30)	m.100
	m.31	m.69 (=31)	m.101
	m.32	m.70 (=32)	m.102
	m.33	m.71	
	m.34 (Bridge)	m.72	
	m.35	m.73	
	m.36	m.74	
		m. 75	
		m. 76	

Note: = identical; ≈ almost identical

APPENDIX G  
RHYTHMIC SUBDIVISIONS OF THE A SECTIONS  
IN "AGNI-IGNIS" FROM *HYPERION*  
CHART 5

Chart 5. Rhythmic Subdivisions of the A Sections in “Agni-Ignis” from *Hyperion*

Location	Sd	Location	Sd	Location	Sd	Location	Sd
A(mm.1-36)				A' (mm.59-77)		A"(mm.84-102)	
A <sup>1</sup> (mm.1-15)		A <sup>2</sup> (mm.16-36)					
				m.59	P	m.84(=59)	P
m.1	P	m.16(≈1)	P, 22, 30, I	m.60(≈1)	P	m.85(=60)	P
m.2	P, 2	m.17(=2)	P, 2	m.61	P, 27	m.86(=61)	P, 27
m.3	P, 5	m.18(=3)	P, 5	m.62	P, 27	m.87(=62)	P, 27
m.4	P, 7	m.19	P, 30, 23	m.63	P		
m.5(=1)	P	m.20	P, 8, 20	m.64	P, 21	m.88(≈64)	P, 21, I
m.6	13, P		P, III, I	m.65	21, 10	m.89(=65)	21, 10
m.7	P, 14			m.66	P	m.90	26, 27
m.8	P, 6, 8, I	m.21(≈8)		m.67	P	m.91	VIII, 22
m.9	P	m.22(=9)	P	m.68(=30)	P	m.92	P, 27
m.10	P, 3	m.23(=10)	P, 3	m.69(=31)	P, I	m.93	P, I
m.11	P, 14	m.24(=11)	P, 14	m.70(=32)	P, I	m.94	P
m.12	9, 11	m.25(=12)	9, 11	m.71	P, 10	m.95	19, 13
m.13	P, IV+17	m.26(≈13)	P, IV+15	m.72	P, 8, 13	m.96	P, V, I
m.14	7	m.27(≈14)		m.73	P, (18)	m.97	P, 25, 13
m.15	30	m.28	P, (18)+12	m.74	P, 24	m.98	P
		m.29	P, 22, VIII, I	m.75	P, 16	m.99	P
		m.30	P	m.76	P, 16	m.100	P, IV, 15
		m.31	P, I			m.101	P
		m.32	P, I			m.102	
		m.33	P, 4				
		m.34	P, 31				
		m.35	30				
		m.36	30, 31				

APPENDIX H  
RHYTHMIC ANALYSES OF "AGNI-IGNIS"  
CHART 6

Chart 6. Rhythmic Analyses of “Agni-Ignis”

A Section (mm. 1-36)			
Mea sure	Manual (r.h.,l.h.)	Mea sure	Manual (r.h., l.h.)
	pedal		pedal
1	<(2 2 ② 2 2 2 2 2), 16>	2	<(2 2 ② 2 2 2 2 2), <u>6 4 4 2</u> >
	<16R, (2 2 ② 2 2 2 2 2)>		<16R, 2 2 ② 2 2 2 2 2>
3	<(2 2 ② 2 2 2 2 2), 6 4 6>	4	r.h.<2 ② 4, 2 2 2 2, (2 ② 2 2 2 2 2 2)>; l.h.<2 ② 4, (2 2 2 2, 2 2 2 2 2 2 2 2)>
	<16R, (2 2 ② 2 2 2 2 2)>		(2 2 2 2), 8R,(② 2② 2 2 2 2 2)>
5	<(2 2 ② 2 2 2 2 2),16>	6	< <u>4 4 2 4 2, 2 2 2 2</u> , (2 2 2 2)>
	<16R, (2 2 ② 2 2 2 2 2)>		<32R>
7	r.h.<(2 2 2 2 2 2 2 2 2), (2 2 2 2 2 2 2 2)>; l.h.<(2 2 2 2 2 2 2 2 2), <u>2 2 2 2 2 2</u> >	8	<(6 6 4, 4 2 2), (2 2 ② 2)>
	< <u>4 2 4 2 2 2</u> , 16R>		< <u>2 2 2 2 2 2 2 2 2 2 2 2</u> , 8R>
9	<(② ② ② 2 2 2 2 2), 16>	10	<(4 4 <u>2 6 2 2 2 2</u> ), 2 2 2 2>
	<16R, (2 2 ② 2 ② 2 ② 2)>		<(2 2 2 2 2 2 2 2), 16R>
11	r.h.<②②②② 2 2 2 2, (2 2 2 2 2 2 2 2)>; l.h.<-----, <u>4 2 4 2 2 2</u> >	12	<(2 2 2 2) 4 4, 2 4 2, 2 2 2 2>
	<32R>		<32R>
13	<(2 2 2 2 2 2 2 2 2, 2 2 2 2 2 2 2 2)>	14	<(2 2 2 2 2 2) <sup>6</sup> , 8, 2 2 4, 2 2 2 2>
	<8R, 4 4, 2 4 4 4 2>		<_____, 8R, 16R>

15	<(②②②②, 2 2 2 2), 1 1 1 1 1 1 1 1, 1 1 1 1 1 1 1 1>	16	<1 1 1 1 1 1 1 1, (2 2 ② 2 2 2 2 2),8>
	<32R>		<16, 8R, (2 2 ② 2)>
17	<(2 2 ② 2 2 2 2 2), <u>6 4 4 2</u> >	18	<(2 2 ② 2 2 2 2 2), <u>6 4 6</u> >
	<16R, (2 2 ② 2 2 2 2 2)>		<16R, (2 2 ② 2 2 2 2 2)>
19	<1 1 1 1 1 1 1 1, (2 2 ② 2, 2 2 2 2 2 2 2 2)>	20	r.h.<(2 ② 2 2 2 ② 2 ②), (4 2 2 2 ②②②)>; l.h.< ---- , ( <u>2 2 2 2 2</u> <u>6</u> )>
	<16R, 8, 4 2 2>		<32R>
21	<(2 2 2 2 2 2 2 2), 16R>;<4 2 2, 16, (2 2 ② 2)>	22	<16R, 16>; <(②②② 2 2 2 2 2), 16>
	<8R, 2R 4 4 2 2 2R, 8R>		<16R, (2 2 ② 2 ② 2 ② 2)>
23	r.h.< <u>4 4 2 6</u> , <u>2 2 2 2</u> , 2 2 2 2>; l.h.<___, 8R>	24	r.h.<②②②② 2 2 2 2), (2 2 2 2 2 2 2 2)>; l.h.<16R, <u>4 2 4 2 2</u> <u>2</u> >
	<(2 2 2 2 2 2 2 2), 16R>		<32R>
25	<(2 2 2 2), 4 4, 2 4 2, 2 2 2 2>	26	< r.h. (2 2 2 2 2 2 2 2, 2 2 2 2 2 2 2 2 2)>; l.h. <(②② ②② 2 2 2 2)(2 2 2 2, 2 2 2 2)>
	<32R>		<8R, 4R 4, 4 2 4 4 2>
27	r.h.<(2 2 2 2) 2 2 2 2, 2 2 2 2 2 2 2 2>; l.h.< -----, 24R>	28	r.h.<2R 2 2 2 ② ② ② ②), (② ② ② 2 2 2 2 2 2)>; l.h.<16, 16R>
	<8, 8R, 16R>		<4R <u>4 4 4</u> , <u>4 4</u> , 2 2 2 2>
29	<8R, (2 2 ② 2 2 2 2 2),8>	30	r.h.< <u>2 2 2 2</u> , <u>2 2 2 2</u> , <u>2 2 2 2</u> , <u>2</u> <u>2 2 2</u> >; l.h.<(②② 2 2, 2 ② ② 2), (2 2 2 2, 2 2 2 2)>
	<{2 2 2 2 2} <sup>5</sup> , 8R, 8R, (2 2 ② 2)>		<32R>

31	<(2 2 ② ②), 24>	32	<(2 2 ② ②), 24>
	<8R, 4R (2 2, ② 2 2 2, 2 2 2 2)>		<8R, 4R (2 2, ② 2 ② 2, ② 2 ② 2)>
33	r.h.<(2 2 ② 2, 2 ② 2 2, ② 2 2 ②, 2 2 ② 2)>; l.h.<6R 6 4, 4 2 4 6>	34	<(2 2 ② 2, 2 2 2 2), {11111111111111111111}⊃>19>
	<32R>		<32R>
35	<11111111, 11111111, 11111111, 11111111>	36	<11111111, 11111111, {11111111111111111111}⊃>19>
B Section (mm. 37-42)			
37	<32R>	38	<8R, 4 4R, 8R, (4 4)>
	<16, {2 2 2 2 2}⊃>5, {2 2 2 2 2 2}⊃>6		<{2 2 2 2 2 2}⊃>6, ----> pedal same until m. 42
39	<8R, 4 4, 4R 4, 4R 4>	40	<4 4R, 4R 4, 8R, 4 4R>
41	<4 4, 4R 4, 4R 4, 4 4>	42	<4R 4, 4 4, 4 4, 4 4R>
Bridge (mm. 43-46)			
43	<(②②② 2 2 2 2 2), (② ② ②2, 2 2 2 2)>	44	<2 2 2 2, 2 2 2 2, 2 2 2 2, 2 2 2 2>
	<32R>		<32R>
Core Section (mm. 45-58)			
45	<2 2 2 2, 2 2 2 2, (2 2 2 2, 2 ② ② ②)>	46	<2 2 2 2, 1 1 1 1 1 1 1 1, {1 1 1 1 1}⊃>5 4, 8>
	<32R>		<32R>
47	r.h.<32R>; l.h.<8, 8R, 16R>	m.48	<32R>
	<32>		<32>
49	<32R>	50	<32R>
	<32>		<32>
51	<32R>	52	<32R>
	<16, 16>		<32>



53	<32R>	54	<32>
	<32>		<32>
55	<16, 16>	56	<16, 16>
	<32>		<32>
57	r.h.<32>; l.h.<16R, 8, 2 6>	58	r.h.<32>; l.h.<1 1 6, 4 4, 2 2 2 2, {2 2 2} <sup>3</sup> 4>
	<32>		<32>
A' section (mm. 59-76)			
59	r.h.<(2 2 ② ②, ② ② ② ②), (② 2 2 2, 2 2 2 2)>; l.h.<(②② 2 2, 2 2 2 2), ( ② 2 2 2, 2 2 2 2)>	60	<(2 2 ② 2 2 2 2 2), 16>
	<32>		<16R, (2 2 ② 2, 2 ② 2 2)>
61	<8, 8, 16>	62	<8, 8, 8, 8>
	<(2 2 2 2, 2 2 2 2), (② ② 2 ②, 2 2 2 2)>		<(2 2 ② 2, 2 2 2 2, (2 2 2 2, ② ② ②②)>
63	<16, 16>	64	r.h.<8, 2 2 2 2, (2 2 ② 2, 2 2 2 2)>; l.h.<8,(2 2 2 2),(2 2 2 2, 2 2 2 2)>
	<(2 2 2 2, 2 2 2 2, 2 2 2 2, 2 2 2 2)>		<(2 2 2 2), 8R, 16R>
65	<32>	66	r.h.<(②②②②, 2 2 2 2), (② ② ② 2, 2 2 2 2)>; l.h.<(②②②②, 2 2 2 2, (②② ② 2,2 2 2 2)>
	<8, (2② 2②), (② 2 ② 2, 4 2 2)>		<32>
67	r.h.<(② ② ② ②, 2 2 2 2), (2 2 2 2, 2 2 2 2)>; l.h.<( ② ② ② ②, 2 2 2 2), -- --- >	68	r.h.< <u>2 2 2 2, 2 2 2 2, 2 2 2 2, 2 2 2 2</u> >; l.h.<(②② 2 2, 2 ② ② 2)(2 2 2 2, 2 2 2 2)>

	<32>		<32R>
69	<(2 2 ② ②), 24>	70	<(2 2 ② ②), 24>
	<8R, 4R 2 2,(② 2 2 2,2 2 2 2)>		<8R, 4R 2 2, (②2②2,②2② 2)>
71	r.h.<2 2 2 2, 2 2 2 2, (2 2 2 2, ② ② ② ②)>; l.h.< 16R, 8R, (4 ② 2)>	72	r.h.<(2 2 2 2, 2 2 2 2), 4 4, 2 4 2>; l.h.<(4 ② 2, ② 2 ② 2), ___>
	<32R>		<32R>
73	<(②②②②, 2 2 2 2, (2 2 2 2, 2 2 2 2)>	74	r.h.<(2222, 2222), (22 ② 2, 2222)>; l.h.<(2222, 2222), (②②② 2,2 2 2 2)>
	<16R, 4R 4, 4 2 2>		<2 4 2, 8, 8R, 4R 4>
75	<(2222, 2222),(② ② ② 2, 2 2 2 2)>	76	<(2222, 2222), 16R>
	<4 2 2, 2 2 4, 8R, 4R 4>		<4 2 2, 2 2 4, 16>
B' section (mm. 77-83)			
77	<8R, 4 4R, 8R, 44>	78	<8R, 4 4, 4 R 4, 4 R 4>
	<{2 2 2 2 2} <sup>6</sup> , __, __, __>		<__>: Same pedal until m.83
79	<4 4R, 4R 4, 8R, 4 4R>	80	<4 4, 4R 4, 4R 4, 4 4>
	<__>		<__>
81	<4R 4, 4 4, 4 4, 4 4R>	82	<4R 4, 4 4, 4 4R, 4 4>
	<__>		<__>
83	<4 4, 4 4, {4 4 4} <sup>3</sup> , 8R>		
	<__, __, __, 8R>		
A'' Sections (mm. 84-102)			
84	r.h.<(2 2 ② ②, ② ② ②②), (② 2 2 2,2 2 2 2)>;l.h.<( ②② ② ②),(② ② 2 2), (2 ② 2 2, 2 2 2 2)>	85	<(2 2 ② 2 2 2 2 2), 16>
	<32R>		<16R, (2 2 ② 2 2 ② 2 2)>
86	<8, 8, 16>	87	<8, 8, 8, 8>
	<(2 2 2 2, 2 2 2 2), (② ② 2 ②), 2 2 2		<(2 2 ② 2, 2 2 2 2),

	2)>		(2 2 2 2, ② ② ② ②)>
88	r.h.<8, 2 2 2 2, (2 2 ② 2, 2 2 2 2)> l.h.<8,(2 2 2 2),(2 2 2 2, 2 2 2 2)>	89	<32>
	<(2 2 2 2), 8R, 16R>		<8, <u>2 2 2 2</u> , <u>2 2 2 2</u> , 4 2 2>
90	<8, 8, 8, 4 4>	91	<4 4, 24>
	<32>		<8, {2 2 2 2 2} <sup>5</sup> , <u>2 2 2 2</u> , 8>
92	r.h.<16, (2 2 ② ②, ②②②②)> l.h.<16,(2 2 2 ②②②②)>	93	r.h.<② ② ② ②, 2 2 ② 2), (2 2 2 2), 8> l.h.<(② ②②②, 2 2 2 2), (2 2 2 2), 8>
	<8, 8, 16>		<16R, 8R, (2 2 ② 2)>
94	<(16, (2 2 2 2, 2 2 2 2)>	95	<4 4 4 4, 4 4, 2 4 2>
	<(2 2 2 2, 2 2 2 2), 16)>		<32R>
96	<2 4 (2, 24)>	97	<4 4, 8, <u>4 4</u> , <u>2 4 2</u> >
	<8R, (2 2 ② 2), (2 2 2 2, 2 2 2 2)>		<(2 2 2 2, 2 2 2 2, 2 2 2 2, 2 2 2 2)>
98	<32>	99	r.h.<2 2 2 2, 2 2 2 2, 2 2 2 2, 2 2 2 2>; l.h.<(2 2 2 ② ② ② ② ②), ( <u>② ② 2 2 2 2 2 2</u> )>
	<(2 2 2 2, 2 2 2 2, 2 2 2 2, 2 2 2 2)>		<32R>
100	r.h.< ② ② ② ②, 2 2 2 2), (2 2 2 2, 2 2 2 2)> ;l.h.<(② ② ② ②, 2 2 2 2), (2 2 2 2, 2 2 2 2)>	101	<(2 2 2 2, 2 2 2 2, 16)>
	<8R, 4 4, 4 2 4 4 2>		< <u>2 2 2 2</u> , <u>2 2 2 2</u> , <u>2 2 2 2</u> , <u>2 2 2 2</u> >
102	<(24, 1 1) 6R>		
	<(24, 1 1) 6R>		

## SELECTED BIBLIOGRAPHY

### Books, Úeriodicals, and Öissertations

- Bell, Carla H. "A Structural and Stylistic Analysis of Representative Compositions of Olivier Messiaen." Ph.D. diss., Columbia University, 1977.
- Bingham, Seth. "Messiaen's Pentecostal Organ Mass." *Organ Institute Quarterly* 3 (winter 1953): 9-18.
- Cooper, Grosvenor and Leonard Meyer. *The Rhythmic Structure of Music*. Chicago and London: The University of Chicago Press, 1963.
- Delong, Richard, V. Kliever, H. Riesberg, A. Winold, and M. Wennerstrom. *Aspects of Twentieth-Century Music*. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1975.
- Demuth, Norman. "Messiaen and His Organ Music." *The Musical Times* 96 (April 1955): 203-206.
- Gillock, Jon. "Celebration Messiaen: The Complete Works for Organ." *The American Organist* 38 (June 1999): 66-70.
- Griffiths, Paul. *Olivier Messiaen and the Music of Time*. Ithaca: Cornell University Press, 1985.
- Guillou, Jean. *L'Orgue, Souvenir et avenir*. 3rd ed. Paris: Buchet-Chastel, 1996.
- Hasty, B. "Rhythm in Post-Tonal Music: Preliminary Questions of Duration and Motion." *Journal of Music Theory* xxv (1981): 183-216.
- Hill, Peter, ed. *The Messiaen Companion*. Portland, Ore.: Amadeus Press, 1995.
- Hodant, Jean-Philippe. "Rhetorique et Dramaturgie Musicales dans l'oeuvre de Jean Guillou." Ph.D. diss., Université de Paris-Sorbonne, 1992.
- Holloway, Clyde Barrington. "The Organ Works of Olivier Messiaen and their Importance in His Total Oeuvre." S.M.D. diss., Union Theological Seminary, 1974.
- "Jean Guillou, International Performer of the Year 1982," Website of New York City Chapter, American Guild of Organists. (Accessed February 15, 2008)  
<http://www.nycago.org/html/POTY/Guillou.html>
- Johnson, Robert Sherlaw. *Messiaen*. Berkeley: University of California Press, 1975.

- LaRue, Jan. *Guidelines for Style Analysis*. 2nd ed. Michigan: Harmonie Park Press, 1992.
- Lester, Joel. *Analytic Approaches to Twentieth-Century Music*. New York: W.W. Norton & Company, 1989.
- Little, J. "Architectonic Levels of Rhythmic Organization in Selected Twentieth-Century Music." Ph.D. diss., University of Indiana, 1971.
- Machlis, Joseph. *Introduction to Contemporary Music*. New York: W.W.Norton & Company, 1979.
- Marvin, Elizabeth West. "The Perception of Rhythm in Non-Tonal Music: Rhythmic Contours in the Music of Edgard Varèse." *Music Theory Spectrum* 13, no. 1 (Spring 1991): 61-78.
- Marvin, B. "A Generalized Theory of Musical Contour: Its Application to Melodic and Rhythmic Analysis of Non-Tonal Music and Its Perceptual and Pedagogical Implications." Ph.D. diss., University of Rochester, 1989.
- Messiaen, Olivier. *Technique de Mon Langage Musical*. Vol. I, II. Paris: Alphonse Leduc, 1944.
- \_\_\_\_\_. *Traité de Rythme, de Couleur, et d'Ornithologie*. Paris: Alphonse Leduc, 1994-2002.
- \_\_\_\_\_. *Traité de Rythme, de Couleur, et d'Ornithologie*. Translated by Melody Baggech. D.M.A. diss., University of Oklahoma, 1998.
- Pearsall, Edward. "Interpreting Music Durationally: A Set-Theory Approach to Rhythm." *Perspectives of New Music* 35, no. 1 (winter 1997): 205-230.
- Peterson, Larry Wayne. "Messiaen and Rhythm: Theory and Practice." Ph.D. diss., University of North Carolina at Chapel Hill, 1974.
- Rothstein, William Nathan. *Phrase Rhythm in Tonal Music*. New York: Schirmer Books, 1989.
- \_\_\_\_\_. "Rhythm and the Theory of Structural Levels." Ph.D. diss., Yale University, 1981.
- Samuel, Claude. *Olivier Messiaen: Musique et Couleur: Conversations with Claude Samuel*, trans. E.Thomas Glasgow. Portland, Ore.: Amadeus Press, 1994.

- Simundza, Mirjana. "Messiaen's Rhythmical Organization and Classical Indian Theory of Rhythm I & II." *International Review of the Aesthetics and Sociology of Music* 18, no. 1 (January 1987): 117-144.
- Spies, Donald G. "Some Solutions to the Problem of Form in Organ Music 1950-1970: Including An Analysis of the Organ Works of Bengt Hambraeus, Jean Guillou, and William Albright." Doctoral diss., Northwestern University, 1972.
- Thomas, Janet. "Contemporary Music and the Avant-Garde - An Introduction: Part II. The Continent and Some Hints on Performance." *Organists' Review* 69, no. 279 (August 1985): 31-38.
- Terry, Mickey Thomas. "An Interview with Jean Guillou." *The American Organist* 28, no. 4 (April 1994): 56-58.
- Tye, Alexia. "Back to the Future with Jean Guillou." *The American Organist* 40, no. 8 (August 2006): 66-67.
- Urwin, Ray. "The Late Organ Works of Olivier Messiaen." M.A. thesis, Yale University, 1978-79.
- Van den Toorn, Pieter C. *The Music of Igor Stravinsky*. New Haven and London: Yale University Press, 1983.
- Winold, A. "Rhythm in Twentieth-Century Music." In *Aspects of Twentieth-Century Music*, ed. G.E. Wittlich. Englewood Cliffs, N.J.: Prentice-Hall, 1975: 208-69. (Richard Delone, author)
- Zagorski, William. "Jean Guillou and the Organizing of Inspiration." *Fanfare* 13, no. 5 (May-June 1990): 76-87.

#### Musical Scores

- Boehm, Georg. *Organ Works*. Miami: Kalmus/Warner Bros. Publications. No date.
- Guillou, Jean. *Alice in Organ Land Op. 53 for Organ and Narrator*. Mainz :Schott, 1998.
- \_\_\_\_\_. *Hyperion or the Rhetoric of Fire, Op. 45 for Organ*. Boston: Wayne Leupold Editions, Inc., 1997.
- Palestrina, Giovanni Pierluigi da. *Le Opere Complete di Giovanni Pierluigi da Palestrina Volume XI*. Roma : Edizione Fratelli Scalera, 1941.
- Messiaen, Olivier. *Messe de la Pentecôte*. Paris: Alphonse Leduc, 1951.
- Stravinsky, Igor. *The Rite of Spring*. New York: Dover Publications, Inc., 1989.

## Discography

Ericsson, Hans-Ola. *Les Corp Glorieux*. BIS-CD 442, CD.

Guillou, Jean. *The Great Organ of Saint Eustache, Paris*. Dorian DOR90134, 1989, CD.

Weir, Gillian. *Olivier Messiaen: The Complete Organ Works*. Collins Classics 70312 Vol. 5, 1994, CD.