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L'Harmonie révée: An Analysis of Henri Pousseur's 'Votre Faust' And 'Les litanies d'Icare'

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L’Harmonie rêvée: An Analysis of Henri Pousseur’s Votre Faust and Les Litanies d’Icare

by

André Brégégère

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Abstract

L’HARMONIE RÉVÉE: AN ANALYSIS OF HENRI POUSSEUR’S VOTRE FAUST AND LES LITANIES D’ICARE

by

André Brégégère

Adviser: Professor Joseph N. Straus

This dissertation consists of two chapters, largely self-contained, each dedicated to a different piece by Belgian composer Henri Pousseur (1929–2009). The first chapter presents a detailed survey of Pousseur’s opera, Votre Faust, attempting to address all major aspects of this vast, ambitious work: origins and reception, compositional design, relationship with the Western operatic and literary tradition, formal experimentations, and harmonic innovations. The second chapter presents a detailed analysis of a work representative of Pousseur’s more recent output, Les Litanies d’Icare (1993) for piano solo, focused on Pousseur’s trademark techniques of parametric, serial design (technique des groupes), and on his unique harmonic methods (technique des réseaux).

While largely independent from each other, these two chapters can, nevertheless, offer a larger view of the evolution—and, overall, remarkable consistency—of Pousseur’s compositional methods, with two pieces representing the boundaries of the composer’s post-Darmstadt career, from their early, experimental, inception in Votre Faust, to their more mature, controlled expression.
in *Litanies*. It is my hope that these two analyses can also contribute to bringing renewed attention to Pousseur’s musical and theoretical work within North American, English-language scholarship.
Table of Contents

Abstract

List of Tables

List of Illustrations

Introduction

Chapter I: The Utopian Bargain of Pousseur’s *Votre Faust* 7

1. Introduction 7

2. Butor/Pousseur: Origins of a collaboration 7

3. Setting the Stage: An Overview 12

4. Analysis (1): Harmonic techniques 21

5. Analysis (2): Generalized serial design 31

6. Opera Revisited: The Fair 38

7. Mobile Design (1): Large-scale topography and audience participation 44


9. Assessing Votre Faust: Reception and legacy 52

10. Conclusion 55

Chapter II: Les Litanies d'Icare 57

1. Introduction 57

2. Overview 61

3. Harmonic Premises: Interval Networks 62

4. Path/Network Derivation 73
5. Parametric Premises 77
6. Rhythmic Premises: Meter System 80
7. Group Types: Parametric Design 84
8. Group Types: Diagonal Interpolation 87
9. Group Types: Paths 89
10. From Group Types to Groups 93
11. Harmonic Derivation 95
12. Second Interpolation: Periods 113
14. Sectional Interpolation 127
15. Sectional Derivation (2): Section E 135
16. Conclusion 143

Coda 147

Appendix I: Translated excerpts 149
   a) Excerpt 1 ("Harmonie? Harmonies!": 227) 149
   b) Excerpt 2 (Ibid.: 235–238) 149

Appendix II: Les Litanies d’Icare, annotated score 154

Bibliography 183
List of Tables

Table 1.1. Main literary sources

Table 1.2. Characterization of Votre Faust's five main locales

Table 1.3. Arrangement of the musical material in the Fair

Table 1.4. Four versions of the Puppet play (Part 2, scenes, E1–4)

Table 1.5. Variable text for the polyphonies of the travel segment

Table 2.1. Networks a–e dyadic and trichordal content

Table 2.2. Parametric distribution within group types

Table 2.3. Section A, parametric distribution

Table 2.4. Multipliers for Sections A–D

Table 2.5. Dynamic Series for sections A–D

Table 2.6. Evolution of the Dynamics Series through sections A–D

Table 2.7. Evolution of Articulations through sections A–D

Table 2.8. Sectional interpolation, overview

Table 2.9. Section B, Period VI (mm. 118–141): Set-class analysis

Table 2.10. Section E, parametric distribution

Table 2.11. Section E, Attacks distribution
Table 2.12. Section E, distribution of dynamics
## List of Illustrations

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figure 1.1</td>
<td>Stage setup</td>
<td>13</td>
</tr>
<tr>
<td>Figure 1.2</td>
<td>Formal Outline</td>
<td>16</td>
</tr>
<tr>
<td>Figure 1.3</td>
<td>O'Donnell’s original transformation</td>
<td>22</td>
</tr>
<tr>
<td>Figure 1.4</td>
<td>Partial representation of Pousseur’s whole-tone generated cyclic system</td>
<td>23</td>
</tr>
<tr>
<td>Figure 1.5</td>
<td>Cycle-of-fifth generated cyclic system (partial representation)</td>
<td>24</td>
</tr>
<tr>
<td>Figure 1.6</td>
<td>Generative series for “Prologue dans le ciel”</td>
<td>26</td>
</tr>
<tr>
<td>Figure 1.7</td>
<td>Realization of segments $A-D$ in “Prologue dans le ciel”</td>
<td>27</td>
</tr>
<tr>
<td>Figure 1.8</td>
<td>Derivation of the melodies (vocalises) associated with each one of the opera’s main locales</td>
<td>28</td>
</tr>
<tr>
<td>Figure 1.9</td>
<td>Sequence of five harmonic progressions derived from Monteverdi’s sinfonia</td>
<td>30</td>
</tr>
<tr>
<td>Figure 1.10</td>
<td>Excerpts of “Roof” and “rain” series, and of their combination</td>
<td>32</td>
</tr>
<tr>
<td>Figure 1.11</td>
<td>Cabaret’s song</td>
<td>35</td>
</tr>
<tr>
<td>Figure 1.12</td>
<td>Fair’s song</td>
<td>37</td>
</tr>
<tr>
<td>Figure 1.13</td>
<td>Generic outline of a scene from Part 2, third segment</td>
<td>49</td>
</tr>
</tbody>
</table>
Figure 2.1. Pousseur’s “Elements for Analysis” (Éléments d’analyse). 60

Figure 2.2. a) abstract network template; b) general representation of available paths and intervallic distance from the central pitch 63

Figure 2.3. Networks a–e, using central pitch A3 64

Example 2.1. Partial illustration of all possible two-interval networks 66

Example 2.2. Projection of a specific “path” onto six different two-interval networks 67

Figure 2.4. Networks a–e primary intervals plotted in Straus’s set-class voice-leading space 71

Figure 2.5. Networks a–e trichordal set classes plotted in Straus’s voice-leading space 71

Figure 2.6 Harmonic trajectory of network sequence a–e 73

Figure 2.7. Derivation of the A/ii-family 74

Figure 2.8. Map of the twenty-five pitch networks used in Litanies 76

Figure 2.9. Group-types i–vii as paths within the abstract network 77

Figure 2.10. Basic-Measure distribution within Group-Types i–vii 78

Figure 2.11. Illustration of the implicit diagonal-distribution of Group-Types i–vii 79
**Figure 2.12.** Sectional distribution of: Networks, Group Types, and Periods  80

**Example 2.3.** Proportional meter system  82

**Figure 2.13.** Two types of diagonal interpolation  88

**Figure 2.14.** Pitch reduction of group-types i–vii, applied to network a, with A3 as central pitch  89

**Figure 2.15.** Total number of iteration for each node throughout group-type sequence i–vii  92

**Example 2.4.** A/a-family, score excerpts  94

**Example 2.5.** A/iii-family, score excerpts  96

**Figure 2.15.** A/iii-family, pitch analysis  97

**Figure 2.16.** A/iii-family trichords (T^{1–3}): Position in the abstract network. Representation as unordered-interval networks  99

**Figure 2.17.** A/iii-family trichords (T^{1–3}), evolution of trichords’ constituent intervals across networks a–e  100

**Figure 2.18.** A/iii-family, transformational voice-leading  102

**Figure 2.19.** Transpositional field resulting from the application of FT_{n/m} to network N  105

**Figure 2.20** Transpositional field resulting from the application of FT_{n/m} to network N: transpositional axes  106
Figure 2.21. Network-sequence a–e as a FT-chain 107

Figure 2.22. Mapping of networks a–e onto the FT hyper-network 108

Figure 2.23. Mapping of networks a–e onto the FT hyper-network, distinguishing “favorable” and “deficient” networks 111

Figure 2.24. Section A, group distribution 113

Figure 2.25. Attacks series (Att), diagonal interpolation within section A 115

Figure 2.26. Sections A–E, transpositional network (chronological) 116

Figure 2.27. Sections A–E, transpositional network (achronological) 117

Example 2.6. iii/a-family (sections A–D) 119

Figure 2.28. Derivation of group B4 120

Figure 2.29. Derivation of group C4 122

Figure 2.30. Derivation of group D4 123

Figure 2.31. Evolution of the Time-Signature and Tempo Series through sections A–D 123

Figure 2.32. Interpolated segment, mm. 118–141. Score excerpt, set-class analysis 130

Figure 2.33. Interpolated Segment, mm. 118–141. Network/parametric structure 131
Figure 2.34. Section E, group distribution 135

Figure 2.35. Retrograde-inversion of Group Types in section E, network view 137

Figure 2.36. Retrograde-inversion of Group Types in section E, pitch view 137

Example 2.7. E/iii-family 139

Figure 2.37. Section E, transformation of the Attack-series 141

Figure 2.38. Formal Overview 145

Example 3.1. “The five networks for AQUARIUS-MÉMORIAL” 150

Example 3.2. [No caption] 152

Example 3.3 [No caption] 153
Introduction

Belgian composer Henri Pousseur (1929–2009) started his career during the fifties and early sixties as an integral member of the European avant-garde, working in close collaboration with its other major figures, Luciano Berio (1925–2003), Pierre Boulez (b. 1925), and Karlheinz Stockhausen (1928–2007). He contributed a significant body of compositions reflecting his deep involvement with the principal issues and trends of the period, including integral serialism (*Quintette à la mémoire d’Anton Webern*, 1955; *Exercices*, 1956), electronic music (*Scambi*, 1957; *Rimes*, 1958), and “open” form (*Mobile*, 1957–58; *Répons*, 1960). These musical works were paralleled by a series of theoretical writings, published in the major European journals of the period (e.g., *die Reihe*, *Incontri Musicali*). Of particular note among his publications of the period is the article “Zur Methodik” (1957), in which Pousseur documents in detail his recent compositional research, and the progressive development of the method of parametric design that would thereafter characterize his compositional approach.

The sixties marked a time of crisis in which Pousseur, motivated by his growing disillusionment with the strict stylistic/harmonic limitations of post-Weberian serialism, would progressively distance himself from his European colleagues, and develop the unique musical language that would define all of his subsequent output, characterized by a blend of serial rigor, harmonic/stylistic all-inclusiveness, and continued formal experimentation. A central aim of his research from the period was the establishment of a music-technical framework that would
allow the integration of a vast array of harmonic idioms—including, but not limited to, integral quotations—into his serial language. Pousseur’s major work of the period, *Votre Faust* (1962–68), a kaleidoscopic re-visitation of the operatic genre and tradition, organized as a vast, serially organized architecture of quotations, can be seen as a vast experiment for this new harmonic approach—as well as for many other domains (formal, notational, poetic) of interest to the composer, as will be discussed at length in Chapter 1 of this dissertation. Characteristically, Pousseur also expounded his harmonic research from this fertile decade in an article, “*L’Apothéose de Rameau*” (1968), introducing, in particular, the methods of harmonic design via interval cycles and interval networks that would form the basis of his trademark *technique des réseaux*.

The seventies and eighties could be dubbed, following Michel Butor,¹ the composer’s “age of responsibility,” as Pousseur started assuming larger responsibilities within educational institutions in Belgium (director of the Liège Conservatory, 1975–94), and in France (founding of the Institut de Pédagogie Musicale 1985–87), resulting in a new emphasis on didactic pieces, culminating in the vast pedagogic summa represented by the collection *Méthodicaire* (1988–2008), a four-volume series of “studies on the understanding, interpretation and invention of contemporary music” (I: piano; II: melodic instruments; III: instrumental ensembles; IV: vocal ensembles). Other major works of the period—continuing, and expanding upon, the trends initiated in the sixties—include: *Huit études*

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paraboliques, for tape (1972); Vue sur les jardins interdits, for saxophone quartet (1974), based on a seventeenth-century chorale by Samuel Scheidt; Die Erprobung des Petrus Hebraicus, chamber music theatre work on texts by Henri Pousseur and Léo Wintgens, for two male actors, dramatic soprano, tenor/counter-tenor, baritone, seven instrumentalists, and tape (1974); Les îles déchaînées, for jazz group, synthesizer ensemble, and orchestra (1980), a vast triptych exploring the use of mobile form in the context of a large, multi-stylistic ensemble; La seconde apothéose de Rameau, for large chamber ensemble (1981), the musical counterpart to Pousseur’s eponymous 1968 article; and Dichterliebesreigentraum, for soprano, baritone, two solo pianos, choir and orchestra (1992–93), a vast re-interpretation of Schumann’s song cycle, presenting a direct counterpart to Pousseur’s analytical monograph on the same work (Schumann le poète. 25 moments d’une lecture de Dichterliebe).

From 1994, Pousseur retired from his institutional obligations and devoted himself entirely to composition. The most significant works of this later period are the cycle Aquarius mémorial, written during the composer’s residency at the Catholic University of Leuven between 1993 and 1998, and consisting of a set of four pieces: Les litanies d’Icare, for piano solo, 1994 (the subject of my second chapter); Les Fouilles de Jéruzona, mobile for orchestra, 1995; Danseurs gnidiens cherchant la perle clémentine, for chamber orchestra, 1998; and Icare au jardin du Verseau, for piano and chamber orchestra, 1999; and the “ethno-electroacoustic” piece Seize Paysages planétaires, a sixteen-hour multimedia program articulating a collection of ethnic representations in a sort of syncretic
metaphor of the human musical world—a fitting epitaph to Pousseur’s creative life. Henri Pousseur passed away on March 6, 2009, in Brussels.

This dissertation consists of two chapters, largely self-contained, each dedicated to a different piece by Pousseur. The first chapter presents a detailed survey of Pousseur’s opera, _Votre Faust_ (1962–68), attempting to address all major aspects of this vast, ambitious work: origins and reception, compositional design, relationship with Western operatic and literary traditions, formal experimentations, and harmonic innovations. The second chapter presents an analysis of a work representative of Pousseur’s more recent output, _Les Litanies d’Icare_ (1993) for piano solo. The relatively more limited scope of this work, compared to Pousseur’s opera, called for a more narrowly music-technical approach, focused on two aspects of the piece: first, its sophisticated compositional design, illustrating the maturity of Pousseur’s techniques of parametric, serial design (*technique des groupes*); second, its harmonic organization, premised on the use of interval networks, and exemplifying Pousseur’s unique harmonic methods (*technique des réseaux*).

While largely independent from each other, these two chapters can, nevertheless, offer a larger view of the evolution—and, overall, remarkable consistency—of Pousseur’s compositional outlook, with two pieces representing the boundaries of the composer’s post-Darmstadt career, from their early experimental inception in _Votre Faust_, to their more mature, controlled expression in _Litanies_. While the serial design of _Votre Faust_ is certainly more complex than that of _Litanies_, due in part to its application to a much larger musical/semantic field and to the use
of a “mobile” formal design, the compositional approach employed in both pieces is fundamentally similar, relying on the complex combination and transformation of a limited number of basic series associated with an established set of parameters, indicative of the relative stability of Pousseur’s serial methods through the thirty-year period separating the two works. Similarly, these two pieces also illustrate the composer’s enduring interest in the integration of various harmonic colors into his compositional designs, which traverses his entire post-1960s career, characterized by a constant refinement of his trademark Network Technique. I will argue that the two works illustrate this refinement, from the experimental phase of *Votre Faust*, characterized by the introduction of a wide arrays of methods based on the use of single- and dual-interval cycles, to a more unified, sophisticated system, based on interval networks, of which *Litaniess* represents a limpid demonstration.

Finally, I hope that these two analyses can also help bring attention to Pousseur’s musical and theoretical work, which, so far, has been largely absent from the discussion within North American-, English-language scholarship. While this re-evaluation of the significance of Pousseur’s oeuvre to recent music history would be worthwhile on the sole basis of its general artistic and scholarly value, I also believe that Pousseur’s enduring preoccupation with harmonic relationships,² quite rare among European composers of his generation, creates a unique affinity with some parallel trends in North-American music theory, as will be expounded in more detail in this dissertation. More specifically, I will explore striking similarities between

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² “Harmonic relationships” is here meant in the general sense of a concern with how simultaneous tones interact, outside of any preexisting framework.
Pousseur’s early experiments with interval cycles in *Votre Faust* and some aspects of George Perle’s Twelve-Tone Tonality (and, to a lesser extent, Milton Babbitt’s study of all-combinatorial hexachords), and the even more remarkable connections between the interval networks used in *Litanies* and the *Tonnetz*, as recently revived within North-American scholarship in the context Neo-Riemannian and Network theories.
Chapter I: The Utopian Bargain of Pousseur’s *Votre Faust*

1. Introduction

*Votre Faust*, a “variable fantasy in the operatic genre,” is the product of an eight-year collaboration (1961–68) between Henri Pousseur and French writer Michel Butor (b. 1926). In this seminal work, Pousseur, leaving behind the taboos of post-Webernian orthodoxy, ushered in a significant mutation of his musical aesthetics, engaging in a critical dialogue with the operatic genre and the Western tradition at large through a multifaceted exploration of the Faust theme. In this chapter, I will present a comprehensive study of the opera, opening with a summary review of the work’s origins and a presentation of its setup, basic elements, and story, followed by a more in-depth analysis of Pousseur’s innovative harmonic techniques, and of the opera’s overarching serial design. After a detour through a close look at the opera’s central “Fair” scene, I will consider the mobile design of the opera: first on the large-scale, as a participatory process of increasing complexity; then on a more local level, through an examination of the complex mechanics of performance exhibited in the score. Finally, I will close this investigation with a summary of the opera’s performance and reception history, and an assessment of its significance and enduring legacy.

2. Butor/Pousseur: Origins of a collaboration

The early development of Pousseur’s musical language broadly parallels that of the European avant-garde at large during the fifties, concerned with the radical expansion of the serial concept through various stages of “punctual” and “generalized” serialism, the exploration of the new possibilities offered by the emerging electroacoustic medium, and,
later in the decade, the first experiments with indeterminacy and open form. Yet, while Pousseur remained throughout this fertile decade a firm believer in, and stringent advocate of, the radical modernist approach of the Darmstadt school, one can already detect in his early output several idiosyncrasies that proved crucial to the composer’s new path of the sixties. The first was a long-standing preoccupation with the harmonic dimension, which had been from the beginning an important focus of both his music-theoretical work—as seen in his early analyses of Webern, characteristically focused on the consideration of harmonic collections—and led the composer to progressively develop, starting in the mid-fifties, a set of techniques allowing for a rigorously controlled, limited reintroduction of non-chromatic, consonant intervals in his own musical works of the period.

A second significant trend pertains to the composer’s early interest in the extension of mobile form and indeterminacy to the context of collective performance. A first, limited attempt in this direction, Mobile for two pianos (1958), was followed by Répons (1960), a mobile piece for seven musicians in which both form and material are elaborated collectively by the performers. This experience led Pousseur to start reflecting upon the


2 For a detailed discussion of the early development of Pousseur’s compositional techniques, see Pousseur, “Ébauche d’une méthode.”

3 Here, and in the remainder of this dissertation, we reserve the term “mobile form” to refer specifically to formal indeterminacy, in which pre-composed elements can be re-arranged, depending on a choice by the conductor, performer(s), and/or the audience.
role of the audience in the context of mobile works—a preoccupation that proved central to the conception of *Votre Faust*.4

In addition to these long-standing tendencies, Pousseur seems to have experienced at the outset of the sixties a deep creative crisis. Increasingly frustrated with the strict *tabula rasa* approach of the European school, he had become convinced of the necessity for a radical expansion of serialism beyond its self-imposed taboos and limitations:

In 1960, I decided to leave the narrow exclusivism of serial music, that was then called “generalized,” and that I later called “narrow.” I tried to practice a much more generalized serialism, extending it to all sorts of other domains and, in particular, not refusing the link to the past, to our heritage, our roots.5

It is in this frame of mind that Pousseur made his first contact with Michel Butor in September 1960, inviting him to collaborate on “a work of some importance: the contemporary equivalent of an opera,” in a letter that illustrates the centrality, from the very outset, of the Faust myth within the composer’s project, and reveals its ambitious scope:

[The Faust] myth seems able to gather the main interrogations, the main collective preoccupations of our time, to justify, while giving it a prospective

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4 “For the performers, [*Répons*] was very engaging, because it resembled a game, and the music they were producing was dependent on their interactions. But the audience remained outside of the game; a sort of esotericism towards the public; I immediately felt the necessity, on the one hand, to make the music more significant, and, on the other, to include the audience more directly.” Butor, Pousseur, *Votre Faust, fantasie variable*, 20. My translation. Unless otherwise indicated, all subsequent translations are mine.

5 Gonneville, “Visages de Pousseur,” 22.
function, not only the alchemy of the various current modes of musical production . . . but also that, newly attempted, of word and music. It also seems to legitimize . . . the research, from the point of view of theater, of “mobile,” complex, to a certain extent indeterminate forms. Isn’t indeed the question of Faust an open question, one that shall be put at stake, rather than resolved in advance?6

The choice of Michel Butor for this collaboration was significant. The French author had gained some recognition as an experimental writer associated with Nouveau Roman, with works such as l’Emploi du temps (1956), a rigorous study of narrative time, or La Modification (1957), a novel entirely written in the second person—not incidentally, as in “Votre” Faust.7 In addition to his literary production, Butor had also recently published a series of critical and theoretical writings, among which one in particular, the essay “La musique, art réaliste” (1960), resonated greatly with Pousseur’s own preoccupations.8 Two elements in particular would find a direct expression in Votre Faust: the first is Butor’s radical conception of a continuum of signification between music, sound, and speech—a

6 The letter, dated from September 29 1960 is quoted in full in Michel Butor, “Postface,” 238. An intriguing aspect of this letter, however, is the absence of any direct reference to the use of quotations, a technique that would become so central to the project in its later phases, a sign that Butor’s subsequent influence may have proved paramount in this regard.

7 The particular blend of structural rigor and formal inventiveness demonstrated by Butor in these early works indeed played a major role in Pousseur’s interest in this collaboration: “There is with Michel Butor a conception of mobility, a language that employs verbal elements in an almost serial fashion, a utilization of the repetition of elements, a lyricism that excited me greatly. A text that is offered to me must be supple, open, [and] susceptible to further elaboration. . . . It must possess a very solid structural frame, (I like to have, as a starting point, a structural framework), a kind of scheme close to my formal conceptions.” Butor, Pousseur, Votre Faust: fantaisie variable, 38.

8 Butor, “Music as a Realistic Art.” In quoting from this essay, I have made a few revisions in Donald Schier’s generally excellent translation.
concept echoed by the renewed “alchemy” of word and music evoked in Pousseur's letter. A second element is Butor’s description, as a more diffuse category of musical signification, of a range of musical “colors,” significantly including “geographic” and “historical” colors, whereby national or historical idioms can be used as elements of the musical discourse.9

Following Butor’s positive response, the work on Votre Faust started the following summer, when the two men spent the month of June 1961 in a summer house on the Belgian coast, laying out, in close collaboration, the general concept, basic structure, and first concrete musical and literary elements of the opera. It is at this early stage—which also included an extensive research of the Faustian musical and literary tradition—that the authors decided on an initial series of main sources, both literary (Goethe, Nerval, Marlowe, Gongora, Petrarch), and musical (Monteverdi, Mozart, Gluck).10

In the wake of this first collaborative sequence, and while remaining in close contact throughout the process of elaboration of the opera, they undertook a more specialized phase of the work: Butor completed shortly thereafter a first version of the libretto, serialized in the literary journal Nouvelle Revue Française early in 1962,11 while Pousseur started the composition of the music, a process that would occupy him intermittently

9 Butor offers as a model the trajectory of Stravinsky’s oeuvre, up to its late serial phase, presented as a logical response to “the absolute necessity of a higher kind of organization within which could freely come into play all the geographical and historical colors that he had so patiently learned to manipulate.” Ibid., 461.

10 This list of sources was considerably expanded in the course of the opera’s subsequent elaboration. For more detail on the author’s initial plan for the use of musical quotations, see Pousseur, “La foire de Votre Faust,” 330; Bosseur, “Les scenes de foire,” 138.

11 Butor, “Votre Faust, fantaisie variable genre opera.”
during the following years. *Votre Faust* was finally completed in 1968, and received its official premiere, at la Picolla Scala in Milan, on 15 January 1969.\textsuperscript{12}

3. Setting the Stage: An Overview

The opera calls for four singers, five actors, twelve instrumentalists, a conductor, and an operator for the tape/speakers-system. Significantly, the staging purposely reveals the performance’s inner workings (see Fig. 1.1): singers and instrumentalists, divided in four subgroups, are distributed on four podiums placed in a semi-circle around the stage. The conductor occupies a smaller podium to the left of the stage, while the operator and sound equipment (tape players, amplifiers, mixing table) rest in the orchestra pit. A wooden cube placed in the front of the stage provides the only concrete element of décor, used in various capacities throughout the opera (i.e., piano, table, chair…). The actors remain visible at all times, when not involved in the play, sitting on the four chairs placed in front of the central podium—with the exception of the Director, who sits on the wooden cube in front of the stage, reflecting his mediating role between actors and audience. Similarly, all costume changes are effected on stage, and the costumes themselves, stored on a set of hangers located to the right of the stage, must be made as visible to the audience as possible.

\textsuperscript{12} *Votre Faust* received two partial performances before its Milan premiere: a concert version consisting of selected excerpts was given, under the name *Portraits de Votre Faust*, at the Brussells Biennale in December 1966; and a preview performance of the opera, in an unstaged, “oratorio” format, took place in March 1968 at SUNY Buffalo—where Pousseur effected a three-year residency in 1966–69.
The various roles are distributed among the five actors as follows: the theater Director; Henri, a young composer; Maggy (green dress), who can also become Greta (red dress); the singer, Pamonella; and, Richard, Henri’s composer friend, who can also assume a series of secondary roles (Waiter, Thug, Doctor, Policeman). Additionally, the puppet play of Part 2 (scene E) is enacted by the two actors playing Richard and Pamonella, wearing motley costumes and using handheld masks to represent the various characters: Guignol, Doctor Faustus, and Mephistopheles (Richard); Guignol’s wife, and Helena (Pamonella).

The visual décor consists of a set of still images projected on four large screens placed above each podium. The images contain elements of characterization for each particular location: the five main locales (Room, Cabaret, Street, Fair, Port); the Church,
where the Finale of Part 1 takes place; and the three modes of transportation featured in Part 2’s “travel” segment (Boat, Train, Plane). In addition, the still images contain elements of association between pairs of locations (e.g., the church’s tower is visible from the window of Henri’s Room; factory chimneys from the Port are visible in the decor of the Fair). The stills also include two “visual quotations,” used during the puppet play of Part 2: Rembrandt’s etching, Faust, and Delacroix’s lithograph “Faust et Méphistophélès galopant dans la nuit du Sabbat.” Finally, the stage lighting uses a set of five colors, ordered on a scale of increasing intensity (Blue, Green, Yellow, Red, Violet). The arrangement and evolution of these visual elements—in particular the lighting (color, intensity)—is precisely notated in the score, and forms an integral part of the structural unfolding of the piece.

The dramatic structure, not unlike that of Goethe’s original, features two asymmetrical parts of increasing complexity: while Part 1 presents a rather linear narrative, the turn of events in Part 2 can vary greatly depending on the versions (see Fig. 1.2). The

13 Figure 1.2 presents the intricate “map” of Votre Faust, consisting of two parts, the second one divided into three “segments.” The unfolding of each part/segment is presented from left to right. Arrows are used as follows: to indicate the possible “switch” of a version of a scene for another (Part 2, first and second segment); to indicate the different possible “points of entry” into the segment, depending upon the number of prior interventions (Part 2, third segment)—these complex mechanisms are discussed in more detail in a subsequent section of this chapter. Also, Figure 1.2, as well as all subsequent discussion, distinguishes two versions of Votre Faust: 1) the “original version,” corresponding to Pousseur’s original score, used for the Milan premiere; 2) the streamlined “revised version,” corresponding to the version published as: Henri Pousseur, Votre Faust: Variable work in the operatic genre; new version 1981, Vienna: Universal, 1981. This revised version, used in all subsequent performances to date (Gelsenkirchen 1982, Bonn 1999), is the only version currently available from the publisher. All subsequent discussions of the original version are therefore based their description in various secondary sources (see Bibliography), and, in some cases, on surviving segments included in Votre Faust’s numerous “satellite works” (in particular, Miroirs and Echos de Votre Faust).
story of *Votre Faust* is enacted by the actors in spoken dialogues, in a sort of theater play within the opera. It presents a modern version of Goethe’s *Faust*, complete with a scheming theater director (Director/Mephisto), a young, idealist composer (Henri/Faust), and his love interest (Maggy/Gretchen). A few more ambivalent characters supplement this initial triangle: Maggy’s equivocal *Doppelgänger*, Greta, associated with the more sensual, Don Juan-esque side of Henri; Richard, Henri’s composer friend, who can also become a tool in the Director’s schemes; Pamonella, the singer—and the Director’s creature—who can also, in some versions, help Henri’s escape from the Director.
Figure 1.2. Formal Outline
*Votre Faust* opens, in a clear nod to Goethe, with a playful *mise en abîme*: a conference on the “problems of contemporary music,” given by a young, idealist composer, Henri (“Prologue sur le théâtre”). At the end of the lecture, the Director approaches Henri with a tempting offer: to write an opera, under one condition, “It must be a *Faust*.” After an instrumental overture (“Prologue dans le ciel”), the opening scene presents the composer at work in his study, interrupted by successive visits from Richard and the Director (scene 1, Room). In the next scene, Henri pays a first visit to the fair, where he joins the Director and Pamonella; he is introduced to Maggy, and the two of them escape for a stroll among the stalls, where several versions of a “Faust” puppet play are loudly advertised (scene 2, Fair). The drama accelerates in the following scene, as the Director, feeling threatened in his influence, tries to convince Maggy to leave Henri. Faced with her obstinate refusal, he conspires to have her arrested and thrown in jail on made-up charges (scene 3, Street). In Part 1’s last scene, all the characters except Maggy—whose fate is still in the balance—are enjoying a night at the church’s Cabaret, where Henri meets Maggy’s sister, Greta; the scene ends in a rather flirtatious, if inconclusive, exchange between the two characters (scene 4, Cabaret). Following Part 1’s Finale, which takes place in the church and features a first “intact” musical quotation—a sinfonia from Monteverdi’s *L’Orfeo*¹⁴—a first bifurcation in the storyline intervenes, as the Director invites the audience to decide Maggy’s subsequent fate through a vote.

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¹⁴ In Monteverdi’s opera, the sinfonia directly precedes the aria, “Possente spirito” (Act 3), where Orfeo pleads for Charon to grant him passage into Hades. In addition to its extensive quotation in the Finale of Part 1, the sinfonia (or fragments thereof) also plays a significant role at other junctures of *Votre Faust*: in the polyphonies of Part 2; in the accompaniment the bass’s *Dies Irae* setting in Part 1 Finale’s middle section; and in the instrumental punctuations to the tenor’s interventions in the various versions of the puppet play (scenes E1–4).
Building on this precedent, Part 2 multiplies the opportunities for audience participation, resulting in a more complex dramatic structure, divided in three segments ("tronçons") of increasing mobility—the first of which is entirely omitted in the revised version. During the second segment Henri, accompanied by Maggy or Greta depending on the outcome of the vote, revisits the Fair, where he attends a puppet play in which the Faust myth is critically interpreted through its juxtaposition with other central myths of European consciousness (Orpheus, Don Juan, “Romantic Man,” Christ). This episode represents a crucial juncture in the opera, wherein “the protagonists (including the public) must clearly become aware of [the drama's] underlying relations.”

Following this moment of realization, Henri attempts to run away from his fate—and from the Director—using various modes of transportation (Boat, Train, Airplane). In this last, “travel” segment (“tronçon de voyage”) the indeterminacy of the dramatic structure reaches its peak, leading to five possible versions of the final scene (scene J), each located on a continuum of possibilities between the two extremes of Henri’s salvation through love (J1), on the one hand, and Henri’s ultimate death, drowned in the waters of the Port (J5), on the other. This last scene is followed by the opera’s general Finale, which performs a “critical” reprise of the “Prologue dans le ciel” embedding a recapitulation of elements from all the previous scenes. Finally, a short Epilogue completes the journey of Votre Faust, leading it back to its starting point, and concluding with the end of Henri’s opening lecture.

One of the most significant features of Votre Faust, making it such a radical departure from Pousseur’s previous works, is the opera’s heavy reliance on the use of

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quotation—musical and literary—the extent of which seems to have surprised even its author.\textsuperscript{16} Indeed, \textit{Votre Faust} features a vast, heterogeneous series of musical and literary citations covering a vast semantic field centered around, but not limited to, the Faustian theme. Table 1.1 presents the detail \textit{Votre Faust’s} main literary sources, and their usage in the opera.

This list reveals, unsurprisingly, the centrality of Goethe’s \textit{Faust}, both in the original German and in Nerval’s French adaptation. In addition, earlier strains of the Faustian literary tradition are also represented, with Marlowe’s \textit{Doctor Faustus}—which provides in particular the text of the Mephistopheles’s invocation in Part 1’s Finale and the literary counterpoint to the “English” version of the puppet play (scene E4)—and with fragments from pre-Goethean “Faust” plays from eighteenth-century Germany that constitute the basic material of the central puppet play (Part 2, scene E).\textsuperscript{17} Butor completed \textit{Votre Faust’s} cultural/linguistic panorama with three additional sources, representative of the European literary tradition at large: an Italian sonnet by Petrarch, and French and Spanish poems by Nerval and Gongora.\textsuperscript{18}

\begin{footnotes}
\item[16] “The manner in which the subject of \textit{Votre Faust} was developing . . ., the fact that Michel Butor (in part at my request) had made an abundant usage of literary quotations, led me to consider the parallel integration of musical quotations. The first steps in this direction were still relatively timid. And then, I can now say that the monster grew, so to speak, over my head, and, now that it is over, I must admit that \textit{Votre Faust} consists almost entirely of quotations.” Pousseur, “L’Apotéose de Rameau,” 37.
\item[17] Butor and Pousseur do not give further detail on these “pre-Goethean” sources, collected during their extensive investigation of Faustian sources in June 1961.
\item[18] These three additional sources are used principally in the “airs” that punctuate the scenes of Part 2’s third segment (see Table 1.1).
\end{footnotes}
<table>
<thead>
<tr>
<th>SOURCES*</th>
<th>LANGUAGE</th>
<th>SECTIONS</th>
<th>MAIN USES</th>
</tr>
</thead>
</table>
| **Goethe:**  
*Faust (Part 1)* | German | “Walpurgis Night’s Dream”  
("Walpurgisnachtsträum"): 4259–62  
“Night” (“Nacht”): 3682–97  
“Outside the City Gates” (“Vor dem Tor”): 852–9  
“Walpurgis’ Night” (“Walpurgisnacht”): 4128–31, 4136–9  
“Walpurgis’ Night” (“Walpurgisnacht”): 3871–5  
“Dungeon” (“Kerker”): 4412–20  
“Evening” (“Abend”): 2759–82  
“Witch’s Kitchen” (“Hexenküche”): 2402–15  
“Cathedral” (“Dom”): 3798–9, 3813–5, 3825–7, 3833  
“Prologue in Heaven” (“Prolog im Himmel”): 288–91 | Room’s song  
Cabaret’s song  
Street’s song  
Fair’s song  
Part 2 (“airs”)  
Port’s song  
Puppet play (scene E2)  
Part 2 (“polyphonies”)  
Puppet play (scene E3)  
Part 1 Finale  
Fair (scenes E1–4)  
Part 2 (“polyphonies”)  
Puppet play (scene E3) |
| **Marlowe:**  
*Doctor Faustus* | English | Scene 3, lines 16–22  
Scene 10, lines 5–28 | Part 1 Finale  
Part 2 (“airs”) |
| **“Pre-Goethean Faust”** | German | Unidentified sources from eighteenth-century German plays | Fair  
Puppet play |
| **Nerval:**  
*Odelettes* | French | “Sur le pays des chimères” (second stanza) | Part 2 (“airs”) |
| **Gongora:**  
*Soledades* | Spanish | “Pasos de un peregrino son, errante,” (first stanza) | Part 2 (“airs”) |
| **Petrarch:**  
*Rime sparse* | Italian | “Zefiro torna, e il bel tempo rimena,” no. 310 | Part 2 (“airs”) |
| **Monteverdi/Striggio:**  
*L’Orfeo* | Italian | *Sinfonia infernale* (act. 3, no. 22) | Part 1 Finale  
Puppet play (scenes E1–4)  
Part 2 (“polyphonies”) |
| **Mozart/da Ponte:**  
*Don Giovanni* | Italian | Overture (*Allegro* section),  
“Commander scene” (act 2, sc. 5) | Puppet play (scene E3)  
Part 2 (“polyphonies”) |
| **Gluck/Moline:**  
*Orphée et Euridice* | French | Act 2, sc. 1 | Puppet play (scene E1)  
Part 2 (“polyphonies”) |

* See Bibliography for the detail of editions used in this chapter.

**Table 1.1.** Main literary sources
The list also features three operas—which also play an important role in the music quotations discussed at length below—that expand the theme of Faust by putting it in dialogue with two other central myth of the Western tradition, Orpheus and Don Juan. Finally, in addition to the sources presented in Table 1.1, the opera also features a number of Latin quotations, associated with the opera’s persistent religious theme, and including the verses from *Dies Irae* featured in the “Cathedral” scene of Goethe’s *Faust*, Mephistopheles’s invocation from *Doctor Faustus*, as well as, in Part 2, selected passages of the book of Genesis, the *Dies Irae*, and the Latin text of Pousseur’s own *Chants sacrés*.  

4. Analysis (1): Harmonic techniques

The musical counterpart of this vast literary panorama, equally varied, presented the composer with a unique challenge: “How to ‘rhyme’ in the same composition a quotation from Gluck or Monteverdi, and another by Webern . . ., how to ‘conjugate’ them, find common functions, and . . . establish between them a series of intermediary types able to convince the ear of their belonging to the same general domain?”

In order to realize this stylistic integration, Pousseur characteristically focused his early research on the harmonic domain. A first breakthrough came with the discovery of an article by American music theorist Walter O’Connell. In his article, O’Connell observed

19 The quotations from the Book of Genesis use the verses inscribed on the wall of Saint-Mark’s Basilica in Venice, also employed by Butor in his book *Description de San Marco*. The three songs of Pousseur *Chants sacrés* feature, respectively: the chant “Veniet dominus et non tardabit,” the responsory “O vos omnes,” and the Marian hymn “Salve Regina.”


21 The following discussion is largely based on Pousseur’s own account of his early research in “L’Apothéose,” 48–55; and “Von ‘Votre Faust’,” 6–10.

22 O’Connell. “Der Ton-Raum, Rüblicke.”
a peculiar relationship between the chromatic scale and the cycle of fifths, noting that they could be mapped onto each other by effecting a partition into two whole-tone collections, and transposing one of these collections at the tritone (Fig. 1.3):

![Figure 1.3. O'Donnell’s original transformation. The label (T₆) applies to all arrows. Empty and black noteheads identify the two whole-tone scales. NB: accidentals modify only the note they directly precede (also true of Figs. 1.3–7 below). Expanding on O’Connell’s observation, Pousseur added intermediary steps resulting in a complete cyclic system of six transformations, yielding, in addition to the chromatic scale and cycle of fifths, two intermediary types: the compound interval-cycles 3/e, and 5/9—also represented in the full system by their respective retrograde inversions, e/3, and 9/5. With this transformation, Pousseur had laid the basis for “an axis for gradual harmonic variation going... from chromatic, to diatonic, through an intermediary zone... that can be characterized to a certain extent as major-minor,” illustrated in Figure 1.4:  

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23 Compound interval cycles are labeled using two numbers separated by a slash. Each number represents an ordered pitch-class interval. Double-digit numbers are replaced by a letter, as follows: t=10, e=11. Thus, for any pair of ordered pitch-class interval x and y, the expression x/y (or x/y-cycle) refers to the compound interval cycle consisting in the alternation of x and y.

Figure 1.4. Partial representation of Pousseur’s whole-tone generated cyclic system.

Interval-cycle labels appear in parentheses on each staff (top-left). Vertical brackets indicate the evolution of harmonic color (right).

This first cyclic system, however, remains closely tied to the serial idiom, as its application does not affect the rate of aggregate completion for the material affected.\(^{26}\) In order to incorporate a broader stylistic array, Pousseur imagined a variant, employing a


\(^{26}\) Indeed, and moreover, this whole-tone based transformation presents a remarkable characteristic in the context of twelve-tone composition, preserves the combinatorial properties of the material affected. Note for example, that each of the compound cycles presented in Fig. 1.4 yields a pair of all-combinatorial hexachords: (012345) for the 1/1-cycle, (023457) for the 3/e-cycles, and (024579) for the 5/9- and 7/7-cycles.
cycle of fifths in place of whole-tone scales to generate a new cyclic system of six distinct compound-interval cycles:\(^{27}\)

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\(^{27}\) The cyclic system presented in Fig. 1.5 presents some striking similarities with the early form of George Perle’s “cyclic arrays”—see George Perle, “Composing With Symmetries.” Like Pousseur’s, Perle’s system admits the unison/octave as a valid interval, and is also based on the various alignments of two 5-cycles—Perle’s cyclic arrays, however, are based on an inversional alignment of the two 5-cycles, and do not form compound interval cycles.
As with the previous system, the interval cycles are neatly arranged on an axis of gradual harmonic variation from the most consonant (0/7) to the most dissonant (1/6). However, in contradistinction with the previous, whole-tone-based system, they are here also distinguished by their rate of aggregate completion: from the 1/6-cycle, completing the aggregate in twelve steps, to the 0/7-cycle, which requires twenty-four steps to achieve the same result. Furthermore, the “diatonic” end of the harmonic spectrum is here considerably extended, to a “tonal,” triadic, harmonic color in the 3/4-cycle, and, even further, all the way to a “pre-tonal,” modal color in the 0/7-cycle, dominated by perfect fifths and octaves.

Pousseur employed these cyclic techniques in two ways: the compound interval cycles could be used directly to generate “groups” of the desired harmonic quality; or the cyclic transformations themselves could be applied directly to preexisting material. I will illustrate the former approach with a survey of “Prologue dans le ciel,” an instrumental overture that, not unlike Goethe’s “Prolog im Himmel”—albeit admittedly on a smaller scale—establishes the “transcendental framework” of the opera, i.e., the development of Western music from early tonality to Webern.28 Pousseur describes the Prologue as “a particular musical process announcing the musical “language” [of Votre Faust]. Within an articulation that remains typically Webernian unfolds a very gradual transformation from a

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Webernian chromatic harmony to a diatonicism which, in this context, is not without recalling Debussy; and vice-versa.”

This process is articulated around an underlying “cantus firmus” of one-hundred generative pitches, consisting of a chain of tone rows taken from various landmark pieces of the serial repertoire—the last note of each row becoming the first note of the next. Each row is associated with a specific compound interval cycle, derived from one of the two cyclic systems presented in Figures 1.4 and 1.5. Each note from the generative series in turn generates a group, wherein a segment of the associated interval cycle fills the space from one generative pitch to the next. The evolution of the compound cycles associated with the generative series produces the desired harmonic trajectory, from dissonance to consonance, and back (Fig. 1.6):

[Diagram showing generative series for “Prologue dans le ciel.” Labels and brackets identify, each twelve-tone row, its original source and its associated compound cycle(s) (above staff). Boxed segments with letter-labels A–D refer to Figure 1.7 below. [Adapted from Gonneville, “La Seconde Apothéose,” Example 1].

Key stages of the first half of this harmonic process are illustrated in Fig. 1.7, which provides the detail of the score realization of the four segments, A–D, highlighted in Fig. 1.6, and going from the dissonant, Webernian color of the Prologue’s opening measure (A, 1/6-cycle), to the consonant—and indeed very Debussyian—parallel fourths of segment D (0/5-cycle), through intermediary, increasingly consonant stages with segments B and C, (1/4- and ¾-cycles, respectively).30

**Figure 1.7.** Realization of segments A–D (see Fig. 1.6., above) in “Prologue dans le ciel”: piano reduction of the original score, with summary sc analysis. (top staves); underlying pitch structure, and active interval cycle (bottom staff). Generative pitches are identified by empty noteheads.

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30 This arrangement even allows for a cryptic musical “jape,” with the arrival of a C-major triad (on the downbeat!) on the first note of a tone row by none other than Pierre Boulez, one of the fiercest critics of Pousseur’s new path (see Fig. 1.7C).
Our next example illustrates Pousseur’s application of similar procedures of harmonic transformation to the opera’s large-scale serial design. An important aspect of this design, as will be discussed in more detail in a subsequent section of this chapter, rests on the rigorous system of characterization of each of the opera’s main locales (série de lieux). One element of this system consists of a set of four melodies (vocalises), each characterized by a specific harmonic color and uniquely associated with a specific locale.\(^{31}\)

![Diagram of Vocalises](image)

**Figure 1.8.** Derivation of the melodies (vocalises) associated with each one of the opera’s main locales (Fair, Room, Cabaret, Street), from the first hexachord of the series from Boulez’s *Soleil des eaux*.

As illustrated in Figure 1.8, the melodies are all derived from the first six notes of the tone row of Boulez’s piece, *Soleil des eaux*; the first derivation (Room), is obtained through a simple permutation of the fourth and sixth pitch of the original hexachord—somehow reinforcing its “whole-tone” quality. The other melodies are generated by the application of a systematic, presumably *ad hoc*, transformation, wherein every other note

\(^{31}\) The melodies (vocalises), associated with a group of vowels, are sung by one of the singers in the manner of a vocalization at various stages of the appropriate scenes.
of the original is transposed by a fifth, resulting in a gradual exploration of the harmonic spectrum—from chromatic, to “whole-tone,” diatonic, and pentatonic—unfolding across the entire opera, as its various locales are visited and revisited.

Our final example illustrates Pousseur’s application of his trademark system of cyclic transformations to a more integral musical quotation: a fragment of a *sinfonia* from Monteverdi’s *L’Orfeo*, which, along with its transformations, provides the harmonic template for the vocal polyphonies of Part 2’s final segment.\(^{32}\)

\(^{32}\) See note 13.
Figure 1.9. Sequence of five harmonic progressions derived from Monteverdi’s *sinfonia* (left); Letter-label, “name,” and set class (center); underlying structure and transformations (right).

Figure 1.9 displays, on the left column, the original excerpt from the sinfonia (A)—a traditional chord progression consisting of four minor triads embedded in an ascending-fifth sequence—followed by its four, increasingly dissonant, transformations (B–E). The right column provides the detail of these transformations: first, the triads from the original model—ignoring the octave doublings—are identified as four contiguous three-note segments of a 4/3-cycle, resulting from the alignment of two cycles of fifths. In the next step (B), each segment is extended to incorporate an additional pitch, resulting in a series
of four “minor-seventh” chords. In the following steps (C-E), the generative interval cycle is submitted to a gradual process of cyclic transformations, progressively shifting the chord progressions towards more dissonant regions: from “major-seventh” chords (C), to (0156), and, finally, (0167)-tetrachords (D, E).

Pousseur consistently applied similar techniques to virtually all components of Votre Faust’s harmonic framework, as in Part 1, scene 1, which unfolds an arch-shaped harmonic trajectory, similar to that of the “Prologue dans le ciel,” and largely based the cyclic transformations of an excerpt from Webern’s cantata no. 2; or in the “Venetian” Finale of Part I, where a similar harmonic trajectory results from transformations of Monteverdi’s sinfonia. Furthermore, these techniques provided the composer with the means for a rigorous control of harmonic color, which could therefore become a parameter among others in the opera’s overarching serial design.

5. Analysis (2): Generalized serial design

Pousseur’s radical “generalization” of the serial techniques, however, was not limited to the harmonic domain. In fact, virtually every aspect of Votre Faust—including not only musical, but also verbal, visual, cultural, and dramatic elements—is organized according to one of a myriad of underlying, simultaneously unfolding serial processes. In this respect, the collaboration with Butor proved especially fruitful:

33 Pousseur continuously refined his technical outlook, which evolved from the linear, interval-cycle based conception presented in Figures 1.4–9, to the more flexible approach, based on multi-dimensional interval networks (“technique des réseaux”) that became an enduring trademark of his compositional technique, and will be discussed at greater length in the second chapter of this dissertation.
When we met in 1961, [Butor] was using [in his writing] sets of elements and immediately conceived *Votre Faust* through these means of organization [...] a great number of series of elements that he employed in the combinatorial work where gradual series, what in music we call “scales” (“échelles”) rather than series.34

Indeed, Butor’s verbal décor is saturated by serial elements, with series consisting of the names of birds, flowers, or cities; of curses; of elements of conversation; of thematically related words and phrases (e.g.: “roof” series, “rain” series). These series could themselves be manipulated and combined with one another to generate new material—a process particularly represented in the second part of the opera.35 Fig. 1.10 provides representative excerpts from the “roof” and “rain” series, and their combination—I will let readers discover for themselves another cryptic reference to Boulez, “hidden” in one of the series:

Figure 1.10. Excerpts of “Roof” *(left, roman)* and “rain” series *(right, italic)*, and of their combination *(center)*

34 Butor, Pousseur, *Votre Faust: fantaisie variable*, 52.
35 The detail of many of these series is provided in Bosseur, “Collaboration Butor/Pousseur,” 83–105.
The concept of gradual “scales” comes into play in the context of the higher-level series that permeate the opera’s structure, encompassing heterogeneous sets of complex elements such as literary/musical quotations, musical idioms, or dramatic outcomes. A paradigmatic illustration of this process is found in the complex series (“série de lieux”) governing the characterization of the opera’s main locales, and resulting in their inception on a gradual scale of intensity from the quietest, Henri’s Room, to the most chaotic, the Port. This arrangement, established during the early stages of the opera’s conception, rigorously defines every aspect of the locale’s characterization: lighting color, language, dominant musical idiom (“stylistic color”), characteristic instruments, figurative elements, and characteristic song (Table 1.2).\(^36\)

\(^{36}\) References to Goethe’s *Faust* in this chapter generally provide scene titles in English and German, followed by line numbers. Alternatively, as in Table 1.2, a shortened reference can be given as “F” followed by line numbers. See bibliography for the German, English, and French editions used in this chapter.
Table 1.2. Detail of the characterization of *Votre Faust*’s five main locales

Particularly relevant to the present study, the characteristic songs for each locale combine musical quotations, corresponding to the stylistic “color” of each scene, with excerpts from *Faust*, in the various languages required by the linguistic imperatives of each scene—Nerval’s translation and Goethe’s original being consistently used for the dominant French and German versions. This arrangement provides the opportunity for a series of thematic correspondences and textual interplay: the song for the Port, scene of Henri’s death in *Votre Faust*’s most tragic ending, uses the appropriately gruesome verses of Gretchen’s mad song from *Faust*’s “Dungeon” (“Kerker,” 4412–20). Similarly, the verses of Mephistopheles’s serenade from “Night” (“Nacht,” 3682–97) offer a fitting counterpoint to the sensual, Don Juan-esque atmosphere of the Cabaret. In Part 1 scene 4, the serenade

<table>
<thead>
<tr>
<th></th>
<th>Room</th>
<th>Cabaret</th>
<th>Street</th>
<th>Fair</th>
<th>Port</th>
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<td>Yellow</td>
<td>Red</td>
<td>Violet</td>
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<td>3 (+ English)</td>
<td>4 (+ Italian)</td>
<td>5 (+ Spanish)</td>
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<td>Berg/Debussy</td>
<td>Varèse</td>
<td>Nineteenth-century opera pastiche</td>
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<td><strong>Instruments</strong></td>
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<td>Flute, cello, harp</td>
<td>Horn, bassoon, harp, vibraphone, double-bass</td>
<td>All</td>
<td></td>
</tr>
<tr>
<td><strong>Figurative Elements</strong></td>
<td>Noise</td>
<td>Shoemaker Slamming doors Rain</td>
<td>Applause Jangling glasses Wind Rain</td>
<td>Traffic noises Kisses Boat sirens</td>
<td>Explosions Merry-go-rounds</td>
</tr>
<tr>
<td></td>
<td>Figurative Elements</td>
<td>Music</td>
<td>Violin student practicing</td>
<td>Pentatonic “fountains” (à la Debussy)</td>
<td>“Industrial” soundscape (à la Varèse)</td>
</tr>
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<td></td>
<td>Words</td>
<td>Conversations</td>
<td>Series: Birds, Flowers, Torrador</td>
<td>Conversations Lovers whispers</td>
<td>Spectacle announcements Genesis (scene E only)</td>
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<tr>
<td><strong>Song</strong></td>
<td>Text</td>
<td>First air for bass from Webern’s cantata no. 2, 1.</td>
<td>“jazzed-up” version of Mary’s Lullaby from Berg’s Wozzeck</td>
<td>Boyar’s Song from Boris Godunov (variation à la Bartók)</td>
<td>Nineteenth-century opera (Varied) (Varied)</td>
</tr>
<tr>
<td><strong>Density of Verbal Décor</strong></td>
<td>Groans</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Shouts</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Laughs</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Conversations</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

provides the material of the central musical number, a song performed by the alto—accompanied by the Cabaret’s “band”—for the benefit of the scene’s protagonists, and set to a “Jazzed-up” version of “Mary’s lullaby” from Berg’s Wozzeck (Fig. 1.11).\(^\text{37}\)

![Figure 1.11. Cabaret’s song [Adapted from Pousseur, "La foire de Votre Faust," Example 1]](image)

In addition, scene 4 also develops the more ominous implications of the serenade, with the combination of the line “Près du moment fatal” with elements of conversation (“Ein whisky und gin Martini,” “Dans la chambre?”), resulting in a more “fateful” coloration of the vocal décor in the latter part of the scene (“Un whisky fatal,” “Chambre fatale”).

In Henri’s Room, we overhear a song sung by a beggar in the neighboring Street (bass), set to an excerpt from Webern’s second cantata.\(^\text{38}\) The text used in this song, a nonsensical nursery rhyme taken from the intermezzo of “Walpurgis Night’s Dream” (“Walpurgisnachtstraum,” 4259–63), does not present at first glance any strong topical correspondence with its setting. A closer examination of Nerval’s translation, however, reveals a few possible associations, with the sense of a beginning—appropriate for an opening scene—conveyed by the first verse (“À l’embryon qui vient de naitre”)/"For the

\(^{37}\) Alban Berg, Wozzeck, act 2, scene 1.

\(^{38}\) Anton Webern, Cantata no. 2, op. 31, I., mm. 8–12.
just-born embryo”), or with the last verse’s evocation of "opera" ("Mais c’est au moins un opéra” /But it’s at least an opera”).

The same beggar (bass) also performs the song for the Street, appropriately using the beggar’s song from “Outside The City Gates” (“Vor dem Tor,” 852–59), set to a version à la Bartók of the Boyar’s song from Boris Godunov. In addition to its fitting topicality, the text was also chosen for its connection with the text of the second of Pousseur’s Chant sacrés—the responsory “O vos omnes” (“O all you who walk by on the road, pay attention and see”), whose opening measures provide the material for most of Votre Faust’s preludes and interludes.

Finally, the song for the Fair reflects the unique arrangement of the musical material in this locale, unfolding as a dense, variable pastiche of the nineteenth-century operatic repertoire. Figure 1.12 presents a representative sample of the song’s varied settings, featuring, from top to bottom, recognizable fragments of Gounod’s Faust, Handel’s Messiah, Wagner’s Tannhäuser, and Verdi’s Rigoletto.

39 My literal translation of Nerval’s verses. Significantly, these two associations are not found Goethe’s original text (“Spinnenfuß und Krötenbauch und Flügelchen dem Wichtchen! Zwar ein Tierchen gibt es nicht, Doch gibt es ein Gedichtchen,” F, 4259–62, my italics), providing yet another illustration of the role of Nerval’s translation, in some cases at least, as the author’s primary source (see also note 45).

40 Modest Mussorgski, Boris Godunov, Prologue, scene 2.
Figure 1.12. Fair’s song [Adapted from Pousseur, "La foire de Votre Faust," Example 2]

The song’s text uses Faust and Mephistopheles complementary rhymes from “Walpurgis’ Night” (“Walpurgisnacht,” 4128–31; 4136–9), developing the theme of the Fall from Eden. It announces the overarching thematic of the puppet play of Part 2, which relates Doctor Faustus’s damnation—a thematic also paralleled in the “alternate myths” represented in the play’s various musical “backgrounds” (i.e., Orpheus descent to Hades, Don Giovanni’s damnation, etc.). Building on this thematic correspondence, Butor also inserted fragments of the song in the literary counterpoint for the puppet play: Doctor Faustus’s metaphysical doubts (“Mais a quoi m’a servi cette théologie?”/“But what was the point of this theology?”) are echoed by the fragment “un aimable mensonge” (“a sweet lie”); his pact with the devil (“j’étudie la magie, à l’enfer je me lie”/“I study magic, attach myself to Hell”) corresponds with the verses “Deux beaux fruits semblaient y briller, J’y montai, c’était un pommier” (“Two beautiful fruits where shining, I climbed up, it was an apple tree”).
6. Opera Revisited: The Fair

The Fair—and, in particular, the puppet play of Part 2—represents the focal point of *Votre Faust*, concentrating in a single "location" all of the opera's essential themes:

On the one hand, as a veritable “opera fair” [("foire aux operas")], [the Fair] is a forum where the question of a new theater is in principle subject of a debate . . . And on the other hand, the puppet play, as an internal reflection, as the central mirror of the action, is the place where the protagonists (including the audience) must clearly become aware of [the drama's] underlying relations.41

The Fair scenes receive a unique musical treatment (Table 1.3): the material is distributed among four fairground stalls, represented on the stage by the four podiums, with their respective singer and instrumental group. Each stall proposes a different version of a “Faust” puppet play, advertised by sensational announcements consisting of excerpts from promotional material for actual theatrical representations of *Faust* from pre-Goethean Germany: the tenor announces “the troubled life and frightful end of Doctor Faustus and his servant, Guignol;” the soprano, a "cabinet of wax figures" (lemurs, furies, and other extraordinary creatures); the alto, the “dioramas of the Duke of Parma” (rock of Sisyphus, Prometheus’s vulture, etc.); and the bass, “great historical and biblical representations” (Samson and Delilah, David and Goliath, etc.). In addition, each stall is associated with a language, and with a group of musical quotations corresponding to a specific “national” color; each group of quotations is modernized in the style of a preeminent composer of the

41 Pousseur, “La foire de *Votre Faust*,” 338.
early twentieth century—the main purpose of this special arrangement and its uniquely dense network of musical quotations being, in Pousseur’s words, “to separate, to ‘protect’ the puppet play of Part 2 from the rest of the composition.”

<table>
<thead>
<tr>
<th>Spectacle</th>
<th>“La vie agitée et la fin effroyable du Docteur Faust et de son valet Guignol”</th>
<th>“Cabinet des figures de cire”</th>
<th>“Dioramas du Duc de Parme”</th>
<th>“Grandes representations historiques et bibliques”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Singer</td>
<td>Tenor</td>
<td>Soprano</td>
<td>Alto</td>
<td>Bass</td>
</tr>
<tr>
<td>Language</td>
<td>French</td>
<td>German</td>
<td>Italian</td>
<td>English</td>
</tr>
<tr>
<td>Style</td>
<td>French XIXth-century opera</td>
<td>German XIXth-century opera</td>
<td>Italian bel canto</td>
<td>“A certain Church music, close to opera and thus typically bourgeois”</td>
</tr>
<tr>
<td>Quotations</td>
<td>Outer Sections: Berlioz and Gounod’s Faust, Manon, Carmen; Mignon</td>
<td>Weber, Lortzing, early Wagner (Holländer, Tannhäuser, Lohengrin)</td>
<td>Rossini’s Barber of Seville; Verdi’s Rigoletto, Traviata; Puccini’s Tosca</td>
<td>Handel’s Messiah; Bach-Gounod’s Ave Maria; Mendelssohn’s Wedding March; Chopin’s Funeral March; Franck’s Pani’s Angelicus</td>
</tr>
<tr>
<td>Transformation</td>
<td>“À la Milhaud”</td>
<td>“À la Schoenberg”</td>
<td>“À la Stravinsky”</td>
<td>“À la Hindemith”</td>
</tr>
</tbody>
</table>

Table 1.3. Detail of the arrangement of the musical material in the Fair

The puppet play (“a little Faust appearing as a ‘tabernacle’ and containing the largest quotations of classical operas”) occupies the central section of scene E, which comes in four versions (E1–4). The material for the play itself remains identical in all versions: it unfolds as the condensed version of a pre-Goethean German Faust play, using

42 Pousseur, “La foire de Votre Faust,” 323. See also Pousseur’s additional comment, referring to the use of an integral quotation from Mozart’s Don Giovanni in the “Italian” version of the puppet play (E3): “To insert in my piece the Commander’s scene was a very dangerous operation; That is why I devised, all around it, very robust walls, as if I had to protect myself from Mozart.” Bosseur, “Les scènes de foires,” 145.


44 The outer sections of the two principal Fair scenes (i.e., Part 1, scene 2; Part 2, scene E) present a largely similar outlook. During the Fair scene of Part 1 (scene 2), the puppet play is replaced by a central section, corresponding to Henri and Maggy’s silent stroll among the fairground stalls, and set apart by the absence of dialogue, a uniform, brisk tempo, and a new group of quotations (see Table 1.3).
rudimentary dialogues and monologues, based on the text of actual eighteenth-century plays, and enacted on stage by the actors using handheld masks to represent the various characters: Mephistopheles; Doctor Faustus; his servant, Guignol (Hanswurst in the German version of the opera); Guignol’s wife; and Helena. A series of announcements, shouted by the tenor, signals the main stages of the action: “Here is Guignol!” “And Here Is Guignol’s wife!” “Doctor Faustus!” “The Invocation!” “The Pact!” “The Fantastic Ride!” “Helena’s Apparition!” “The Hour of Death!” “The Punishment!” In addition, an instrumental group, different with each version, punctuates each of these announcements with a distorted fragment of Monteverdi’s sinfonia from l’Orfeo quoted extensively in Part 1’s Finale.45

The fixed elements of the play are superimposed to a variable musical background, different for each version of scene E, and providing a unique interpretation on the Faust story through its juxtaposition with one of four “alternate myths,” all variously related to the overarching theme of the fall: Orpheus, Don Juan, “Romantic Man,” and Christ. Two of these versions, E1 and E3, feature the quasi-integral quotation of a scene from a landmark of the operatic repertoire (Gluck’s Orphée, Mozart’s Don Giovanni). In each case, the quotations are played on the speakers, using a prerecorded version of Pousseur’s own arrangement of the original, re-orchestrated for the twelve instruments present on stage.46

45 See fn. 14.

46 For Don Giovanni, Pousseur, in order to better fit the quotation within the structure of scene E3, realized a montage, appending the allegro section of the Overture to the Commander’s scene (see Pousseur, “La foire de Votre Faust,” 330).
<table>
<thead>
<tr>
<th>Version</th>
<th>E1</th>
<th>E2</th>
<th>E3</th>
<th>E4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stall</strong></td>
<td>Tenor/French</td>
<td>Soprano/German</td>
<td>Alto/Italian</td>
<td>Bass/English</td>
</tr>
<tr>
<td><strong>“Alternate Myth”</strong></td>
<td>Orpheus</td>
<td>Romantic Man</td>
<td>Don Juan</td>
<td>Christ</td>
</tr>
<tr>
<td><strong>Original Background (Tape)</strong></td>
<td>Gluck’s <em>Orphée et Eurydice</em> (act 2, sc. 1)</td>
<td>“La chevauchée fantastique” (original “Romantic Fantasy,” retracing the trajectory of German Romantic music from Beethoven to Schoenberg)</td>
<td>Mozart’s <em>Don Giovanni</em> (excerpt from overture + Commander scene)</td>
<td>Original “small cantata” in the style of Bach (toccata, three chorale variations, final fugue)</td>
</tr>
<tr>
<td><strong>Alternate Background (Instrumental)</strong></td>
<td>“Concerto-Divertimento” on <em>Orphée’s</em> aria, in the style of Mozart and Haydn</td>
<td>“La chevauchée fantastique” (version for solo piano)</td>
<td>Scattered fragments (&quot;ruines&quot;) of Mozart’s original</td>
<td>Parody of Weill’s <em>Threepenny Opera</em></td>
</tr>
</tbody>
</table>

**Table 1.4.** Detail of the four versions of the Puppet play (Part 2, scenes, E1–4)

In the “French” version of the play (E1), Pousseur used in its entirety a scene from Gluck’s *Orphée et Eurydice*, in which the furies are swayed by Orpheus to let him enter Hades and release Eurydice (act 2, scene 1). This version corresponds to a “positive” outcome of the vote, and resonates with the corresponding preceding scene (D1), in which Henri/Orpheus rescues Maggy/Eurydice from the hospital/Hades. In the “Italian” version (E3), Pousseur used as a background the complete commander scene from *Don Giovanni*—this time, in association with a “negative” outcome, where Henri/Don Juan has abandoned Maggy for another woman. As an important aside, I must note that the Orpheus/Don Juan dichotomy was, in Pousseur’s conception, more ambiguous than might seem at first glance: as an equally valid alternative to an immediate, moralizing interpretation of this opposition, he offers the perspective of Grabbe, who, in his play, *Don Juan und Faust*, presented the former as the positive symbol of the victory of material reality over abstract idealism, of *eros* over *agape*.⁴⁷

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⁴⁷ Regarding Pousseur’s reference to Grabbe, see Bosseur, “Les scènes de foires,” 146.
The superposition of these various layers—including, in addition to the puppet play and its variable musical background, the occasional insertion of additional quotations from Faust—produces many opportunities for textual and symbolic interactions. In E1, when the Faust of the play invokes the devil, Orpheus sings “let yourself be swayed by my tears” (“laissez-vous toucher par mes pleurs”); when the tenor announces “The Hour of Death!” the chorus sings: “who is the bold one who dares venture in this dark place, and in front of death, does not quiver?” (“Quel est l’audacieux, qui dans ces sombres lieux ose porter ses pas, et devant le trépas, ne frémit pas?”). Similar coincidences happen in E3: When the tenor announces “The Pact!” the commander sings “Give me your hand in pledge!” (“dammi la mano in pegno!”) and Don Giovanni answers “Here it is!” (“eccola!”); Faust and Don Giovanni’s damnation also occur at the same time, while the bass, in an added layer, sings a song based on a verses from “Witch Kitchen” (“Hexenküche,” 2402–15) ending, in Nerval’s translation, on the words “Gives death” (“Donne la mort”).

The musical backgrounds of the other versions, E2 and E4, present a slightly different outlook, consisting of two “false” quotations. For E2, the “German” version of the play, Pousseur wrote a “Romantic Fantasy” for piano and orchestra, retracing the history of German Romantic music from Beethoven to Schoenberg seen as a metaphor of the fall of

48 Ibid.

49 These two variants (E2, E4) are altogether omitted in the revised version of the score. The subsequent discussion, therefore, is based solely on secondary sources—and, in the case of E2, on the version for piano and voice appearing as the second movement of one Votre Faust’s numerous “satellite” pieces: Miroirs de Votre Faust, for piano and soprano ad lib, published in 1965 (see also fn. 13).
Romantic Man ("l’homme romantique"). It begins with a variation, in the manner of the young Beethoven, of the beginning of the scene from Gluck used in E1, followed in succession by quotations, real and imaginary, from Schubert, Schumann, Mendelssohn, Liszt, and, finally, the fateful chords of Wagner’s Tristan—coinciding in the puppet play with the words “Fauste, Fauste, prepara te ad mortem” (“Faust, Faust, prepare yourself to die”). When the tenor announces “The Hour of Death!” the music becomes atonal, then dodecaphonic (“The Punishment!”), with quotations of Schonberg, Webern, and, finally, of one of Pousseur’s own Chants Sacrés, “Veniet Dominus” (“the Lord is coming”). As an additional literary layer, the “Fantasy” is punctuated by the verses of Goethe’s The King in Thule, sung by the soprano in an original setting.

The last version, E4, introduces yet another parallel “myth:” no less than the Passion of Christ. The background consists of a “small cantata” in the manner of Bach, complete with a toccata-prelude, three variations that use thematic elements from Don Giovanni, and a final fugue on the chorale “Christ lay in death’s bonds” (Christ lag in Todesbanden). Mimicking Bach’s own numerological practice, Pousseur proposes a characteristically ambivalent “exegesis” for this version, wherein the five movements of the cantata can represent either an allegory of the entire salvation story (“1. Fall of Adam, Old Testament with Advent and Annunciation, 2: Christmas Pastoral, 3: Life, Passion and Crucifixion, 4: Resurrection and Ascension, 5: Glorification and Eschatological Return”), or a detailed

50 “In E2, [the story of Faust] is identified with the history of Romantic music, of Romantic sentiment, of Romantic man. Thus, [E2] maybe remains, as a German version, the closest to the theme of Faust.” Pousseur, “La foire de Votre Faust,” 332.

51 This sequence strongly alludes to the Faustian repertoire, with fragmentary quotations from Schubert’s setting of Goethe’s “Der König im Thule”, Schumann’s oratorio Scenes from Goethe’s Faust, and Liszt’s Faust Symphony (see Pousseur, ”La foire de Votre Faust,” 332).
representation of the Passion story ("1: Stations of the Cross and Crucifixion, 2: Elegy, 3: Descent into Hell, struggle with the dark spirits, and liberation of the souls residing there 4: Resurrection, 5: Ascension"). Additionally, the puppet play is slightly altered in this “English “version, taking the outlook of an Elizabethan mask: the actors/puppets mime the action, while the singers sing the dialogues. An additional literary layer, consisting of extensive quotations from Marlowe’s *Doctor Faustus*, also comes to reinforce this “English” color.

Finally, I will briefly mention an additional feature of this already intricate design: in case of an interruption by the audience, the current version of the puppet play is replaced by a second, alternate version, in which the tape is omitted and replaced by an instrumental background (see Table 1.4). This alternate background is, in some cases, related to the original, as in E3, where Pousseur’s “orchestral” arrangement is replaced by scattered instrumental fragments (“ruines”) of Mozart’s scene. In others, however, it presents a completely different outlook, creating an entirely new set of references and textual/musical interactions—as in the extreme case of E4, which substitute a parody of Weil’s *Threepenny Opera* for the original “small cantata.”

7. Mobile Design (1): Large-scale topography and audience participation

Another central aspect of *Votre Faust* is its innovative formal design, exploring the application of mobile form—and audience participation—in the context of a theatrical work. From a narrowly technical standpoint, *Votre Faust’s* mobile architecture reveals a series of systematic processes, consistent with the opera’s overarching, “generalized” serial

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52 Pousseur, “La foire de *Votre Faust*,” 334.
conception, and which seem to embed mobility itself (or degrees thereof) as one of the many parameters of this serial design. The most readily apparent of these processes is the steady increase in complexity initiated in Part 2, starting, as a direct result of Part 1’s vote, with a first bifurcation in scene D, and leading to the delta-shaped configuration of the “travel” segment (see Fig. 1.2, above). Significantly, this large-scale formal process is also paralleled at the local level, with a gradual increase of indeterminacy in the performance material, the use of freer—although, paradoxically, rigorously organized—associations from all categories in the verbal décor (literary quotations, verbal series, conversations, etc.), and, more generally, the incremental blurring of the distinction between the different domains (music, word, sound). Moreover, this process is further emphasized, in the latter part of the opera, by a significant reinforcement of the part played by the tape, a medium that naturally lends itself to the seamless combination of material from various origins.

In addition to this incremental progression in complexity, Pousseur also declined mobility on a more qualitative scale, exploring in turn various modalities of audience involvement: a first declination is represented by the collective vote intervening at the end of Part 1. In contrast, the first segment of Part 2—entirely omitted in the revised version—explores individual choice, as the Director, during the interludes that follow the segment’s first two scenes (scenes A and B), invites a member of the public to join the stage and choose between two options: either to “continue,” and proceed to the next scene; or to “start again,” and play an alternate version of the scene—significantly, these changing rules of intervention are consistently presented to the audience by the Director, in character, symbolically involving the collectivity in the Faustian bargain. The second segment explores another, more collective option: in order to interrupt a scene, and trigger an
alternate version, the audience is invited to collectively shout “no!” loud enough to cover the performance. Finally, the last segment remains in the same “democratic” vein, with only a subtle variation: to trigger a change in the narrative path, the audience needs to cover the lines of the actors during the spoken parts (“bloc de dialogues”) of the scenes. Finally, Pousseur’s careful design reveals yet another significant feature: in the case of the maximum number of interruptions in Part 2, the outcome of the vote from Part 1 can be completely reverted (i.e., a “positive” vote can ultimately lead to the tragic ending of scene J5, and vice-versa).53

From a more general perspective, this systematic exploration of the various modes of participation can be readily interpreted as a transparent political metaphor, revealing a broader socio-ethical, didactic dimension of the composer’s endeavor—echoing Butor’s credo that “[music] teaches us something about the world, . . . that songs transform life.”54 In this respect, Pousseur often cited the influence of Marxist philosopher Ernst Bloch, and his conception of theater as a “paradigmatic institution.”55

53 This feature, not readily seen in Appendix A, can be summarized as follows: in case of a “negative” vote, an interrupted scene will be replaced by the scene appearing directly above (Part 2, first and second segment), or above-and-to-the-left (third segment) in Appendix A’s diagram, thus shifting the dramatic structure in the direction of a “positive” ending—and vice versa, in the case of a “positive” vote.

54 Butor, “Music as a Realistic Art,” 449

55 Bloch, Das Prizip Hoffnung, 478–500. “Ernst Bloch, . . . in “Das Prinzip Hoffnung,” describes theater . . . as a moral, collective institution, in which human beings gather to experience trials by example (Probe auf Exempel), search for solutions and see how they work out, and bring this experience with them outside of the theater, drawing from it enduring consequences for their own lives.” Butor, Pousseur, Votre Faust: fantaisie variable, 40.

Let us now examine the techniques at work in the articulation of the opera’s performance material, which reveals, as noted earlier, a steady progression from the traditional scoring of the “Prologue dans le ciel,” to the extreme of the travel segment of Part 2, wherein, literally, there is no score left, only a flexible—but rigorously organized—multi-layered arrangement of mobile elements.

A first, limited instance of the use of mobile elements appears in the first Fair scene (Part 1, scene 2), where each performer is given, on a separate sheet, a series of ad lib musical fragments (“ritournelles”), consisting, as appropriate for the scene’s locale, of fragmentary quotations from the nineteenth-century operatic repertoire. These elements are called for at various junctures of the scene, in varied combinations—the synchronization of these ad-lib interventions often requiring a complex series of signals, detailed, on a case-by-case basis, by verbal indications in the score. While scene 3 (Street) reverts to a fixed score for its musical background—which, in this particularly dramatic scene, functions very much as a film score, closely following the action and dialogues in series of climax of increasing intensity—scene 4 (Cabaret) introduces yet another set of mobile elements: “fountains,” and “birdsongs.” The former consist in an ad-lib, flowing pentatonic run, featured in each part at a different transposition level. This arrangement allows for a control of the level of dissonance, directly proportional to the number of simultaneous layers called for in the score. Likewise, the “birdsongs” consist of a set of

56 The topicality of these elements is better understood in relation to Pousseur’s conception of the cabaret as a "Guinguette," i.e., a drinking establishment located, in a pastoral setting at the outskirts of the city (see Pousseur, "La foire de Votre Faust," 322–3).
shorter, bird-like melodic fragments—all derived from the row of Boulez’s *Soleil des eaux*— and distributed among the parts according to a similar principle.57

After a brief return to a fixed score for the complex, multi-layered, Finale of Part 1, the beginning of Part 2 marks an extension of the mobile techniques introduced in scenes 2 and 4. In an annex to scene D, each performer (i.e., singers and instrumentalists) is given a series of elements, organized in five distinct groups, each identified by a letter-label (A–E). These groups, which are to be executed ad lib or according to occasional additional instructions in the score, represent the majority of the musical material for the scene—indeed, several of the scene’s sections are made up exclusively of these mobile elements. The structure of groups A–E remarkably illustrates Pousseur’s systematic effort to broaden the scope of serial organization, as each letter denotes a specific type, or quality, of musical object: “A” elements are purely harmonic, consisting of a set of intervals; “C” elements are purely rhythmic, and consist of non-pitched, percussive elements, to be performed using various extended techniques adapted to each specific instrument; “E” elements are verbal, featuring spoken text; finally, “B” and “D” elements represent intermediary types, consisting of ad lib trills and tremolos. In effect, Pousseur created a qualitative scale of musical “types,” integrated within his serial design, and providing a practical application of his—and Butor’s—vision of a continuum of musical signification.

Following a temporary return to a more traditional scoring in scene E (Fair), the paroxysm of indeterminacy is reached in the third and last segment of Part 2 (“travel”

57 The deployment of the “Birdsongs” set among the parts is actually more complex than that of the “Fountains,” employing not only transposition but—maybe in a cryptic nod to their serial origin—the four canonical transformations: Transposition, Inversion, Retrograde, and Retrograde Inversion.
segment, scenes F–J), where Pousseur had to mobilize all his resources and inventiveness in order to create a flexible musical architecture adequately matching the high mobility of the dramatic structure. While an exhaustive description would exceed the scope of the present chapter, I will attempt here to provide a concise summary of this final segment's main principles and constitutive elements—the generic outline for each scene is detailed in Figure 1.13.

**Figure 1.13.** Generic outline of a scene from Part 2, third segment.

The conductor receives a skeletal short score featuring, for each of the segment's fifteen scenes (including all possible variants of scenes F–J), the actor's dialogues and actions, and their synchronization with the tape and with the mobile elements forming the musical background of the scene. Significantly, this short score provides only generic labels for these mobile elements, ("airs," "backgrounds," "signals," and so forth), and the conductor is left largely unaware of their exact content, which is dependent upon external factors (e.g., performers' choices, outcome of the vote from Part 1, stage-lighting color, etc.).

Instrumentalists and singers are provided with two different sources: first, a series of five *scene frames*, each attached to one scene within the sequence of scenes F–J, and independent of each scene's specific local variants (e.g., all version of scene G use the same frame); second, a set of eight *local annexes*, each corresponding to a specific "location"—the
five main locales (Room, Street, Cabaret, Fair, Port), and the three modes of transportation (Train, Plane, Boat)—and building upon the elements of local characterization established in the course of the opera, (verbal and “realistic” elements, musical quotations, characteristic songs, and so forth).

The material for the singers also provides several opportunities for a further development of the opera’s literary material: the text of the polyphonies featured in the “hubs” and “interludes” of each scene features the combination, dependent upon the result of Part 1’s vote, of textual fragments from the puppet play’s backgrounds (i.e., from Don Giovanni, Orphée et Eurydice, Doctor Faustus, “Der König im Thule”) with verses from the Dies Irae, providing yet another layer of critical interpretation of the dramatic outcome (see Table 1.5). The opera’s main literary sources (see Table 1.1, above) also appear, in an additional series of five songbooks providing the material for each scene’s “air”—each songbook being also associated with a specific source, language, and stage-lighting color.\textsuperscript{58}

\textsuperscript{58} Incidentally, it is in these “airs” that Nerval finds his own voice, as the text for the “French” air consists, for the first time, in the poets own verses with the second stanza of his poem, “Sur le pays des chimères,” (in Nerval, Odelettes).
<table>
<thead>
<tr>
<th>Sc.</th>
<th>&quot;Hubs&quot;</th>
<th>&quot;Interludes&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>Qui devant le trépas ne frémît pas (O)</td>
<td>Quid sum miser</td>
</tr>
<tr>
<td></td>
<td>Who, faced with death, does not tremble?</td>
<td>Tunc dicturus? (DI)</td>
</tr>
<tr>
<td>G</td>
<td>Tu m’invitasti a cena, il tuo dover o sai (DG)</td>
<td>Quem patronum</td>
</tr>
<tr>
<td></td>
<td>You did invite me to dinner, And I must repay you</td>
<td>Rogaturus, (DI)</td>
</tr>
<tr>
<td>H</td>
<td>Er sass beim Königsmahle, Die Ritter um ihn her (G)</td>
<td>Cum vix Justus</td>
</tr>
<tr>
<td></td>
<td>He sat at the royal banquet, The knights around him</td>
<td>Sit secures? (DI)</td>
</tr>
<tr>
<td>I</td>
<td>O thou are fairer than the evening air (M)</td>
<td>Judex ergo</td>
</tr>
<tr>
<td></td>
<td>When the judge will sit</td>
<td>Cum sedebit (DI)</td>
</tr>
<tr>
<td>J</td>
<td>Quidquid latet Adparebit (DI)</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>Whatever hides will appear</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sc.</th>
<th>&quot;Hubs&quot;</th>
<th>&quot;Interludes&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>Be silent, there, For danger is in words (M)</td>
<td>Dies iarae</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dies illa (DI)</td>
</tr>
<tr>
<td></td>
<td>The day of wrath, that day</td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>Er sah ihn stürzen, trinken und sinken tief ins Meer (G)</td>
<td>Soltet saeclum</td>
</tr>
<tr>
<td></td>
<td>He saw it plunging, drinking and sink deep into the sea</td>
<td>In favilla (DI)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Will set the world to ashes</td>
</tr>
<tr>
<td>H</td>
<td>Da quell tremor insolito Sento assalir gli spiriti? (DG)</td>
<td>Judex ergo</td>
</tr>
<tr>
<td></td>
<td>From which strange tremor are the spirit assailing me?</td>
<td>Cum sedebit (DI)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>When the judge will sit</td>
</tr>
<tr>
<td>I</td>
<td>A l'affreux hurlement du cerbère écumant (O)</td>
<td>Quidquid latet Adparebit (DI)</td>
</tr>
<tr>
<td></td>
<td>To the frightful roar of a foaming Cerberus</td>
<td>Whatever hides will appear</td>
</tr>
<tr>
<td>J</td>
<td>Nil inultum remanebit (DI)</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>Nothing will remain unpunished</td>
<td></td>
</tr>
</tbody>
</table>

Table 1.5. Variable text for the polyphonies of the travel segment. Label in parenthesis after the original quote indicates the source: *Orphée et Euridyce* (O); *Don Giovanni* (DG), *Doctor Faustus* (DF), *Faust* (F), and *Dies Irae* (DI)
From a technical standpoint, this third segment represents an undeniable achievement, concentrating in one place all the innovative techniques introduced piecemeal in previous sections of the opera. In this respect, it is significant that the “travel” segment is the only section to have been entirely preserved in the revised version. On the other hand, it also offers an exacerbated illustration of the practical problems posed by Votre Faust, from the standpoint of both performance and of reception. In terms of performance, the demands placed on the ensemble are quite extreme: not only must the musicians get acquainted with several new systems of notation and performance practice, but their responsibilities are also considerably expanded with a constant blurring of traditional boundaries of specialization: instrumentalists and singers alike are frequently called to read spoken text, to perform vocal effects, or to use small percussion instruments. In addition, performers are regularly invited to make significant, quasi-compositional decisions, either by determining their specific response to a verbal/graphic instruction, or by choosing among several possibilities within a group called for in the score. Equally difficult is the task of the stage director, as the score, in sharp contrast with the painstakingly meticulous instructions given to the musical cast, provides virtually no direction for the actors, whose interventions are, moreover, often scattered within isolated dialogue “blocks.”

9. Assessing Votre Faust: Reception and legacy

The official premiere of Votre Faust, at the Picolla Scala on 15 January 1969, was, by all accounts—including Pousseur’s— a resounding public and critical failure, adequately summarized by the title of Italian critic Claudio Sartori’s contemporary review: “‘No’ in
Whatever Language.”\textsuperscript{59} A contemporary review by French critic Jacques Longchampt, while more sympathetic to the composer, is nonetheless scathing in its assessment of the opera:

Serialism, collage, collections of mobiles . . . ? In any case, the result is rather chaotic, and seems too often juxtaposed to Pousseur’s carefully worked out music, which does not lack some poetic or parodic successes, yet is incapable of carrying this heap of words and scenes.

The mistake was to treat the problem in the abstract: it is certain that we cannot empathize with this dehumanized Faust, incapable to reach the [level of] myth.\textsuperscript{60}

Yet, the most significant response to the Milan premiere came from Pousseur’s own circle, with an article by Luciano Berio in the periodical Nuova Rivista Musicale, summing up the causes of Votre Faust’s “deserved failure.” While repeatedly praising the music of Pousseur—and demonstrating in his comments a keen understanding of the composer’s musical endeavor—the author delivers a virulent indictment of Michel Butor’s contribution and influence:

Pousseur’s music is an important stage of the history of musical thought;
Butor’s text represents, in large part, a marginal incident in his writing career.
The “concerto da camera” by Pousseur (to which Butor’s text seems merely added) offers a parody, in the deep, liturgical meaning of the word, of its own means: it is indeed a score of which the structure, links, and transformations

\textsuperscript{59} Quoted in Lydon, “\textit{Votre Faust} as Total Art-Work,” 279.
\textsuperscript{60} Lonchampt, “\textit{Votre Faust},” 268.
are essentially built upon the mutations and musical processes of our history.

Butor’s text is far remote from that liturgy.\(^{61}\)

Berio is particularly unforgiving in his criticism of Butor’s spoken text and dialogues, a “fastidious verbal attire” that he deems responsible for an excessive fragmentation of the musical discourse, in particular in the second part of the opera. Somehow echoing Longchampt’s remark on a “dehumanized Faust,” Berio also derides the libretto for the shallowness of its characterization (“With the exception of the Director, all the other protagonists of the ‘drama’ are practically non-existent”).\(^{62}\) Finally, Berio seems equally unconvinced by the opera’s participatory dimension, lamenting the Director’s solicitations as “naïve” and “derisory,” and disparaging the interactive “game” intended by Pousseur as “a lottery without a prize.”\(^{63}\)

Following its flawed premiere, *Votre Faust* has so far only seen two fully staged revivals (Gelsenkirchen 1982, Bonn 1999), neither of which seem to have been able to fully redeem the opera as a work for the theater. Pousseur scholar Pascal Decroupet judges “none” of these three fully staged productions to have been “very convincing.”\(^{64}\) Pousseur himself politely qualifies the Gelsenkirchen revival as “only half-satisfying, here again for

\(^{61}\) Berio, “*Notre Faust,*” 52–3.

\(^{62}\) Ibid., 54.

\(^{63}\) Ibid., 55. Berio’s 1969 article was reprinted in extenso in 1983, in a French translation by Vincent Barras (*Contrechamps* 1: 51–56). Shortly thereafter, Pousseur published a response which, in its very personal tone, gives an indication of the deep wounds left, almost fifteen years after its premiere, by the experience of his opera’s difficult reception (Pousseur, “les mésaventures”). For a detailed discussion of this controversy, see Deliège, “Henri Pousseur, premier dissident.”

\(^{64}\) See Decroupet, “Heterogeneity: Or, On the Choice of Being Omnivorous,” 106.
reasons related to staging.” On a more positive note, the opera has proven time and again to be a prolific source of inspiration for the composer, and a large part of its musical material has found its way in one of the numerous “satellite” works listed in the composer’s catalogue, extending throughout his career, from Miroirs de Votre Faust for piano and soprano ad libitum (1964–65), to Il sogno de Leporello (Leporellos Traum) for orchestra (2005).

10. Conclusion

In conclusion, the utopian bargain of Votre Faust, both in its grandiose ambitions and in the relative shortcomings of their actual realization, presents us with an adequate symbol of the revolutionary spirit of its age, the European 1960s. Pousseur’s work remains today, in spite of its imperfections and harsh reception, an important milestone of twentieth-century musical history, opening the door for a critical re-appropriation of the past—a trend whose influence on the European avant-garde at large, in contemporary works such as Berio’s Sinfonia (1967–69) or Stockhausen’s Hymnen (1966–67), still remains to be fully assessed—and for a renewed interest in the mechanics of musical theater and the politics of performance.

At a deeper level, Votre Faust, embracing fully the radical modernity of Goethe’s masterpiece, provided a fertile breeding ground for a radical re-invention of the operatic genre, and, more generally, the complex relationship between music and words.

65 Pousseur, “Les mésaventures,” 121. I have not been able to find any assessment of the Bonn revival by Pousseur. In the same source, however, the composer evokes the “success” of two additional productions of the opera, in both cases reduced to an “oratorio” (i.e., a version for tape and speaking actors): in 1973, at the Hiversum studios, in the Netherlands; another, “a few years later,” at the Francophone University of Ottawa. (Ibid.).
Furthermore, from a music-technical standpoint, it also performed an equally radical, holistic expansion of the *domain* of serialism. Indeed, our close study revealed, beyond the apparent rupture, the remarkable continuity of Pousseur’s rigorous serial approach, extended in *Votre Faust* to its outmost limits—and, maybe, to its breaking point. Finally, beyond the debate on the validity of such all-encompassing interpretation of the serial concept, Pousseur’s score remains today a rich, rewarding object of study, offering a living testimony of a unique blend of creative imagination, intellectual rigor, and technical resourcefulness from a composer whose achievements, particularly in the domains of harmony and formal design, still remain to be fully acknowledged.
Chapter II: Les Litanies d'Icare

1. Introduction

Les Litanies d'Icare (1994), for piano solo, forms the first part of a large-scale cycle, Aquarius Mémorial (1998), written by Henri Pousseur during his tenure as the Chair for New Music at the Institute of Musicology at the university of Leuven, from 1993 to 1999. The cycle is dedicated to the memory of Pousseur’s predecessor in this position, Belgian composer Karel Goeyvaerts (1923–1993), a dedication reflected in both the title of the piece—a reference to Goeyvaerts’ eponymous series of compositions for various instruments, Litanies I–V (1979–82)—and that of the entire cycle—referring to Goeyvaerts’ opera, Aquarius (1983–92). More generally, Pousseur’s Litanies, in the relative simplicity of its structural premises and general texture, also offer a more indirect stylistic reference to the unique blend of minimalism and serialism characteristic of Goeyvaerts mature compositional style.¹

In the following analysis, I will describe the piece’s complex structure, emerging from the rigorous combination of highly economical premises. I will show that Litanies represents a remarkable illustration of Pousseur’s mature compositional style, focusing, in particular, on two aspects of the composer’s vision. The first of these is Pousseur’s trademark “Network Technique” (technique des réseaux), a term encapsulating both a conceptual framework and a series of hermeneutic procedures, based on the use of interval networks to control, generate, and quantify, complex pitch transformations affecting the

elusive parameter of harmonic color—thus allowing its integration within a serial design. These techniques originate in Pousseur's harmonic research of the sixties, in conjunction with the composition of his opera *Votre Faust* (see Chapter 1), and documented in a 1968 article, “L'Apothéose de Rameau.”

The second is the composer's enduring fidelity to a compositional method based on a serial approach, broadly defined, following Herman Sabbe, as “the double principle of pre-selection ('pre-compositional,' or, rather, 'pre-editorial' selection) of a determinate number of elements, and of their equidistribution.” More specifically, my analysis, detailing the complex parametric design of *Litanies*, will illustrate Pousseur’s unique approach to serial composition. This approach, progressively elaborated during Pousseur’s early serial works of the mid-fifties in the context of the development of the so-called “Group Technique” (*technique des groupes*), and to which has remained remarkably faithful throughout the rest of his oeuvre, is aptly summarized by Herman Sabbe as follows:

> From this moment on [i.e., after 1956], Pousseur’s compositional act is defined as the deployment of a definite set of elements and operations; the set of elements is presented as a set of parametric value-classes, the

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2 Sabbe, Introduction to *Henri Pousseur: Icare obstiné*, III. My translation. Unless otherwise indicated, all subsequent translations in the remainder of this chapter are mine.

3 Significantly, the label “Group Technique” is not unique to Pousseur, but rather corresponds to a general evolution of European serialism during the first half of the 1950s, setting forth “the idea of a serial form on a large scale, resulting from the modulation, at a higher [structural] level, of the textures generated at lower, subordinate levels” (Pousseur, “Petit bilan,” 227). This evolution is illustrated in works such as Stockhausen’s *Kontrapunkte* (1953), Pousseur’s *Symphonies à quinze solistes* (1954), or Boulez’s *Le marteau sans maître* (1955).

4 For a firsthand account of the development of Pousseur’s outlook and techniques during this period, see Pousseur, “Ébauche d’une methode.”
operations determine the modes of differential combination of these elements within units whose succession constitutes the formal division of the [piece’s] temporal unfolding; each of these units is characterized by the set of values (simple or complex) of a same number of parameters; therefore, their organization constitutes the application of a system of relations, and the resulting form is characterized by the relative affinity, or, on the contrary, opposition, between juxtaposed units.

In spite of the importance of these global characteristics, the compositional system is organized hierarchically by harmonic characterization, determined by the set of available intervals during one, or several successive, groups. The distribution of these intervals (successive/simultaneous, ascending, descending, singular/plural, etc.) and the deployment of the other parameters (registral position, dynamics, “morphological” articulation, rhythmic and harmonic density) effect the particularization and differentiation “in-time,” of the “out-of-time” intervallic relation, general and undifferentiated.5

In addition to the published score, my analysis has been guided by a few additional sources: the first is Pousseur’s own description of Litanies’ harmonic premises—presented integrally in Appendix I—in the context a 1995 article featuring a more general presentation of the composer’s Network Technique.6 In this article, Pousseur provides, and

5 Ibid., V.
6 Pousseur, “Harmonie? Harmonies!”: 235–8;
analyzes in some detail, the five interval networks used in *Litanies*. He also discusses in
general terms the piece’s structural design as a process in which a series of basic “figures”
are declined in each of the five networks, a process repeated five times, each time using a
different pitch center, to create the five sections that compose the work. Equipped with this
summary understanding of the piece’s premises, I delved into the score and undertook my
first “round” of analysis, during which I was able to identify Pousseur’s basic “figures” and
their various declination, and to establish an adequate, and original, structural typology
(*Basic Measures, Group Types, Groups, and Periods*).

![Diagram](image)

**Figure 2.1.** Pousseur’s “Elements for Analysis” (*Éléments d’analyse*). Translation of
Pousseur’s original annotations, as well as boldface labeling (1a–c, 2, 3) are mine. 1: design
and distribution of density values withing basic measures (1b); of networks and group-
types within sections (1a and 1c). 2: interval networks a–e (circled notes at the bottom
indicate the networks’ registral expansion for sections C and D only). 3: pitch center for
each section A–E, with their origin in Karel Goveyvaerts’s name; multipliers for each
section (in parenthesis, below section-labels A–E)
After realizing this initial survey of the piece, I discovered a second set of analytical clues, in the form of a series of diagrams and tables included by Pousseur in the preface of the autograph score, under the title “Elements for Analysis” (Éléments d’analyse). These “Elements,” presented integrally in Figure 2.1, provide additional details on Litanies’ network structure (Fig. 2.1.2) and its sectional scheme (Fig. 2.1.3). They also offer some additional information regarding the parametric design, and distribution, of the groups that compose each section (Fig. 2.1.1). Equipped with these varied analytical clues, and with a familiarity with Pousseur’s compositional practice acquired through the study of his published writings and of other compositions, I was able to elucidate the complex design of Litanies, expounded in the remainder of this chapter.

I will start my analysis with a close review of Litanies’ abstract, out-of-time harmonic premises (i.e., interval networks), their makeup and structural implications. I will then consider the deployment of these abstract premises within the piece’s musical material and structure, as one element of a highly determined, complex, parametric design, governing the domains of pitch, rhythm, dynamics, and morphology (i.e., articulations). My analysis of this parametric design will be “bottom-up,” starting with its smallest elements (i.e., basic measures and group types), and proceeding to describe their complex distribution into higher-level units (i.e., groups, periods, and sections).

2. Overview

Litanies consists of five sections, A–E, sharing a similar basic structure: each section features thirty-five groups (1–35), distributed within eleven periods (I–XI) identified in the

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7 I did not have access to the autograph score, but discovered this document as an illustration in Mark Delaere, “Von Votre Faust,” 19–20.
score by the use of a double-bar at the periods boundaries. Each group is labeled in the
score with a capital letter ranging (A–E), identifying its section, and a number (1–35),
denoting its order within the section (e.g.: “A1” indicates the first group of section A, “B5”
the fifth group of section B, and so forth). These thirty-five groups are all derived from the
combination of seven group types (i–vii), each consisting of a specific path within the
abstract network, and their successive projection onto five interval networks (a–e), each
group within a given section being associated with one, and only one group-type/network
pair, and vice-versa.8

_Litanies_ can thus be construed as the equal, and exhaustive, distribution of three
“super-series:” Group-Types, Networks, and Sections—and their attached parametric fields.
Conversely, each group in the piece is thus characterized by a unique combination of three
“super-parameters”: Group Type (i–vii), Network (a-e), and Section (A–E), resulting in a
dense, complex system of interrelationship between groups. In the following analysis, I will
assemble related groups within “families,” or affinity classes consisting of all the groups
sharing one or two attributes—such as, for example, the A/iii-family, comprising all groups
derived from Group-Type iii within section A; or the ii-family, all groups related to Group-
Type ii, across all networks and sections.

3. Harmonic Premises: Interval Networks

The pitch material of _Litanies_ is derived from five interval networks (a–e), acting as
harmonic generators for the entire piece. Each network consists of a bi-dimensional lattice
classified by intervals (x/y), corresponding to the increments of its horizontal and

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8 Network- (a–e) and section- (A–D) labels are consistent with Pousseur’s labeling. Roman-
numeral labels used in this analysis for Group-Types (i–vii), and Periods (I–XI) are my own.
vertical axes. As the networks operate within pitch space, they are also characterized by: a central pitch, different for each section A–E; and a limited area, a slightly truncated “three-by-five” containing a total of thirteen pitches (Fig. 2.2).

![Diagram](image)

**Figure 2.2.** a) abstract network template; the central pitch is represented by an empty circle, the other by a black dot, b) general representation of available paths (dotted lines) and intervallic distance from the central pitch within network x/y

The five interval networks a–e are created by the application of a series of five interval-generator pairs to network x/y, and actualized in pitch-space around a given central pitch, different for each of Sections A–E. Figure 2.3 offers a representation of Networks a–e, as they appear in Section A. Note that the networks in Figure 2.3 correspond to a T\_10-transposition of the networks presented in Pousseur’s “Elements” (see Fig. 2.1.2): in the latter, the networks are applied to pitch-center G4 (the active pitch center in section C). Also in Figure 2.1.2, the area of the networks is expanded by one additional step down the y-axis, circled in the example, illustrating an expansion of the networks’ areas occurring in sections C and D only.
Figure 2.3. Networks a–e, using central pitch A3 (empty notehead). Each network is labeled with its interval-generator pair \(x/y\) (in parenthesis, below network label a–e).

These pitch networks are partially ordered, as the succession of pitches is governed by the structure of the network, and a limited number of available “paths” from one pitch to the next. In effect, any given pitch can be followed by (or sounded with) only one of eight adjacent pitches, in either direction along the x-axis, the y-axis, or one of the two diagonals (\(|x+y|-\text{axis}, |x-y|-\text{axis})

Pousseur’s networks offer a striking similarity to the Tonnetz, as revived in recent years in American music-theoretical scholarship, first in the context of Neo-Riemannian theory, then more broadly generalized to other compositional/analytical purposes. One can note, in particular, the striking resemblance of Pousseur’s networks with Richard Cohn’s “Generic Tonnetz,” published in 1997, four years after the composition of Litanies.

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10 The fact that Pousseur’s precedent is not acknowledged in Cohn’s article—or, to the best of my knowledge, in any of the more recent scholarly production related to this particular trend—only illustrates the need for a wider dissemination of Pousseur’s music-theoretical writings within Anglo-American scholarship. Interestingly—and somewhat ironically—however, I was able to find an earlier reference to Pousseur in Cohn’s review of George Perle’s book, The Listening Composer, where the author lists Pousseur as part of the
While Pousseur, to the best of my knowledge, never explicitly mentioned in his published writings the precedent of the *Tonnetz*, his theoretical exploration of compositional spaces based on *Tonnetz*-like networks can in fact be traced to a much earlier date, as early as his 1968 article, “L’Apothéose de Rameau.” In this article, Pousseur describes in detail the results of the theoretical and practical exploration of the harmonic domain he conducted during the 1960s—a period corresponding to a significant shift of his compositional language, with the composition of *Votre Faust*—leading, in particular, to his first experiments with compositional spaces based on interval networks.

While a complete discussion of this important article is beyond the scope of this chapter, I will provide here two of its illustrations, particularly relevant to our discussion of *Litanies*. The first (Ex. 2.1) offers a partial representation of all possible two-interval networks, indicating that Pousseur, as early as 1968, was aware of the full range of possibilities offered by these networks.

Example 2.1. Partial illustration of all possible two-interval networks: “It is recommended to continue this table and to examine all its symmetries, periodicities, etc. Networks considered as “equal” will not be so in regards to their projections [in pitch space]: these will behave as inversions, rotations, etc.—see Example [2.2]” (“L’Apothéose,” 71)
The second (Ex. 2.2) illustrates through an \textit{ad hoc} example, the projection of a given path within an abstract network onto a series of interval networks, a procedure strikingly similar to that followed by Pousseur twenty-five years later in \textit{Litanies}.\footnote{Example 2.2 is accompanied in Pousseur’s article by the following comments, detailing his approach: “A first possibility is manifest in the context of the bi-dimensional networks [described in Example 2.1]. I would consist in considering a structure, defined within a network, as a generalizable \textit{matrix} (we could for example use all imaginable geometric figures, whose degree of simplicity would correspond \textit{directly} to certain aurally perceivable properties), matrix of which we would retain only the abstract structure, i.e., as a set of \textit{positions} within the network. This matrix could then be \textit{transposed} within any other network. There would be, in all cases, a melodic affinity between the different "projections" of a same matrix. As for the (multiple) harmonic "affinities" that exist among them, they are distributed within the total system of networks [...]. We thus already have here at our disposal the mean to effect extremely subtle "thematic," figural differentiation and affinity, of which we can rigorously control all sorts of effectively musical properties.” (“L’Apothése,” 71–72; my translation).} 

\begin{figure}[h]
\centering
\includegraphics[width=0.8\textwidth]{example22.png}
\caption{Example 2.2. Projection of a specific “path” (top left) onto six different two-interval networks. Arrow pointing from the last (3/11) to the first (11/3) projections highlight the I-relation between the two (“L’Apothése,” 72)}
\end{figure}

Table 2.1 provides a detailed overview of the intervallic structure of the five networks a–e from \textit{Litanies}, with a review of the total pitch collections yielded by each
network, and a list of all available two- and three-note \textit{paths} within the networks (i.e., \textit{basic shapes})—these basic shapes, joining two- and three-notes adjacencies within the network, represent the basic building blocks for the more complex paths used by Pousseur in the construction of the complete group types.$^{12}$

\begin{table}[h]
\centering
\begin{tabular}{|c|c|c|c|c|c|}
\hline
\textbf{Networks} & \textbf{a} & \textbf{b} & \textbf{c} & \textbf{d} & \textbf{e} \\
\hline
\textbf{Primary Intervals} & $|y|$ & (05) & (05) / (07) & (04) / (08) & (02) / (10) & (01) / (11) \\
\hline
\textbf{Secondary Interval} & $|x|$ & (01) & (02) & (02) & (03) & (03) \\
\hline
\textbf{Tertiary Interval} & $|x-y|$ & (04) & (05) & (06) & (05) / (07) & (04) / (08) \\
\hline
\textbf{Trichords} & $|x+y|$ & (06) & (03) / (09) & (02) / (10) & (01) / (13) & (02) / (14) \\
\hline
\textbf{Total*} & \textit{Aggregate} & (0135687T) & \textit{Diatonic} & (024687T) & \textit{Whole-tone} & \textit{Aggregate - Eb} & \textit{Aggregate - Eb} \\
\hline
\end{tabular}
\caption{Networks a–e dyadic and trichordal content. Diagrams (left column) represent all available two- and three-note adjacencies within the networks (i.e., “basic shapes”). Vertical brackets denote unordered pitch interval (omitted when identical to sc).}
\end{table}

An examination of networks a–e as an ordered sequence reveals some significant features—commented upon by Pousseur (see Appendix Ib): First, it yields an incremental

$^{12}$ The distinction made in Table 1 between the two “diagonal” (i.e., compound) intervals, as secondary ($|x-y|$), and tertiary ($|x+y|$), is borne out of Pousseur’s practice, which makes a distinction between interval $|x-y|$, whose size remains within the $x-y$ range, and $|x+y|$, exceeding this range, and thus considered a more distant derivation from the network’s primary intervals (see Pousseur, “Applications Analytiques,” 245–246).
extension of the networks’ interval generators, resulting in a parallel expansion of the networks’ registral spans. This expansion is relatively slow and within a limited range for \( x \): (1, 2, 2, 3, 3); faster and within a wider range for \( y \): (5, 7, 8, 10, 11); perfectly linear for the secondary interval, \(|x-y|\): (4, 5, 6, 7, 8). Second, Networks a–e also display a series of cross-relationships in their intervallic makeup, with common intervals (and/or interval-classes).\(^{13}\) Most notably, the progression between adjacent networks always displays at least one common “pivot” interval: i5 between networks a and b; i2 for b and c; i10 for c and d; i3 for d and e.

The complex harmonic trajectory traced by this sequence is, by its very nature, more difficult to define. At the most basic level, we can observe the most intensely chromatic networks, featuring interval-class 1 as a primary interval, form the boundaries of the sequence (network a: \( x = 1 \); network e: \( y = 11 \)), while the central network, c, yields the whole-tone collection. The resulting harmonic trajectory can thus be broadly construed as moving from dissonance to (relative) consonance, and back. However, while this approach describes relatively well the chromatic relaxation observed in the passage from networks a to b—and, albeit to a somewhat lesser extent, its converse from d to e—the implication that central network c, consisting of the whole-tone collection, is the most consonant is less convincing.

\(^{13}\) This “pivot-interval” relationship exhibits different degrees of affinity: closer when the common interval conserves the same position and inversion in both networks (e.g., i2 in networks b and c); more distant when it conserves the same position, but is inverted (i.e., ic5 as primary-interval y in networks a and b); most distant when it is both inverted and in a different position (e.g., ic1 as primary-interval x in c, tertiary interval in d). Note that Pousseur’s networks are registered: they function in pitch space (i.e., not pitch-class space). The distinction between, for example, the various registrations of ic 1 in networks a (as a minor second), d (minor ninth), and e (minor seventh), is, therefore, significant.
An alternative framework, proposed by Joseph N. Straus, and replacing the ambiguous—and culturally charged—concepts of dissonance and consonance by those, more objective to a certain extent, of chromaticness and evenness, offers a better account for sequence a–e—seen here as a trajectory from chromaticness to evenness, and back—this time fully integrating network c’s whole-tone—and, indeed, maximally even—character.14 Here again, however, the stubbornly intangible nature of harmonic quality reasserts itself under closer examination: the plotting of networks a–e primary intervals and trichords in their respective voice-leading spaces, while not entirely unfruitful, reveals many ambiguities (Figs. 2.4 and 2.5): the coexistence in a single network of interval-classes far apart in the scale (e.g., ic1 and ic5 in network a); the inconsistent results of the plotting of trichordal scs (e.g., chromaticness measures for networks a and e furthest apart on the scale).

14See Straus, “Voice-leading in Set-Class Space.” The degree of chromaticness (or evenness) of a set class of cardinality n is defined in Straus’s article as its distance, within a set-class voice-leading space, from the maximally chromatic (or maximally even) set-class of the same cardinality.
Figure 2.4. Networks a–e primary intervals plotted in Straus’s set-class voice-leading space.

Figure 2.5. Networks a–e trichordal set classes plotted in Straus’s voice-leading space.
In his own presentation of the networks for *Litanies* (see Appendix Ib), Pousseur offers a more qualitative, discursive description of the networks: network a is “chromatic tight” (*chromatique serré*), while network b is “chromatic wide, ‘Webernian.’” Networks b and c are, respectively, “diatonic” and “by whole tones (two even intervals).” Finally, network d “yields a stack of thirds, even triads, but few octaves (unlike [network b]), and therefore ‘tense’ relations between levels (*des relations “tendues” entre les “étages”*).” Particularly revealing, and characteristic of the composer, is the adjectival reference to Webern, used as a stylistic metaphor for a complex set of harmonic qualities. In his own discussion of *Litanes*, Delaere goes a step further, and attributes to Pousseur a complete set of matching stylistic metaphors for networks a–e, respectively: “Schoenberg” (a), “Bartók” (b), “Debussy” (c), “Stravinsky” (d), and “Webern” (e). Based on these considerations, it is possible to build a finer representation of the harmonic sequence formed by networks a–e, as a tripolar, symmetrical trajectory from chromatic, to diatonic, to whole-tone, and back (Fig. 2.6).

15 “Harmonie? Harmonies!” 236.
16 Ibid.
4. Path/Network Derivation

The generation of the groups in Litanies closely follows the method of path/network derivation proposed by Pousseur in “L’Apothéose” (see Ex. 2.2): the pitch material for each group is derived from the projection of a specific “path” within the abstract network onto a pitch network. There are seven paths used in the piece, corresponding to group-types i–vii, and a total of twenty-five pitch networks, corresponding to the deployment of networks a–e around the five pitch centers corresponding to each section A–E.

Networks and paths are equidistributed: in the course of the entire piece, each path is projected once onto each of the twenty-five available pitch networks, generating the basic pitch material for the total of one-hundred and seventy-five groups (thirty-five for each section) that populate Litanies. Figure 2.7 presents one of these paths, corresponding
to group-type ii, and its five “descendant” groups in section A (i.e., the “A/ii-family”),
through successive projections onto pitch networks a–e:

Figure 2.7. Derivation of the A/ii-family: the path associated with group-type ii (left) is
projected onto each of the five pitch networks associated with section A (center), resulting
in the five groups forming the A/ii-family, labeled in the score as: A2/5/9/14/20 (right)

Note that the path for group-type ii (Fig. 2.7, left) is represented using two abstract-
network “boxes,” each box corresponding to one measure in the resulting group (Fig. 2.7,
right), and a series of circled numbers, representing the actual path within the network, the numbers corresponding to the order of attacks within the resulting group. For example, the groups of the A/ii family presented in Figure 2.7 consist of four pitches unfolded within two measures: two singletons in the first measure, and one dyad in the second.

Figure 2.8 presents all twenty-five pitch networks used in Litanies, corresponding to the deployment of networks a–e (Fig. 2.8, columns) around a different pitch center for each Section A–E (Fig. 2.8, rows). Note that, for Sections C and D only, the area of the networks is slightly expanded by the addition of a bottom row (as indicated in Pousseur’s “Elements,” Fig. 2.1.2). Figure 2.9 presents the seven paths corresponding to group-types i–vii. All groups in Litanies are generated through the application of one of the paths from Figure 2.9 with one of the pitch networks from Figure 2.8, following a process similar to the one detailed in Figure 2.7. Using Figures 2.8 and 2.9 in conjunction with the annotated score presented in Appendix II, which identifies the section (A–E), group-type (i–vii), and network (a–e) for every group in Litanies, the reader will be able to follow Pousseur’s path/network derivation process throughout the piece.
Figure 2.8. Complete map of the twenty-five pitch networks used in *Litanies*. Rows correspond to sections (A-E); columns correspond to network-types (a-e, each labeled with its interval-generator pair x/y)
Figure 2.9. Group-types i–vii as paths within the abstract network. Nodes are labeled with order number(s). Solid lines represent simultaneous attacks. Dotted lines indicate non-adjacent connections.

5. Parametric Premises

I will now leave momentarily the pitch domain, and turn to a discussion of Litanies underlying serial/parametric structure. Pousseur’s “Elements,” presented in Figure 2.1 above, offers some clues relevant to this pre-compositional design, detailing: the distribution of a series of sixteenth basic measures within seven group types (Fig. 2.1.1a); the attribution of a “Density” value to each basic measure (Fig. 2.1.1b); and the interpolated distribution of networks a–e within the thirty-five groups composing each sections (Fig. 2.1.1c). The meaning of these “clues,” however, is not immediately evident from Pousseur’s
diagrams alone, and necessitate some additional interpretation, employing the original typology used in the remainder of my analysis.

The segmentation of the basic measure series is represented in Figure 2.1.1a by vertical brackets above the measures, represented by their order number (1–16), each bracket corresponding to a group type (see Fig. 2.10). The identical distribution of this design within five rows in Figure 2.1.1a indicates the derivation of thirty-five groups, representing the successive declination of the seven group types within each of the five networks a–e.

<table>
<thead>
<tr>
<th>Group Types:</th>
<th>i</th>
<th>ii</th>
<th>iii</th>
<th>iv</th>
<th>v</th>
<th>vi</th>
<th>vii</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Measures:</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

**Figure 2.10.** Basic-Measure distribution within Group-Types i–vii (from Fig1.1a).

Figure 2.1.1b presents two tables, one representing a group of sixteen measures (left table), identified by their order number (1–16), and the other displaying a corresponding value of “density” for each measure (right table)— corresponding measure numbers and density values occupying identical position in their respective table. The density values in the right table are given in two different formats: either as a duplet x:y, wherein x represents the number of attacks within a measure, and y the number of pitches per attack; or as a value in parenthesis, (x), wherein x represents the number of pitches per measure, without specifying their distribution. For example, Basic Measure number 2 will

---

17 These values are inverted in section E, as indicated in Pousseur’s footnote in his “Elements for Analysis” (see Fig. 2.1, above).
feature two pitches distributed within two attacks; number 3, two pitches as a single attack; number 16, thirteen pitches, freely distributed. Also note that the group-type segmentation presented in Figure 2.1.1.a is implicitly displayed in the peculiar “diagonal” distribution of the Basic-Measure series in Figure 2.1.1b (left table), effectively corresponding to a “flattening-out” of the table’s diagonals (see Fig. 2.11).

![Figure 2.11. Illustration of the implicit diagonal-distribution of Group-Types i–vii in the two tables from Fig. 2.1.1b](image)

Finally, Figure 2.1.1c presents the distribution of the thirty-five groups forming a complete section of *Litanies*, represented by their order number, in the form of a diamond-shaped table. The seven groups featured in each row correspond to one of the five networks (a-e, from top to bottom); for example, groups 1, 2, 4, 7, 11, 16, and 21 correspond to network a. The table’s columns correspond to the eleven Periods (I–XI) composing each section, and identified in the score by the use of a double-bar boundary.
Figure 2.12. Sectional distribution of: Networks (rows), Group Types (columns), and Periods (diagonals)—(from Fig. 1.1c).

Figure 2.12 presents a detailed interpretation of Pousseur’s table (Fig. 2.1.1c), presented in a normalized, square format. Note that this presentation illustrates the equidistribution, discussed above, of paths (columns) and networks (rows) among groups. In addition, the distribution of the section’s Periods (diagonals) of the table reveals a striking isomorphism with the “diagonal” distribution of group-types within the Basic-measure table (see Fig. 2.11), a procedure that, as the remainder of this analysis will show, plays an important structural role in the global design of Litanies.

6. Rhythmic Premises: Meter System

To complete these preliminary considerations, and before undertaking a description of Litanies’ complete parametric design, I also need to provide a brief description the organization of meter and tempo in the piece, based on an original, non-standard system of proportional time signatures. As in traditional notation, the time signatures in Litanies are
presented as a fraction, \( \frac{x}{y} \), wherein the numerator indicates the number of pulses in the measure, and the denominator identifies this pulse. Pousseur’s system, however, departs from traditional notation in three main respects. First, the time signature’s denominator is not limited here to the traditional subdivisions (i.e., powers of 2): time signatures in *Litanies* thus include other denominators such as 3, 5, 6, 7, 12, or 20. Second, the denominator always indicates divisions of the same basic duration for one whole measure, thus determining tempo relationships. Third, each measure in the score—with the exception of “pulse-less” measures containing only one attack—employs one, and only one, rhythmic value, corresponding to the basic pulse indicated by the time signature’s denominator.\(^{18}\)

\(^{18}\) The notation of the basic pulse for time signatures \( \frac{x}{y} \) follows traditional usage: half notes for \( y<4 \); quarter-notes for \( 4 \leq y<8 \); eighth-notes for \( 8 \leq y<16 \); and sixteenth-notes for \( y \geq 16 \).
Example 2.3a–c. Proportional meter system, score excerpts: a) A4, mm. 5–7; b) B29, mm. 177–80; c) C19, mm. 219–21.

Examples 2.3a–c illustrate these features. In Example 2.3a, the first two measures marked, respectively, as 3/3, and 2/2, both have the same duration, but the tempo in the former is 50% faster than in the latter (i.e., 3:2 ratio). Example 2.3b presents a more intricate progression, performing a rapid chain of metric modulations and featuring complex ratios (8:5, 5:3). The graphic advantage of the system is here more apparent, resulting in an economical, tuplet-less notation. Also note that the tempo indications in
parenthesis are, in theory, redundant, as the tempo of each measure derives, proportionally, from that of the previous one. Additional flexibility within a single measure is provided by the use of arrows to indicate acceleration (upward arrow) and deceleration (downward arrow), as illustrated in the first measure of Example 2.3c. This last example also illustrates the system’s capacity to accommodate “irrational” time signatures—so called because the ratio between numerator and denominator is an irrational number (e.g., 6/7, 4/5, or 2/3).

Pousseur’s system contributes to the unique rhythmic profile of Litanies, unfolding as an entirely homophonic, constantly varied, pulse stream. Its proportional nature also allows the derivation of all tempi in the piece from the choice of the initial value: the beginning of the score actually prescribes a range between $\frac{1}{4}=72$ and $\frac{3}{4}=108$ for the starting tempo, to be chosen by the performer based on her/his ability—a feature introduced by Stockhausen in his Klavierstücke XI. Finally, the system presents a very practical advantage in the context of Pousseur’s compositional process, allowing a one-to-one mapping of each abstract, pre-compositional basic measure into one actual measure in the score, without any complex calculus.19

The system, however, is not without challenges from the standpoint of the performer: the relative economy of the notation is balanced by a constant stream of meter changes, which can indeed reach great levels of complexity, even in a homophonic context (see, in particular, Ex. 2.3c). As a result, the elegant balance of the proportional system,  

19 As noted by Delaere, Pousseur’s metrical system also presents a striking structural isomorphism—admittedly, at a remotely abstract level—with his network system, both being based on the distribution of two integers (x/y). While this correspondence is not used in Litanies in any meaningful way, it nevertheless adds an element of coherence to the piece’s global structure (see Delaere, “Von Votre Faust,” 19–20).
wherein tempo for each measure is determined by that of the previous one, is mostly theoretical, and the performer might chose to rely more on tempo markings provided in the score for each metrical change—and corresponding to a “mediant” starting tempo of \( \frac{4}{4} = 84 \)—than on proportions. Thankfully, the set of different tempi featured in *Litanies* is relatively limited in size, and its articulation is strongly integrated in the musical structure of the piece.

7. Group Types: Parametric Design

\[
\begin{array}{|c|c|c|c|c|c|c|c|}
\hline
 & i & ii & iii & iv & v & vi & vii \\
\hline
\text{Density} & 1 & 2 & 3 & 5 & 6 & 9 & 13 \\
\hline
\text{Attacks} & 1 & 2 & 1 & 3 & 2 & 1 & 5 \\
\hline
\text{Time Sig.} & 9/4 & 2/2 & 3/2 & 3/2 & 5/2 & 3/2 & 5/3 \\
\hline
\text{Tempo} & 42 & 42 & 63 & 42 & 105 & 63 & 42 \\
\hline
\text{Dynamics} & p & p & p & pp < & mp & mp > & pp < \\
\hline
\end{array}
\]

Table 2.2. Parametric distribution within group types, listing: Density (i.e., average number of pitches per measure); Attacks (per measure); Time Signature; Tempo distributions; Dynamics (“<” and “>” characters represent crescendos and decrescendos, respectively).

Table 2.2 presents my interpretation of the complete parametric structure attached to Group Types i-vii, based on Pousseur’s indications and on my own study of the score, and represented as the varied distribution of five parametric values: *Density, Attacks, Time-Signature, Tempo, and Dynamics*. The first two, Density and Attacks, indicating, respectively, pitch and rhythmic density (i.e. number of pitches and attacks per measure), are directly related to the density values and their distribution presented in Pousseur’s “Elements” (Fig.
Note that Density values in Table 2.2 are given as an average for each Group Type, while the Attacks values vary with each measure. The other three parameters, Time Signature, Tempo and Dynamics, are self-explanatory, distributing corresponding values across Basic Measures.\(^{21}\)

The Time-Signature parameter is the more complex of the group, consisting of three distinct parametric layers, displaying, as per the characteristics of Pousseur's metrical system described above, direct connections with other parameters: first a series of numerators \((x)\), representing the number of attacks per measure, and thus tied to the \textit{Attacks} parameter; second a series of denominators \((y)\), identifying the pulse for each measure the pulse as a specific subdivision of a common basic duration, and thus proportionally related to the \textit{Tempo} parameter; third, a series of \textit{ratios} \((x/y)\), affecting the duration of each measure—i.e., “standard duration,” corresponding to the common basic duration, if \(x=y\); shorter measure duration (i.e., “incomplete measure”) if \(x<y\); and longer measure duration (i.e., “lengthened measure”), if \(x>y\).

\(^{20}\) The capitalization of the five parameters’ names (Density, Attacks, Time-Signature, Tempo, and Dynamics) chosen here indicates their use as parametric values, as opposed to the more general uses of the corresponding words (i.e., density, attacks, etc.).

\(^{21}\) Tempo values used in my analysis are predicated on a starting tempo of \(\downarrow=84\), thus corresponding to the metronome markings in the score.
A closer examination of the parametric values listed in Table 2.2 reveals the presence of an underlying series for each parameter, variously distributed within Group-Types i-vii:\(^{22}\)

- **Density**: \((1, 2, 3, 5, 6, 9, 13)\) – linear distribution
- **Attacks**: \((1, 2, 3, 5)\) – interpolated distribution
- **Time Signatures**: \((3/2, 2/2, 3/3, 5/5)\) – interpolated distribution\(^{23}\)
- **Tempos**: \((42, 42, 63, 105)\) – interpolated distribution
- **Dynamics**: \((\text{pp, p, mf})\) – free distribution

The series present various cardinalities and follow different modes of distribution. The Density series (cardinality 7), is linearly distributed within the group-type sequence, listing the average number of pitch per measure for the entire group. The Dynamics series (cardinality 3) is distinguished by a relatively free distribution within the group-type sequence, still revealing some degree of organization: stable at the beginning, starting with the series mediant value (group-types i–ii); oscillating at a progressively increasing rate in the following groups, modulated by crescendos and decrescendos, and ending on its highest value (iii–vii).

\(^{22}\) These basic series are presented here as *gradual series*, or scales, highlighting their similarity with the basic series used in *Votre Faust* (see Butor, Pousseur, *Votre Faust: fantaisie variable*, 52—quoted above, p. 31).

\(^{23}\) The correlation between Time-Signature denominators and Attacks series does not apply to their first element (“3/2” and “1,” respectively). Indeed, a matching of these two values preserving ratio of the former would require a time signature of “1/1.5,” which is not available within Pousseur’s time-signature system, which accepts only integer-values as denominators.
8. Group Types: Diagonal Interpolation

The isomorphic distribution for the Attacks, Time-signature, and Tempo series (all of cardinality-5), is of particular interest, performing an overall iteration of the full series in prime order, through nested, retrograded segments within each group-type. This particular mode of distribution, forming an important structural motive of Litanies, recurs at several stages of the piece's formal development, and can be related to the operational method of “diagonal” distribution observed earlier in Pousseur’s “Elements” (see Fig. 2.1.1 and 2.11, above). I will provide here a generalized, operational definition of the transformation involved in this distribution, defined as the diagonal interpolation (DIA$_m$) of an origin series $O$, of cardinality $n$, producing an interpolated series $I$, of cardinality $n+m$, and distinguishing two variants, DIA$_{1m}$ (Type 1) and DIA$_{2m}$ (Type 2):

- **Step 1:** Given series $O$ of cardinality $n$ ($x_1, ..., x_n$)
- **Step 2:**
  - Type 1 (DIA$_{1m}$): Create a table wherein each column consists of a single iteration of $O$, repeated across $m+1$ columns.
  - Type 2 (DIA$_{2m}$): Create a table wherein each row consists of a single iteration of $O$, repeated across $m+1$ rows.
- **Step 3:** Extract the top-right/bottom-left diagonal of the table thus created. The ordered content of each diagonal, starting from the top-left corner of the table, becomes an element of the interpolated series $I$, of cardinality $n+m$. 
Figure 2.13. Two types of diagonal interpolation, applied to series O, yielding series I (procedural description). Left- and right-columns distinguish the two available distribution-types: DIA1 (Type-1, left), and DIA2 (Type-2, right).

This procedure is illustrated in Figure 2.13.\textsuperscript{24} Note that the output series I consists of a forward iteration of the original series O through expanding/contracting segments (i.e., the diagonals of the table created in Step 2); however, each of these individual segments presents elements of O in prime (Type 1) or retrograde (Type 2) order. Also note that the cardinality of series I is controlled the transformation’s index, m, governing the number of rows/columns created in Step 2.

\textsuperscript{24} The description above, and the attached illustration (Fig. 2.13), only presents a procedural method to operate the interpolation, and not a formal definition. Such a definition would, of course, be attainable—as a moderately complex algorithmic compound of permutation, segmentation, and distribution—but it does not seem necessary for the purpose of this analysis. Similarly, while I limit my consideration to two “types” listed, in use in Litanies, it could be interesting to consider the effect on series O of more complex filling patterns for the table created in Step 2.
9. Group Types: Paths

The complete design of the Group Types involves one more step, connecting them to the interval networks: the association of each Group Type i–vii with a specific network path, a “composing-out,” within network space, of its parametric structure. These paths were already presented, in abstract form, in Figure 9 above. Figure 2.14 offers a more directly “musical” view of these paths, with a pitch reduction of the groups from the A/a-family, mapping the abstract paths presented in Figure 2.9 onto network a, deployed around the active central pitch for section A, A3.

![Figure 2.14](image)

**Figure 2.14.** Pitch reduction of group-types i–vii, applied to network a, with A3 as central pitch (empty noteheads), labeled with sc content (in parenthesis), melodic intervals (ordered pitch intervals, in square brackets), and scs resulting from non-adjacent connections (italics).

The pre-compositional, parametric design detailed above determines important musical features of path sequence i–vii: the distribution of basic measures within group
types (see Fig. 2.11, above) governs the number of measures per group, yielding a balanced, palindromic distribution which results in an expanding/contracting phrase structure across the sequence —i.e., (1, 2, 3, 4, 3, 2, 1). The linear distribution of the Density series—i.e., (1, 2, 3, 5, 6, 9, 13)—similarly shapes the evolution of pitch density through the sequence. Stable in average within groups, it increases across each successive group, and leads to a progressive intensification of the texture—the last Density value, thirteen, corresponding to a complete saturation of the network.

The interpolated distribution of the Attacks-series—i.e., (1, 2-1, 3-2-1, 5-3-2-1, 5-3-2, 5-3, 5)—further articulates, in a more complex fashion, this overall intensification of the texture. While yielding a global increase of attacks-per-measure across the sequence, the distribution of Attacks also yields a progressive decrease at the group level, which, combined with a stable pitch density, leads to an increasing verticalization of the pitch material within each group (e.g., A4/iii, m. 1: three singletons; m. 2: one dyad/one singleton; m.3: one trichord). This last feature is of great consequence for the groups’ phrase structure, and for the musical flow of the piece. While groups i–iv form relatively close, self-contained gestures, closing on a single note or chord, the last measure of groups v–vii is still rhythmically active—increasingly so across each subsequent group—resulting in a more continuous flow to the next group.

Pousseur’s parametric design, however, does not determine all aspects of path-sequence i–vii. A close examination reveals some additional features that can lead to the inference of three broad compositional “rules,” guiding the composing-out of well-formed paths within the network:
1. **Adjacency Rule:** paths within the network only allow for moves between adjacent notes (as per the network underlying structure, see Fig. 2.2). This rule holds true for both melodic (i.e. melodic motion), and harmonic moves (i.e. simultaneities).\(^2^5\) It guarantees a maximally efficient expression of the network’s basic intervallic structure.\(^2^6\)

2. **Completion Rule:** paths within the network must use all available pitches before repeating. This rule ensures a maximally efficient expression of the network’s complete pitch collection, and of its extension in register. It plays a role in the registral oscillation observed across sequence i–vii, performing successive explorations of various “zones” of the network.

3. **Variety Rule:** two consecutive melodic steps must be in different directions. This rule accounts for the “spiral” shape of the paths represented in Figure 2.9/14. From a compositional standpoint, the Variety Rule also presents the advantage of favoring melodic gestures that are unified by a relatively compact registral span, and varied by rich interval content—avoiding the direct sounding of the network’s underlying interval cycles.

The compositional design of paths i–vii also reveals a certain degree of hierarchical predominance for the central pitch. First, and most trivially, the central pitch heralds the ________

\(^2^5\) While all available adjacencies are used in groups i–vii, the network’s tertiary interval \(|x+y|\) seems to be excluded from melodic moves, and limited to a harmonic role, thus confirming its status as a more distant derivation from the networks primary intervals (see fn. 11).

\(^2^6\) The Adjacency Rule suffers a few exceptions (dotted lines in Fig. 9, italicized scs in Fig. 14): in both paths v and vi, step #7 features an identical, non-adjacent shape, resulting in the sounding of interval \(|x-2y|\) (ic3 in network a), not part the network’s basic intervals—in the case of group vi, this irregular step is “resolved” in contrary motion, as a “double neighbor” to step #8. Additionally, each of the last three paths features one “irregular” trichord-shape, further enriching the sequence’s sc-content—i.e., (027) in paths v and vi, (026) in path vii.
entire sequence, as the sole member of Group-Type i. Second, it receives a statistical emphasis, the central node being the most instantiated position in the network (see Fig. 2.15)—followed closely by its direct neighbors on the x-axis.

**Fig. 2.15.** Total number of iteration for each node throughout group-type sequence i–vii; maximum value highlighted (boldface).

Third, and with a little more interpretation, the central pitch could also be seen as a focal point of groups ii–vii phrase design, interpreted as the progressive amplification of the following gesture: 1) spiraling from an off-center starting point, 2) reaching of the central pitch, and 3) spiraling “overshoot” from the central pitch.²⁷

Finally, and more generally, the unity of the sequence is further amplified by motivic relationships across group-types, only partially determined by the strongly structured premises described above. The most salient of these motives results from the consistent articulation of the five-note figure opening group-types iv–vi, nearly identical in pitch for the first two, and in contour for all three groups.²⁸ This, and all other, motivic connections

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²⁷ This pattern is very clear in group-types ii and iii but becomes, admittedly, a little harder to follow in subsequent groups.
²⁸ Pitch content (Fig. 2.14): Eb3-G3-F #3-C #3-D3 in group-type iv; Eb3-G3-F #3-C #3-Bb2 in group-type v; contour, using Morris’s normalized notation: <35412> in iv and vi, and
across group types i–vii further intensify an already dense, interwoven network of motivic correspondences, all groups in *Litaniest* being derived from one the seven paths presented in Figure 2.8.²⁹

10. From Group Types to Groups

To generate the thirty-five groups forming section A, the path-sequence presented in Figure 2.8 is successively projected onto each of the five interval networks a–e—this process being repeated, under various transformations, for each subsequent section. Example 2.4 presents the seven groups derived from the A/a-family as they appear in the score. Each group is labeled with the section’s name, attached to their order number within the section: A1, A2, A4, A7, A11, A16, A25. These groups coincide with the pitch reductions presented in Figure 2.14, completed by the remaining elements of the group-type parametric structure (meter/tempo, dynamics), as well as articulations.

²⁹ Indeed, group-types i–vii being equally distributed, the motive identified above in paths iv, v, and vi, is present in nearly forty-three percent of the groups composing *Litaniest*!
Example 2.4. A/a-family, score excerpts: A1, m. 1; A2, mm. 2–3, A4, mm. 5–7; A7, mm. 11–14; A11, mm. 21–23; A16, mm. 34–35; A21, m. 49. Group type indicated in parenthesis above group name.

This completed presentation allows us to observe the musical translation, in the score, of all the general trends noted in our discussion of the complete parametric design of group-types i–vii: In the rhythmic domain, the evolution of tempo coincides here with the attack distribution, resulting in a global accelerando across the sequence, realized through a nested series of ritardandos within each group. Also, the increased length of the first element of the Time-Signature series (3/2), and its distribution at the end of groups i–iv,
amplifies the sense of closure for the corresponding phrases.\textsuperscript{30} The Dynamics-series increasing variation rate accompanies the general intensification of the musical texture. Finally, Example 2.4 reveals an additional layer of compositional design: the use of articulations, limited here to three elements (tie, tenuto, louré), and adding a final unifying layer to the sequence.\textsuperscript{31}

11. Harmonic Derivation

The remaining groups from section A are derived from a strict mapping of group types i–vii onto each of the four remaining interval networks (b–e), generating four additional collections of seven groups, adding up to the total of thirty-five groups composing the section (A1–35). Example 2.5 illustrates this process, with a presentation of the five groups derived from group-type iii (i.e., A/iii-family), successively projected onto each of the five networks a–e. Figure 2.15 presents a detailed pitch-analysis of these projections, allowing us to observe Pousseur’s system of harmonic derivation in more detail.

\textsuperscript{30} The corresponding time signature in A1, Litanies’ opening group, is given as 9/4, allowing to list the initial tempo as a quarter-note value, \( j=84 \).

\textsuperscript{31} Articulations are determined by a higher-level, associated with the parametric design of sections (see Table 2.7, below).
Example 2.5. A/iii-family, score excerpts: A4, mm. 5–7; A8, mm. 15–17; A13, mm. 28–30; A19, 43–45; A25, mm. 59–61. Each group is labeled with corresponding network a–e.
Figure 2.15. A/iii-family, pitch analysis. Network Path (top) presents group iii’s path within generic network. Pitch Networks (left) lists network name (a–e), primary intervals (x/y), and harmonic style. Right column presents a detailed pitch analysis of the groups, using angled brackets (ordered pitch intervals), vertical bracket (unordered pitch intervals), and parenthesis (set classes); italics denote pc entity not included in the network’s “basic shapes (see Table 2.1).
As seen in Figure 2.15, the design of the model path (iii) leads to a clear expression of the networks’ intervallic structure within each corresponding group—indeed, all intervallic relations are related to one, or both, of the networks’ interval generators (x/y). Using group A4 as an example: the first measure unfolds the network’s secondary-interval (|x-y|, <-4>), and one of the primary-intervals (|x|, <+1>) immediately followed, across the first and second measures, by the remaining primary-interval (|y|, <+5>). The next measure repeats the same intervals, in a different configuration: vertical dyad (|y|, |5|), and simultaneous melodic motion (|x|, |y|; <-1>, <+4>) to a singleton (A3, network’s pitch center), compounding to one of the network’s basic trichords, (015). The last measure presents network a’s remaining basic trichord, (016), articulated vertically.32

Several factors contribute to preserve the aural unity of the A/iii family, even as it traverses various harmonic regions: “path-consistency” across all groups, yielding a general preservation of contour;33 shared parametric design “inherited” from group-type iii, leading to a consistent articulation in the rhythmic (meter/tempo) dynamics, and morphological (articulations) domains; and invariance of the central pitch (A3), associated with section A, acting effectively as pitch “anchor” across the A/iii family—and, more generally, across all groups in section A.

32 The trichordal set-class content of the first measure, not part of the network’s “basic shapes,” presents an interesting case: it reveals different levels of internal consistency across networks a–e, producing a new set class only in the case of networks a, d, and e—including a surprising sc (037) within the “Webernian” network (e).

33 This preservation of contour is guaranteed by the preservation, across networks a–e, of the ordered relationship between the two interval generators (i.e., x<y).
While aurally compelling—and operationally intuitive within Pousseur’s network hermeneutics—the complex pitch transformations involved in these network derivations prove strikingly difficult to formalize. I will attempt here, within the time and space limitations of this chapter, to elucidate some of these processes through an original investigation of these transformations: first by examining the discrete pitch transformations applied to the pitch content of a group when “derived” through networks a-e, using the iteration of the A-iii family through networks a-e as a case study (Figs. 2.16–18); then by introducing an original framework to describe directly the transformation of a complete pitch network into another (“Field-Transposition,” Figs. 2.19–21).

**Figure 2.16.** A/iii-family trichords (T<sup>1–3</sup>). Position in the abstract network (“Network Path“): nodes display registral order, from low to high (1–3). Representation as unordered-interval networks (“Interval Networks“): nodes display registral order, from low to high (1–3); line-labels display unordered pitch-intervals (vertical brackets).
Figure 2.16 introduces our first “test subjects,” consisting of three trichordal pitch-sets, $T^{1-3}$, corresponding, respectively to the pitch content of Group Type-iii’s first, second, and third measures. Each trichord is presented both as a path within the abstract network, and as an unordered-interval networks, wherein each node represents one of the trichord’s pitches, labeled and vertically arranged in registral order. Note that all of the trichord’s constituent intervals are related to one of network’s a–e interval generators (i.e., $|x|$, $|y|$), or to a combination thereof (i.e., $|x+y|$, $|x-y|$, $|x-2y|$).

![Figure 2.17](image)

**Figure 2.17.** A/iii-family trichords ($T^{1-3}$), evolution of trichords’ constituent intervals (rows) across networks a–e (columns); left column lists affected trichord(s) for each interval.

Figure 2.17 offers a first look at the modulation from one network to the next, detailing the evolution of trichords $T^{1-3}$’s constituent pitch-intervals across networks a–e.
The most obvious feature of this evolution is the invariance, already noted, of interval-generator $|x|$ across two network pairs (b/c and d/e), resulting in the preservation, for trichords $T_1$ and $T_3$, of one interval across the corresponding groups—e.g., for $T_3$: D–E in A8, becoming E♭–F in A13 (see Ex. 2.5). Moreover, this feature, combined with the invariance of the central pitch, results, in the case of $T_2$, in the invariance of two of the trichord’s three pitches across network pairs b/c and d/e—i.e., in Ex. 5, the dyads A–B in groups A8/A13, and A–C in groups A19/A25.34 Besides this limited instance, however, Figure 2.17 illustrates the irreducible complexity of the intervallic transformations involved, as all intervals evolve at a different—if related, and consistently expanding—rates.

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34 Incidentally, this invariant interval also creates Knet-relations of positive isography between the affected trichords.
Figure 2.18. A/iii-family, transformational voice-leading. Measures numbers I–III within Group-Type iii (left column). Voices in registral order 1–3, from low to high (middle column). Transformational voice–leadings across networks a–e (right column): nodes indicate pitch, line-labels indicate ordered pitch-interval, solid lines indicate invariance, shadowed node indicates central pitch.

Figure 2.18 presents another perspective on the transformations affecting T1–3, focusing this time on the voice-leading path followed by each of the trichords’ registral
voices while traversing networks a–e. While the transformations presented here are far from presenting a unified outlook, they nevertheless reveal some salient, if somewhat anecdotal, features at a local level: an additional singularity in the behavior of T², the only trichord containing the networks’ invariant central pitch, is highlighted, revealing two instances of perfectly balanced, parsimonious, contrary-motion voice leading occurring twice, between network pairs a/b and c/d. These voice-leading instances can be observed musically between the second measures of groups A4/A8, and A13/A19 (see Ex. 2.5).

Figure 2.18 also reveals additional instances of pitch invariance, for T³: G for networks b/c, and F # for d/e, both in voice 1 (see Ex. 2.5, A8/A13 and A19/A25).

A few additional, more general, trends are also apparent in Figure 2.18. First, each transformational voice is consistently moving in the same direction (up or down) in the course of the entire sequence—all descending for T¹, contrary motion for T²–³. Second, each transformational voice yields a segment of a single- or dual-interval cycle: each transformational voice in Figure 2.18 can be further reduced to a single ordered-interval pair, applied twice (e.g., -3/-1 for the third voice of T¹), or to a single ordered interval (e.g., -1 for the first voice of T²).

Finally, the range of the transpositional steps within each voice exhibits some degree of consistency for each trichord: smallest for T², larger for T³, and largest for T¹. Furthermore, the ranges are correlated to each of the trichords’ respective distance from the central pitch within the abstract network (see Network Paths, Fig. 2.16). T₂, closest to the network’s center, is limited to chromatic-parsimonious motion (i.e., one semitone or
fewer); T₃, slightly more off-center, displays step-parsimonious motion (i.e., two semitones or fewer); and T₁, most peripheral, yields larger steps (four semitones or fewer).

To summarize this first phase of our investigation, the transformational evolution of trichords T¹⁻³, while exhibiting some anecdotal trends, seems to resists any form of broad generalization. Only two systematic observations remain: 1) this evolution is linked to the evolution of networks a-e’s discrete interval generators; 2) the position of the trichords’ paths within the abstract network also seems to play a role in the trichords’ respective transformations. It might, therefore, be useful to take a more global approach, and examine in more detail the processes involved in the complete, “node-to-node” mapping of a network onto another, resulting, in pitch space, in the varied transposition of each of the networks’ component pitches, depending on its position in the network. I offer that this general process is best described as the application of what I will call a transpositional field, represented by the operation of the Field Transposition-transform (FTₘ/ₙ), defined as follows:

- Given two pitch networks, N (x/y), and M (x+n/y+m), of the same size and configuration, using the same central pitch.
- Field Transposition (FT) is the transformation performing the one-to-one, transpositional mapping of each pitch from network N onto the corresponding pitch in network M, such as FTₘ/ₙ(N)=M.

Figure 2.19 details the individual transpositions implied in the node-to-node, FTₘ/ₙ-mapping of network N onto network M, represented as a field, applying an increasing
“transpositional force” as it moves further away from the central pitch. More specifically, the transpositional index applied to each node—always related to m, n, or both—depends on two distinct positional attributes: 1) the node’s distance and direction from the central pitch; 2) its position on one of a total of five distinct axes.

![Diagram](image)

**Figure 2.19.** Transpositional field resulting from the application of FT\(_{n/m}\) to network N. Node-labels indicate transposition-index applied to each node of network N in the mapping to network M. Arrows represent transpositional “push” from the central pitch (black node).

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35 Note the striking isomorphism between Figure 2.19 and the basic network structure presented in Figure 2.2a. Indeed, any network (x/y) can be construed as the application of a FT\(_{x/y}\)-field to the “nill” network—i.e., network (0/0).

36 In Figure 2.19, the transpositional index applied to each node of the network through FT\(_{n/m}\) corresponds to a unique combination of n, m, or both. However, the number of actual transpositional indexes can be reduced, depending on the specific value of n and m—drastically reduced, for example, in the trivial cases of FT\(_{n/m}\) wherein n=m.
Figure 2.20 presents these five directional axes, each characterized by a unique unit of length (i.e., transpositional increment) related to n, m, or both.\textsuperscript{37}

\[ \text{Figure 2.20. Transpositional field resulting from the application of } \text{FT}_{n/m} \text{ to network N.} \]

Dotted lines represent the transpositional axes. Arrow indicates direction. Axes names (italics, boldface) correspond to transpositional increments.

Figure 2.21 presents the network sequence a–e as an “FT–chain,” resulting from successive applications of FT to the networks. Note that this transformational

\textsuperscript{37} The number of axes is dependent upon the specific area of Pousseur’s networks. This number would increase significantly if considering larger networks (i.e., with additional rows/columns).
representation reveals a striking element of symmetry in the sequence’s structure, which can be reduced to the repeated application of one FT-pair: FT\(_{1/2}\) and FT\(_{0/1}\).

**Figure 2.21.** Network-sequence a–e as a FT-chain. Each network is labeled with its name (boldface) and its generative interval-pair (in parenthesis).

This feature allows us to generalize the similar transformational symmetry observed in each of the transformational voices of trichords T\(^{1-3}\) (Fig. 2.18): indeed, the transformational path of any node in the network, when derived through network sequence a–e, will always feature the twofold application of a single pair of transpositional indexes (or, in some special cases, the repetition of a single index).

Taking a more general view, we can build a model of all possible two-interval networks—limited to simple intervals—as an FT-network (Fig. 2.22), and locate the five interval networks used by Pousseur within this “hyper” network.\(^{38}\)

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\(^{38}\) Note the correspondence of the hyper network in Fig. 22 with Pousseur’s presentation of a similar space, in Ex. 1 above.
Figure 2.22. Mapping of networks a–e onto the FT hyper-network, including all possible networks x/y, with $0 \leq x \leq 11$, and $0 \leq y \leq 11$. 
This representation visually summarizes two important features of networks a-e. First, the position of the networks in the top-left half of Figure 2.22 illustrates the invariance of the relation of order between their respective interval-generators x/y (i.e., always x<y). This feature guarantees the preservation of contour when deriving a specific path through networks a-e. Second, the general direction of network-sequence a-e, moving mostly upward, and slightly to the right, illustrates the general increase of interval generators x/y, and the faster expansion of the latter.

This general view can also offer some additional insights into the specific choice of networks operated by Pousseur. Indeed, not all individual interval networks within the hyper-network presented in Figure 2.22 are equally useful for the composer’s purpose. It is possible to offer a plausible representation of the more constrained space within which the composer operated his choice, based on a reasonable assumption of some of the parameters guiding the composer’s selection.

This representation can also illuminate the specific choice of networks made by Pousseur. Figure 2.23 reproduces the hyper network from Figure 2.22, highlighting a more limited number of “favorable” networks, based on a reasonable assumption of some of the parameters guiding the composer’s selection, among a larger number of “deficient” networks presenting one (or several) of the following flaws, leading to the elimination from consideration of the following networks x/y:

1. Trivial networks: x=0, y=0, or x=y
2. Hyper-symmetrical networks: x and y multiples of 2 (Cycle-2 networks), or x and y multiples of 3 (Cycle-3 networks)
3. "Tonal" networks, i.e., containing triads as their "basic trichords": any combination of thirds and fifths, or of major and minor thirds (and all inversions thereof)
Figure 2.23. Mapping of networks a–e onto the FT hyper-network, distinguishing “favorable” (bold border) and “deficient” (dotted border) networks.
Based on these limitations, Figure 2.23 reveals the relatively narrow set of possibilities under which Pousseur operated his selection. Indeed, the location of sequence a-e in the hyper network is the only possible location of this specific path within the hyper network—allowing for the use of one hyper-symmetrical network in the middle of the sequence (i.e., network c, “whole-tone”).

In summary, the introduction of the FT-transform allowed us to quantify the complex harmonic transformations implied in Pousseur's process of harmonic derivation (i.e., the successive mapping of a specific path onto a sequence of interval networks), as a set of discrete transpositions applied to each pitch involved, depending on its specific position within the network. The presentation of network sequence a–e as a FT-chain also allowed us to formalize some of its structural features. Finally, the mapping of the sequence into the FT-network in Figures 2.22 and 2.23 gave us a better understanding of the specific technical constraints under which Pousseur operated his choice of networks.\(^{39}\)

More generally, the investigation of harmonic derivation above illustrates the powerful features of the harmonic system used by Pousseur in Litanies: incremental expansion in register; preservation of contour; controlled evolution of harmonic color, with a clear expression of each of the successive network's intervallic structure. Furthermore, the system presents the advantage of a great operational simplicity, performing these

\(^{39}\) While outside the purview of this analysis, I believe this hyper network could also provide a useful framework for a more general study of harmonic derivation as practiced by Pousseur, examining, for example, the following questions: what invariant properties would exhibit a different network sequence, using the same path within the hyper network (i.e., same FT-sequence)? How does the sequence used in Litanies compare with other network sequences? What would be the various properties of different paths within the hyper network?
complex sets of local transformations through the manipulation of only two high-level parameters, the network's interval generators.

12. Second Interpolation: Periods

The thirty-five groups comprising section A (A1–35) are distributed within eleven periods (I–XI), consisting of one to five groups each, and separated in the score with a double bar. This distribution follows the plan laid out in Pousseur's “Elements,” yielding a diagonal distribution of groups within periods (see Fig. 2.24).

**Figure 2.24.** Section A, group distribution. Numbers 1–35 indicate order number within section. Network- and Group type-families in rows and columns, respectively. Periods (I–XI) in diagonals.

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40 In this regard (i.e., operational simplicity yielding complex results), not unlike Pousseur’s method of diagonal interpolation discussed above.
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**Table 2.3.** Section A, parametric distribution. “Measures” and “Density” indicate, respectively, number of measures, and average pitch density per group.

Table 2.3 presents an overview of the resulting parametric design. This sectional design presents a striking isomorphism with that of the group-type sequence presented in Table 2.2. Indeed, a closer examination reveals the diagonal interpolation of networks a–e and group types i–vii within section A: Type-1 interpolation (DIA23) for group-types i–vii and their associated parametric field, yielding an iteration of the i–vii sequence in prime order, through expanding/contracting, retrograded segments; Type-2 interpolation (DIA14) for networks a–e—yielding an similar prime-iteration of sequence a–e, this time featuring nested segments in *prime* order, creating an opposing phase for the two sequences. The complex envelope resulting from this configuration results, for each period I–XI, in a decrease in length and density, with the retrograde iteration of sequence i–vii, combined with an expansion in register, with the forward iteration of sequence a–e—the coincidence of group type vii (maximum density), and network e (maximum expansion in register) occurring only in the section’s last period (XI).

Furthermore, this interpolation creates a second stage of interpolation for the basic series already interpolated at the Group-Type level (i.e., Attacks, Time-signature, and Tempo series). This process, applied to the Attacks series, is detailed in Figure 2.25. While both interpolation stages (DIA23, DIA24) are of the same type (i.e., Type-2, yielding
retrograded segments), they yield different indexes, influencing the cardinality of the output series.\footnote{This observation highlights one of the great practical advantages of Pousseur’s Diagonal-Interpolation method, allowing for the “fitting” of input series of different cardinalities into an output series of the desired cardinality.}


The basic group-structure of sections, B, C, and D is similar to that of section A. To each group Ax in section A corresponds one, and only one, derived group, with a corresponding index, in each of the other sections (i.e., Bx, Cx, and Dx). The last section, E, presenting a special case, will be considered separately. All groups with an identical index number in each section are associated with the same group type (i–vii) and network (a–e). For example, groups A1, B1, C1, and D1 are all members of the i/a-family. All features of sectional design presented in Figure 2.24 and Table 2.3 (i.e., Network and Group-Type family-, Period-, and Group-distribution) can therefore be applied to sections B–D. The actual content of section A’s original groups (i.e., pitch, meter/tempo, dynamics,
articulation), however, is variously transformed in each successive section. I will now 
examine in some detail the various stages of these transformations.

The transformation of the groups’ pitch content involves two distinct processes: a 
transposition of the networks, and a proliferation of the pitch material. The first 
transformation is straightforward: as noted earlier, each section A–E uses a different 
central pitch for the construction of networks a–e, resulting mechanically in a transposition 
of the networks. Pousseur, in his “Elements for Analysis,” presents this transpositional 
scheme design as a veiled reference to the piece’s dedicatee, the successive pitch centers 
representing letters from the name Karol Goeyvaerts (see Fig. 2.1.3, above, and Pousseur’s 
comments in Appendix Ib). Figure 2.26 presents this sectional scheme as a transpositional 
network, performing an eighteen-semitone ascent in pitch space during the course of the 
piece. Viewed in more detail, this trajectory starts with a short descent to E3 in section B, 
followed by a rapid ascent reaching A5, two octaves above the original pitch center, in 
section D, and ends with a short descent, down a tritone, to Eb5, in section E.42

![Diagram of transpositional network](image)

**Figure 2.26.** Sections A–E, transpositional network (chronological)

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42 The occasional coincidence of these transpositional levels with the networks’ interval 
generators can result in various levels of pitch invariance, across sections, within pitch 
networks (and/or pc-sets) derived from the same interval network. For example, the 
intersection of the two pitch networks corresponding to interval-network a in sections A 
and B, related by T5, yields a total of ten common pitches (see Fig. 2.8, above).
The distance of two octaves between section A and D is significant: as a result, the networks for both sections will feature, under octave equivalence, identical pitch collections. Section D, therefore, could be interpreted as a transformed recapitulation of sorts. Moreover, the entire last segment (sections D–E), with its motion down a tritone from A5 to Eb5, could also be interpreted as a transformed repetition of the downward-fifth motion from A3 to E3 in the first segment (sections A–B). Finally, this transpositional scheme presents, at a more abstract level, another noteworthy feature, illustrated in Figure 2.27: in pitch-class space, the set of four distinct pc-centers for sections A–E (A, E, G, Eb) yields set-class (0146), an all-interval tetrachord. In other words, considering sections A–E extemporally, as an unordered set, all interval classes are represented in the distance between at least one section pair.

![Figure 2.27. Sections A–E, transpositional network (achronological). Line labels represent pitch-class intervals (in parenthesis).](image)

In addition to this transposition of the pitch networks, a second transformation of the groups’ pitch content within sections B–D involves the proliferation of the material derived from the original groups in section A, through an *ad hoc* process of “multiplication,”
the modalities of which vary across each section B–D.\textsuperscript{43} I will label this process as “M”\textsubscript{m} (i.e. “multiplication by m”), wherein m corresponds to the density multiplier for each section, indicated by Pousseur in his “Elements” (see Fig. 2.1.3, bottom), and recapitulated below in Table 2.4. The use of quotes denotes the informal status of “M”\textsubscript{m} as a loosely defined operation, corresponding to three different “modes” of multiplication, involving pitch duplication (Section B, “M”\textsuperscript{3/2}), pitch transposition (Section C, “M”\textsuperscript{2}), or a combination of both (Section D, “M”\textsuperscript{3}).

![Table 2.4. Density multipliers for Sections A–E, indicated by Pousseur in his “Elements” (cf. Fig. 2.1.3, bottom). The multiplier for Section B is to be read as a fraction (“Three halves”). Section E uniquely presents a variable multiplier, going from 3 to 1, a feature that will be discussed in more detail in a later section of this chapter.]

In order to illustrate these transformations applied to the group-types across Sections A–D, I will use, as a representative example, the relevant members of the iii/a-family (i.e., A4, B4, D4, and C4), presented in Example 6 as they appear in the score.

\textsuperscript{43} Pousseur never formally labeled this process of proliferation as a “multiplication,” although he does use, once, and in passing, the term “multiplication in density” in his description of Litanies (see Appendix I, 148). Also, note that Pousseur’s method is not related to Boulez’s multiplication (see Boulez, Boulez on Music Today, 80), nor to the M-transform commonly used in North-American twelve-tone theory (see Morris, Composition with Pitch-Classes, 41–42).
Example 2.6. iii/a-family (sections A–D): A4, mm. 5–7; B4, mm. 75–77; C4, mm. 133–35; D4, mm. 165–67.

The derivation of group B4 from its parent group, A4, operated through the application of $T_5$ and "M"$^{3/2}$, is presented in Figure 2.28. The left column displays the transposition of the original interval network (a), resulting from the displacement of its central pitch. The middle column presents, from top to bottom: the original group, A4; as an intermediary step, the transposition ($T_5$) of this original group within the network
operating in section B; and the final output of the derivation, group B4, resulting from the multiplication of the transposed group. The right column displays, as a path within the network, A4’s original group type (iii), and its product under multiplication. Note that, for section B, the multiplication (“M”\(^{3/2}\)) does not affect the pitch content of the derived group, involving only pitch duplication and reordering.

![Figure 2.28](image)

**Figure 2.28.** Derivation of group B4, detailing, from left to right: transposition of pitch-network (left column); group transformation, represented as a two-step process: transposition (T\(_5\)), and Multiplication (“M”\(^{3/2}\)); resulting transformation of the network path.

In Section C, however, the multiplication (“M”\(_2\)) does create additional pitches in the affected group, by combining the transposed set with its T\(_y\)-transposition—effectively doubling the derived set’s cardinality.\(^{44}\) This feature is apparent in the derivation of group

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\(^{44}\) This feature requires the extension of the lower area of interval networks a-e for sections C and D, indicated in Fig. 2.1.2.
C4 (Fig. 2.29): in the middle column, the derived group is presented on two staves, visually separating the pitch set derived from transposition of the original set from the additional pitch set created by the multiplication (top and bottom stave, respectively). In the right column, the network representation of C4 (right column), also layered, reveals this duplication within the abstract network, as a “shadowing” of the original path by an identical path, one step down on the y-axis (T_y). The compound set, consisting of the pitches from the original group and their T_y-transposition, is then freely ordered within each measure to generate the new group—this “free” distribution still operates within the general rules defined earlier (i.e., Adjacency, Completion, and Variety Rules), thus preserving the intervallic integrity of the network.
Figure 2.29. Derivation of group C4, detailing, from left to right: transposition of pitch-network (left column); Group transformation, represented as a two-step process: transposition \( T_{10} \), and Multiplication ("M"\(^{3/2}\)); the resulting pitch content of C4 is presented in two staves: transposed pitch content (top), and additional pitch content created by multiplication (bottom). Resulting transformation of the network path, detailing the replication of the original path “one y-step down” \( T_y \) within the network.

Finally, Section D combines the processes observed in B and C: as in section C, the multiplication ("M"\(^3\)) doubles the cardinality of the original pitch set by duplicating its path, one step down the y-axis; as in section B, it also creates additional attacks by freely repeating pitches from the compound set (Fig. 2.30).
Figure 2.30. Derivation of group D4 (same presentation as Fig. 2.29).

In the rhythmic domain, each of sections B–D receives its own meter/tempo profile, consisting of a Time-Signature and a Tempo series, presented in Figure 2.31.

Figure 2.31. Evolution of the Time-Signature and Tempo Series through sections A–D.
The progression of these series is guided by the same multipliers used for pitch multiplications (see Table 2.4, above).\(^{45}\) For example, the numerator of the second member of the Time-Signature series goes from two (Section A, 1-multiplier), to three (B, 3/2-multiplier), to four (C, 2-multiplier), and to six (D, 3-multiplier), accompanying the proliferation of material resulting from the multiplication process (i.e., “M”\(_m\)). Similarly, the denominators in the Time-Signature series are also affected by this general trend, resulting in a parallel increase in tempi across sections, also related to the same density multipliers.\(^{46}\) The evolution of these two values, however, is somewhat decoupled, the numerators increasing at slightly slower rate than the numerators. This results in an increase of the rhythmic complexity of each section, with the progressive proliferation of “incomplete” time signatures (i.e., time signatures \(x/y\) wherein \(x<y\), resulting in a varied shortening of the affected measures’ duration). While sections A and B feature only “complete” time signatures, two out of four time signatures in section C are “incomplete,” as are all four in section D.

Similarly, dynamics are modified through a transformation, for each section B–D, of the of the original Dynamics series. Each modified series, presented in Table 2.5, presents a structure similar to the original, as set of three dynamic markings, representing low, mediant, and high dynamics values.

\(^{45}\) The first element of the series, corresponding to Group-Type i (single attack), is, however, uniquely unaffected by this trend (see fn. 23).

\(^{46}\) Indeed, as per Pousseur’s metrical system, the time-signature denominators are proportionally related to tempo values (see above, p. 83).
Table 2.5. Dynamic Series for sections A–D.

The application of the series within groups section B–D preserves the distribution observed in section A, simply substituting low, mediant, and high values from one series to the other—e.g., a pp-marking in section A is successively replaced by pp in section B, mf in section C, and f in section D. While the evolution of the Dynamics series does not follow the multiplication affecting other parameters, it results in an overall dynamic increase across sections, concurrent with the parallel intensification observed in the pitch and rhythmic domains. Furthermore, the structure of the four dynamic series for sections A–D exhibits a certain level of regularity, and can be construed as the symmetrical, interpolated iteration of a larger-level series, consisting of the seven dynamic values used across the four series (Table 2.6).

Table 2.6. Symmetrical evolution of the Dynamic Series through sections A–D.

We have seen that the degree of parametric determination employed by Pousseur varies with each broad domain: very tight, and complex, in the pitch/harmonic domain; less developed in the rhythmic domain; even simpler, and to a certain extent freer in the
dynamics domain. The organization of the morphological domain (i.e., articulations) completes this sequence, consisting of a relatively simple system, attributing a different set of available articulation to each section (Table 2.7).

<table>
<thead>
<tr>
<th>Section</th>
<th>Available Articulations</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>- Tenuto/staccato markings, slurs</td>
</tr>
</tbody>
</table>
| B       | - Tenuto/staccato markings, slurs  
- ½ Ped. - *sparingly, group endings*  
- Grace notes - *sparingly* |
| C       | - Tenuto/staccato markings, slurs  
- Accelerando/ritardando |
| D       | - Tenuto/staccato markings, slurs  
- Accelerando/Ritardando  
- ½ Ped. (D1–6) → Ped. (D7–35) - *always*  
- Grace notes - *frequently, group endings* |

*Table 2.7. Evolution of Articulations through sections A–D.*

The distribution of articulations indicated in Table 2.7 is progressive—and, to a certain extent, cumulative, section D featuring all elements added in previous sections. It accompanies the progressive intensification observed in other domains. For example, the accelerando/ritardandos (sections C and D) and sustain pedal (section D) reinforce, respectively, the intensification in the rhythmic and pitch domains, while also contributing to the unique character of each section.
14. Sectional Interpolation

The strong characterization of each section is made all the more crucial to the piece’s formal intelligibility by another important structural feature: the dovetailed distribution of sections A–E, adding yet another level of interpolation to *Litanies*’ final design. This last stage of interpolation, detailed in Table 2.8, is realized by alternating periods from sections A–E, and, displays some regular features. Additional sections are added at a regularly increasing rate for sections A–D—section B “enters” after the previous section’s sixth period, section C after the fourth, and section D after the second. Also, the resulting structure presents a near-symmetrical shape—for a perfect symmetry around mm. 181–193 (highlighted in Table 2.8), section E would have had to “enter” two interpolation-steps earlier, at m. 267.
Table 2.8. Sectional interpolation, overview.
While not exactly isomorphic to the now familiar process of diagonal interpolations used at lower levels of structure, this higher-level interpolation functions in a strikingly similar fashion. Indeed, the resulting Period- and Section-sequences, displayed below Table 2.8, yields an ordered iteration of sections A–E and periods I–XI, through nested, expanding/contracting segments. Each of these segments iterates Section-sequence A–E in prime order, and period-sequence I–XI in retrograde order—isomorphic with the opposing-phase configuration of networks and group-types sequences observed within sections A–D. However, while the interpolated segments preserve the (retrograded) order of the Period-sequence, thus conserving the general unfolding of all attached processes (i.e., evolution of density, measures per group, attacks per measure, etc.), they effectively compress the sequence by skipping steps, thereby increasing the rate at which these processes unfold.

Let us examine in some detail one of these interpolated segments (mm. 118–141), wherein a near complete segment of the retrograded Period-series is compressed in only four steps, X–V–II–I. Figures 2.32 and 2.33 present, respectively, for mm. 118–141, a score excerpt annotated with a summary pitch-class analysis, and a summary of the underlying network/parametric structure. This excerpt allows us to observe the complex unfolding of many of the processes described so far, as they are articulated—and thusaurally manifested—in the final design of the piece.
Fig. 2.32. Interpolated segment, mm. 118–141. Score excerpt, set-class analysis.
<table>
<thead>
<tr>
<th>Period</th>
<th>Group</th>
<th>Network/Group Type</th>
<th>Pitch Network</th>
<th>Paths</th>
<th>Multiplication</th>
</tr>
</thead>
<tbody>
<tr>
<td>XI</td>
<td>A35</td>
<td>e/vii *</td>
<td>![Image]</td>
<td></td>
<td>“M”₁</td>
</tr>
<tr>
<td>VI</td>
<td>B16</td>
<td>a/vi</td>
<td>![Image]</td>
<td></td>
<td>“M”³/²</td>
</tr>
<tr>
<td></td>
<td>B17</td>
<td>b/v</td>
<td>![Image]</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B18</td>
<td>c/iv</td>
<td>![Image]</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B19</td>
<td>d/iii</td>
<td>![Image]</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B20</td>
<td>e/ii</td>
<td>![Image]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>III</td>
<td>C4</td>
<td>a/iii</td>
<td>![Image]</td>
<td></td>
<td>“M”₂</td>
</tr>
<tr>
<td></td>
<td>C5</td>
<td>b/ii</td>
<td>![Image]</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>C6</td>
<td>c/i</td>
<td>![Image]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>II</td>
<td>D2</td>
<td>a/ii</td>
<td>![Image]</td>
<td></td>
<td>“M”₃</td>
</tr>
<tr>
<td></td>
<td>D3</td>
<td>b/i</td>
<td>![Image]</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Group A35 features a slight variant of Group Type vii (cf. Fig. 2.9, above)
The trajectory in register, apparent in the score excerpt, and in the registral evolution of its underlying pitch networks, ascends two octaves in the course of the segment, articulating the transpositional scheme for sections A–D. The evolution of Density and Attacks, linked to the parametric configuration of both sections (Multiplication “Mm”), and periods (Group-Type distribution), is more complex, resulting from opposing phases: while the distribution of the network paths yields an overall decrease in density across periods, this decrease is modulated by a parallel increase of the density multiplier for each section.

Dynamics increase globally across the segment. Note that the design of the dynamic series for each section results in a sharp contrast between the softer sections, A and B (mm. 118–132), both within a pp-mf range, and the louder ones, C–D, (mm. 133–141, ff–fff range). Finally, morphological articulation also significantly reinforces the contrast between section-pairs A–B and C–D, with the use of crescendos/decrescendos in the latter, sharply increasing the rhythmic complexity of the musical surface. The pedaling of each measure in section D further amplifies harmonic density at the end of the segment (mm. 139–141).

This excerpt also gives us the opportunity for a more detailed look at the evolution the parameter of harmonic quality, as it unfolds chronologically in the finalized design of the piece. In this respect, mm. 119–133, representing Period VI from Section B, presents a particularly revealing illustration, as it performs a complete, ordered, iteration of network-
sequence a–e. Table 2.9 gives us a broad measure of this harmonic evolution, detailing the compounded set-class content and interval vector for each measure of Period VI.\(^{47}\)

<table>
<thead>
<tr>
<th>Group</th>
<th>Pitch Content</th>
<th>Set Class</th>
<th>Interval Vector</th>
<th>Network</th>
</tr>
</thead>
<tbody>
<tr>
<td>B16</td>
<td>{1, 2, 3, 4, 5, 8, 9, 10} {0, 3, 4, 5, 6, 7, 10, 11}</td>
<td>(01234789) (6) (4) (4) (5) (6) (3)</td>
<td>(a)</td>
<td></td>
</tr>
<tr>
<td>B17</td>
<td>{1, 4, 6, 9} {2, 4, 7, 9, 11} {1, 2, 4, 6, 11}</td>
<td>(02479) (6) (4) (4) (5) (6) (3)</td>
<td>(b)</td>
<td></td>
</tr>
<tr>
<td>B18</td>
<td>{0, 2, 6, 8, 10} {2, 4, 6, 10} {0, 2, 6, 8} {0, 2, 4, 6, 10}</td>
<td>(0268) (6) (4) (4) (5) (6) (3)</td>
<td>(c)</td>
<td></td>
</tr>
<tr>
<td>B19</td>
<td>{3, 8, 11} {4, 7, 9} {1, 2, 11}</td>
<td>(013) (6) (4) (4) (5) (6) (3)</td>
<td>(d)</td>
<td></td>
</tr>
<tr>
<td>B20</td>
<td>{1, 4, 5, 7}</td>
<td>(0236) (6) (4) (4) (5) (6) (3)</td>
<td>(e)</td>
<td></td>
</tr>
</tbody>
</table>

Table 2.9. Section B, Period VI (mm. 118–141): set-class analysis displaying Pitch Content, Set Class, and Interval Vectors for each measure. Shaded columns highlight the respective interval-classes of each of the network’s interval-generators pairs. *Because of their sparse pitch content, the two constituent measures of B20 are compounded to one.

This approach illustrates the statistical prevalence of each network’s ic-generator in the interval-vectors of associated measures. The interval-vector measure allows us to partly quantify, for instance, the sharp “chromatic-to-diatonic” move between networks a and b, ic1 being strongly prevalent in the former, and nearly absent in the latter.

Unsurprisingly, harmonic quality is most sharply defined within network c, based on the__

\(^{47}\) This particular analytical approach (i.e., scs and interval vector measures) is used here as it seems most relevant to the study of the actual, aural, effect of the harmonic transformations involved.
hyper-symmetrical whole-tone scale—therefore excluding odd interval classes. Table 2.9 also further illustrates the pivotal role of the two invariant pitch-interval generators across network-pairs b/c (prevalence of ic 2) and d/e (prevalence of ic, 3). Furthermore, the set-class view adopted here also highlights the role of two pitch-class-interval generators, playing a similar pivotal role, between network pairs a/b (05) and c/d (02).48 Finally, the evolution of the interval vectors across the period also illustrates the impact of pitch-class density on harmonic definition, which can be somewhat blurred by the multiplication of cross-relations if the density is too high (B16), and, conversely, be difficult to ascertain if the density is too low, and the intervallic relations too scarce (B20).49

In addition to these intervallic measures, the intelligibility of the broad harmonic relations displayed in mm. 119–133 is also greatly enhanced at the musical surface by phrasing, dynamics, rhythmic articulation, and motivic correspondences, leading to striking musical effects. For example, the evolution of the five-note motive identified earlier in the opening measures of group-types iv, v, and vi, convincingly highlights the harmonic/stylistic trajectory of mm. 119 and 134: densely chromatic in its first appearance (m. 119, network a, “Schoenberg”), it shortly returns in a pentatonic guise (m. 121, network b, “Bartók”), and, a few measures later, in a whole-tone, Debussyan version (m. 128, network c).

48 The pivotal role of (02), therefore, extends across three networks: b, c, and d. Also, taking into account these common pitch-class intervals, each step of network sequence a–e yields one such pivot interval, contributing to the organic unfolding of the entire sequence.

49 Note that the two measures composing the sequence’s final group, B20, comprising only two pitches each, have been compounded in Table 2.9 in order to produce a more significant interval-vector datum.
15. Sectional Derivation (2): Section E

The last section, E, performs a compressed, retrograde recapitulation of the various processes observed in sections A–D, progressively returning to the quiet, sparse texture of the piece’s opening. This is achieved through a manipulation of the sectional structure, resulting in a retrograded unfolding, within section E, of virtually all the processes observed across the first four sections.50

The overall parametric structure of section E is modified by a retrogradation of the group-type–sequence (Fig. 2.34; compare to Fig. 2.12, above), resulting in a modified distribution of the Network and Group-Type families—and of their attached parametric fields—across the section (Table 2.10—compare to Table 2.2, above).

![Diagram of Periods and Groups](image)

**Figure 2.34.** Section E, group distribution. Numbers 1–35 indicate order number within section. Network and Group-Type families in rows and columns, respectively. Periods (I–XI) in diagonals.

50 The singular structure of section E is briefly mentioned by Pousseur in his comments (see Appendix Ia, 145). The specific group-type distribution for section E is also indicated in his “Elements for Analysis” (see Fig. 2.1.1c, bottom).
Table 2.10. Section E, parametric distribution. "Measures" and "Density" indicate, respectively, number of measures, and average pitch density per group.

As a result of this modification, the interpolated Group-Type sequence is performed in retrograde order, starting with vii and ending with i. In turn, the unfolding of the associated series (Measures, Density) is also retrograded, yielding an overall decrease in pitch-density across the section, realized through nested, increasing segments—while the Measure series, as per its internal symmetry, remains unaffected. On the other hand, the interpolated Network-sequence conserves its original order—resulting in a unique alignment of the two sequences’ phases within each period in section E (i.e., from group-type i to vii, and from network a to e). As a result, the piece as a whole retains an ordered, progressive, harmonic shape, starting with network a, and ending with network e.

At the local level, the groups composing Section E are also transformed through a process of retrograde inversion of their parent group types. Figure 2.35 illustrates this process within the abstract network, applied to the corresponding members of the iii/a-family within sections A (A4) and E (E11), as a symmetrical “flip” of the paths around the central pitch, doubled with a retrogradation of the attack order.51 Figure 2.36 displays the

51 Note that this retrogradation also affects the distribution of the Attack-parameter within each group-type, from a decreasing pattern in sections A–D, to an increasing pattern in section E. For example, the number of attacks per measure is 1-2-3 in A4, and 3-2-1 in E11 (see Figs. 2.35 and 2.36).
same transformation in pitch space, corresponding to canonical transformation $RI_0$: inversion around a C/F #-axis, and retrogradation of attack order. $^{52}$

![Diagram](image)

**Figure 2.35.** Retrograde-inversion of Group Types in section E, network view, using groups A4 and E11 (both members of iii/a-family)

![Diagram](image)

**Figure 2.36.** Retrograde-inversion of Group Types in section E, pitch view, using groups A4 and E11 (both members of iii/a-family)

$^{52}$ Note that the central axis of the I-transformation in pitch space, C/F #, corresponds to the inversionsal relationship of the central pitches for section A (A, pc 9) and E ($E_b$, pc 3).
The groups in section E are also subjected to a process of multiplication through pitch figuration, similar to the one observed in section B. However, unlike in all other sections, the multiplier varies in the course of section E, resulting in an incremental decrease of rhythmic density (i.e., number of attacks per measure) throughout the section. This process—entangled with a parallel evolution of tempi, dynamics, and articulation—is illustrated in Example 2.7, presenting all five groups from the E/iii-family, in their order of appearance within section E, as displayed in the score.
Example 2.7. E/iii-family: E11, mm. 341–43; E17, mm. 356–58; E23, mm. 371–73; E28, mm. 384–86; E32, mm. 394–96. Each group is labeled with corresponding network a–e.
The multiplication process is not entirely regular, the rhythmic density of each measure decreasing at different rates: relatively slow, and with few increments for the first measure of each group, which displays two attacks in the first three groups (E11/17/23), and one in the last two (E28/32); more progressive and regular in the second and last measures, modulated by the use of measured tremolos in E11 and E17. More specifically, a closer look at the Attacks-distribution for the entire section reveals a systematic design, based on the use of five distinct Attack series (Att₁-5), strictly distributed within groups E1-35 (Table 2.11). The evolution of these series is not regular: the increasing shape exhibited by the last three series (Att₃-5) is not followed in the first two (Att₁-2).

<table>
<thead>
<tr>
<th>Networks</th>
<th>viii</th>
<th>vii</th>
<th>vi</th>
<th>v</th>
<th>iv</th>
<th>iii</th>
<th>ii</th>
<th>i</th>
<th>Series</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>E1</td>
<td>E2</td>
<td>E4</td>
<td>E7</td>
<td>E11</td>
<td>E16</td>
<td>E21</td>
<td></td>
<td>Att ₁ (2, 1, 2, 4)</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>4</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b</td>
<td>E3</td>
<td>E5</td>
<td>E8</td>
<td>E12</td>
<td>E17</td>
<td>E22</td>
<td>E26</td>
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<td>Att ₂ (2, 6, 2, 4)</td>
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<td></td>
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<td>4</td>
<td>1</td>
<td>(8)</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>c</td>
<td>E6</td>
<td>E9</td>
<td>E13</td>
<td>E10</td>
<td>E23</td>
<td>E27</td>
<td>E30</td>
<td></td>
<td>Att ₃ (2, 4, 6, 10)</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>6</td>
<td>10</td>
<td>4</td>
<td>6</td>
<td>10</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>d</td>
<td>E10</td>
<td>E14</td>
<td>E19</td>
<td>E24</td>
<td>E28</td>
<td>E31</td>
<td>E33</td>
<td></td>
<td>Att ₄ (1, 3, 5, 8)</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>4</td>
<td>8</td>
<td>3</td>
<td>5</td>
<td>8</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>e</td>
<td>E15</td>
<td>E20</td>
<td>E25</td>
<td>E29</td>
<td>E32</td>
<td>E34</td>
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<td>Att ₅ (1, 2, 3, 5)</td>
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<td>5</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Table 2.11. Section E, Attacks distribution, showing interpolation of Attacks-series Att₁-5.

Shadowed measures feature tremolo-modulation. Parenthesis indicate anomaly in series distribution.

---

53 The distribution of each Attack-series in section E, detailed in Table 2.11, follows a type-1 diagonal interpolation, leading—unlike in sections A–D—to a progressive decrease in the number of attacks per measure in the course of the section.
The interpolated distribution of Attacks presented in Table 2.11 is modulated at the musical surface by the presence of measured tremolos in the first half of section E. This occurs in every measure of the first three periods (I-III), disappearing progressively in the next three (IV–VI). This tremolo-modulation, unique to section E, culminates the process of rhythmic densification observed in sections A–D. It also mechanically increases the surface density, effectively “correcting” the anomaly observed in the distribution of the Attacks series, conferring a consistently decreasing slope to the rhythmic-density envelope for section E. Figure 2.37 presents the five Attacks-series as a single transformational network, revealing the unifying role played, across series, by the same multipliers governing the evolution of density across sections A–D—i.e., (1, 3/2, 2, 3)—here presented in retrograde order. These multipliers govern only partially the evolution of the series: strictly for Att3-5; loosely for Att2 (partially modulated by tremolos), and not at all for Att1, wherein measured tremolos become the governing factor.

**Figure 2.37.** Section E, transformation of the Attack-series, indicating multipliers (italicized) and tremolo modulation (“tr.”). Parenthesis indicate partial application of the transformation.

The distribution of tempo accompanies the global decrease in intensity in the course of section E: the tempo (corresponding to the time-signature numerator for each measure) decreases globally across the section, through a series of nested increases within each group.
(predicated by their parent group-types’ parametric structure), of decreasing amplitude between each successive group. This global envelope is also modulated locally by elements of articulation: the measured tremolos noted above (periods I–VI, mm. 307–340), are replaced by a series of accelerandos/ritardandos, progressively fading in and out from period IV to VIII (mm. 331–390), and disappearing in the last sequences, leading to a return of the sparse, simple texture of the piece’s opening measures in periods IX–XI (mm. 391–397).

Time signatures also participate to the section-wide decreases in rhythmic complexity: while the first part of the section (I–IV, mm. 307–340) features a majority of “incomplete,” shorter measures (i.e., time signature $x/y$, wherein $x<y$), the remainder of the section, starting with period V (mm. 341–353), sees an increasing predominance of “lengthened” measures (i.e., time signature $x/y$, wherein $x>y$). In addition, the time-signature denominators (i.e., $y$, for time signature $x/y$) progressively shift from a majority of odd values to a majority of even values, leading to a progressive simplification of tempo-relations across measures in the course of the section.

Unlike in sections A–D, section E receives its own dynamic profile. Each group is associated with a single dynamic value, taken from an original series of five: ($p$, $mf$, $f$, $ff$, $fff$).

<table>
<thead>
<tr>
<th>Period</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>V</th>
<th>VI</th>
<th>VII</th>
<th>VIII</th>
<th>IX</th>
<th>X</th>
<th>XI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group No.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
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<td>11</td>
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<tr>
<td>Dynamics</td>
<td>$p$</td>
<td>$f$</td>
<td>$ff$</td>
<td>$fff$</td>
<td>$p$</td>
<td>$f$</td>
<td>$ff$</td>
<td>$fff$</td>
<td>$p$</td>
<td>$f$</td>
<td>$ff$</td>
</tr>
</tbody>
</table>

**Table 2.12.** Section E, distribution of dynamics
As illustrated in Table 2.12, this dynamics series is distributed within section E through Type-1 diagonal interpolation (DIA14), yielding a progressive, interpolated decrescendo throughout, accompanying the decrease in density throughout the section. Also, unlike in section A–D, these values are not modulated by crescendos/decrescendos, imparting to section E a unique, "terraced," dynamics profile.54

Finally, the distribution of articulation in section E further defines the general decrease of intensity observed in the other domains, performing a loosely structured, retrograde, recapitulation of the elements of articulations accumulated in the first four sections (presented in Table 2.7, above). In addition to the elements of articulation previously discussed (i.e., tremolos, accelerando/ritardandos), the sustain pedal is used systematically during the initial overlap between sections C, D, and E (mm. 307–329, periods I–III), effectively sustaining the climax of intensity reached at this point, and smoothening the transition to the piece’s closing part. Starting in period III (mm. 324–329), the use of the pedal becomes increasingly sporadic, disappearing completely for the last four periods (IX–XIII, mm. 391–397).

16. Conclusion

The analysis above presents Litanies as an exemplar of Pousseur’s mature compositional style. I have expounded in detail the harmonic method employed by Pousseur to control the constant variation of harmonic color through the piece, through the successive projections of a limited number of paths onto a sequence of interval networks. Our investigation has revealed the remarkable efficiency of Pousseur’s Network Technique, 54 Note, however, that, while both dynamics- and density-envelopes are overall decreasing in the course of section E, they are moving in opposite direction within each period I–XI.
allowing for the implementation of sophisticated, complex, pitch transformations, through a set of relatively simple procedures—an illustration of the evolution of the composer's harmonic methods since the experimental phase of Votre Faust.

Our analysis has also elucidated the rigorous, sophisticated modes of serial determination involved in Litanies' parametric design, relying—not unlike Votre Faust—on the complex distribution of a set of basic series within a hierarchical progression of structural levels. Figure 2.38 summarizes these processes in the form of a transformational network, tracing the evolution of a set of elements (circles) through a series of modulations (square boxes), and operations (rounded boxes), and tracing an overall trajectory from a “Parametric Space,” consisting of abstract, parametric values, to a “Network Space,” positionally organized in two dimensions, to a “Musical Space” consisting of actual, complete musical events, as they appear in the score.
Figure 2.38. Litanies: Formal overview

PARAMETRIC SPACE  -->  NETWORK SPACE  -->  MUSICAL SPACE

Basic Measures (1-16) Density Attack

Amplitude Mod. Dynamics (A-D)
Frequency Mod. Time signature

Interpolation 1

"Compositional" Mod. Parts

Group Types (I-vii)

Frequency Mod. Tempo
Harmonic Mod. Pitch Bernardity
Morphological Mod. Articulations

Groups (1-35)

Interpolation 2

Transposition

Sections (A-E)

Interpolation 3

Litanies
This simplified representation, while somewhat incomplete—in particular, it does not account for the singular design of Section E, which integrates (and recapitulates) internally the processes at work in the design of the other four sections—nevertheless offers a plausible transformational account of Litanies. This account, as well as our analysis as a whole, does not claim to present the chronological order in which Pousseur composed the piece, which could only be inferred from a study of the composer’s sketches. It offers instead an ordered, “algorithmic” view of the piece’s structure, illustrating Herman Saabe’s definition of Pousseur’s compositional act, quoted at the beginning of this chapter, as “the deployment of a definite set of elements and operations,” combined “within units whose succession constitutes the formal division of the piece’s temporal unfolding.”
In this dissertation, I have emphasized two aspects that seem essential to me: firstly, Pousseur’s enduring fidelity to the serial method, albeit in a form that vastly expands upon its dodecaphonic origins, to become a more general method of rational organization of the musical material—accompanied, admittedly, and in particular in *Votre Faust*, by a no less radical expansion of what can be considered as “musical material”; secondly, the composer’s development of a unique technical apparatus dedicated to the integration of a wide range of harmonic colors within his music.

In this last regard, however, the two pieces examined in this dissertation are not equal: indeed, *Votre Faust*—and its music-theoretical counterpart, “L’Apothéose de Rameau”—represent a fertile milestone in the emergence of Pousseur’s Network Technique, which, to a large extent, have consistently nourished the composer’s output in the following four decades. *Litanies*, on the other hand, offers a much more focused, concentrated representation of only one possible incarnation of Pousseur’s harmonic techniques—the very clear and transparent application of which made our more technical-oriented analysis of *Litanies* all the more fruitful.

In other words, if the high level of efficiency (i.e., simple procedures leading to extremely complex results) of the network-based methods illustrated in *Litanies* indicate, as observed in my introduction, a certain technical refinement over those observed in *Votre Faust*, it should not be assumed that they represent a last, normalized version of Pousseur’s Network Technique. Indeed, one of the most striking aspects of these techniques, and of the
composer’s creative trajectory as a whole, is their unique ability to constantly evolve, without seemingly ever crystallizing into a definite, final form, while at the same time remaining consistent with their original spirit.

This leads me to a consideration of the vast repertoire left to us by Pousseur, with a catalogue of more that two-hundred works, and of the fascinating discoveries that remain to be obtained. Pousseur’s manuscripts, including his scores, sketches, and voluminous correspondence with many of the major figures of post-World-War-II European intellectual life, are retained at the Paul Sacher Foundation, in Basel, and, for the large part, remain to be explored. It is my hope that this dissertation will play its part in inviting a renewed interest in Pousseur studies in the United States and beyond, and in contributing to a reevaluation of the composer’s contribution the European musical avant-garde, along with that of already established figures such as Boulez, Berio, and Stockhausen.
Appendix I: Translated excerpts

a) Excerpt 1 (“Harmonie? Harmonies!”: 227)

As soon as 1960, I became deeply involved in the search for a “generalized grammar” (but always temporary, incomplete, open), that is to say, able to create a “common denominator” between very different things, apparently incompatible, at least on the harmonic level (for example, and to begin with, Monteverdi and Webern). This common denominator, whose widest and deepest reality still escapes us [...] and which can thus manifest itself in many different ways (of which other musicians such as Stravinsky or Berg, Stockhausen and Berio after 1960, Bernd Alois Zimmermann earlier and Frederic Rzewski a little later [...] have given us some beautiful examples), finds for me his simplest, clearest, and most practical expression, in what I called the “Network Technique.”

b) Excerpt 2 (Ibid.: 235–238)

Five networks are used in Litanies; they constitute a relatively simple progression on the “melodic” level (i.e. the distance, “out-of-time,” between the constituting points of the networks), but greatly more complex, less “geometrical,” from the point of view of the resulting harmonic “colors” (this for the simple reason that the progression between consonance and dissonance, or progression in “tension,” is not simply parallel to the progression in distance: the former is, by nature, much more nuanced, involving a set of factors more difficult to coordinate). It is, nevertheless, in order to create something sufficiently convincing from this point of view that I precisely limited myself to these five networks. Here is there presentation, all five being organized around a central pitch, G4 (the G in Goeyvaerts), and limited to an “area” of 13 notes, the construction of each being
defined by two numbers of semitones (convention that symbolizes qualitative intervals, not necessarily quantified in this way by the listener), one for the vertical axis, the other for the transversal axis, ascending towards the right (while a third, between parenthesis, defines their difference, representing the axis ascending towards the left—or descending towards the right—of this space with triangular shapes [mailles?], as with all these networks, that carry the multiple harmonic vectors of a melodic space, fundamentally one-dimensional, the frequency scale)— [Ex. 3.1].

Example 3.1. "The five networks for AQUARIUS-MÉMORIAL. “Out-of-time” structures, that can be “explored” in all directions—either by the composer, or, in cases of “open forms” and improvisation, by the performer(s)." (“Harmonies? Harmonies”: 236)

Note:

1) That the first network is chromatic tight, whereas the fifth is chromatic wide,

“Webernian;” that the second is diatonic, the third “whole-tone” (two even modules),
and that the fourth yields a stack of thirds, even triads, but few octaves (unlike the second), and therefore ‘tense’ relations between levels.

2) That if the progression of the two intervals follows a certain alternation:

   5, 7, 8, 10, 11 (+2 or +1),

   1, 2, 2, 3, 3 (+1 or 0),

   the third, “resulting” [interval], yields the most regular progression:

   4, 5, 6, 7, 8 (always +1).

3) That there are correspondences between networks with common intervals, not only “in the same position” (the 2, major seconds, and the 3, minor thirds, of the second series), but also “from one position to an other” (the 7, perfect fifths, and the 8, minor sixths, of the first and third series), to which can be added the inversions from 1 to 11, 2 to 10, 4 to 8, and 5 to 7, which take into account only “interval-class” relationships.

Also note:

a) that a very simple figure (in fact, a single, sustained note), presented at the beginning of the piece, will be developed through addition of notes from the network: horizontally (“melody”), which results in an acceleration if the total duration remains constant, or vertically (chords), which results in a thickening [of the texture], accentuating through simultaneity the differences in “color” between the different networks.

b) that if, indeed, this process is first deployed (repetition, progressively varied) within the first network, it is nevertheless reproduced exactly in each one of the other
networks, the intervals thus becoming larger, but the contour and (approximate) proportions being preserved; and that we alternate these five layers according to an order of which I only indicate here the beginning ([Ex. 3.2] - capital letters represent here the five variants, and thus the five networks):

<table>
<thead>
<tr>
<th></th>
<th>A 1</th>
<th>A 2-3</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>B 1</td>
<td></td>
<td>A 4-6</td>
<td>A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>C 1</td>
<td></td>
<td></td>
<td></td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>D 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>B</td>
</tr>
<tr>
<td>E 1</td>
<td></td>
<td></td>
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</table>

**Example 3.2.** [No caption] (Ibid.: 237)

c) that this entire set of 5 x 16 figures irregularly but inexorably growing in energy—actually deployed initially not around the G4 mentioned above [see Ex. 3.1], but around A3, a minor-seventh below—is also reproduced around five different “horizon”-notes, forming a shortening of the name (K)A(R)E(L) G(OEYV)A(ERT)S:
[Ex. 3.3]—G4 being therefore at the center of the entire architecture—and that these five larger units, while reproducing, transposed, the complete process of 80 figures already mentioned, and maintaining the large pulsation which articulates their succession in an almost obstinate manner, continue nevertheless, until the fourth, to considerably proliferate the material, while the fifth unit, presented in retrograde order (except for its harmonic plan: it ends with network number 5), performs a fall from degree 4 to degree 1 of the last multiplication in density. Finally, these five large units being dove-tailed within each other to a certain extent (more and more so until the fourth, less so for the fifth), and dynamics as well as articulation coming to corroborate all this, it results in an enormous, complex, arch, lasting around twenty minutes, (with permanent returns, or falls and rises) of which I believe one can perfectly perceive the ondulatory unity.

Example 3.3 [no caption] (Ibid.: 238)
Appendix II: *Les Litanies d’Icare*, annotated score

See below an annotated version of the published score.¹ Each group is labeled, above the circled capital letter and number indicating its section (A–E) and order number (1–35), with its corresponding *Network* (a–e, see Fig. 2.8) and *Path* (i–vii, see Fig. 2.9). Thus, for example, the marking “a/i” (boldface) above the label for the opening group of the piece (i.e., “A1”), indicates that the group is derived from *Network a* (using the operating pitch center for section A, “A3”), and *Group Type i*. *Periods* (I–XI), separated by double bars in the original score, are also identified with a boldface, uppercase, Roman-numeral label placed directly to the left of the label marking each period’s opening group (e.g., on the first page of the score: *Period labels* I, II, III, IV, and V next to the labels for, respectively, groups A1, A2, A4, A7, and A11).

Les Litanies d'Icare

\begin{align*}
\text{c/iii} & \quad \text{d/ii} \\
A13 \ (r = 63) & \quad A14 \\
\text{p} & \quad \text{p}
\end{align*}

\begin{align*}
\text{e/i} & \quad \text{VI} \ (A16) \ (r = 105) \\
A15 & \quad A16 \\
\text{pp} & \quad \text{p}
\end{align*}

\begin{align*}
\text{b/v} & \quad \text{c/iv} \\
A17 \ (r = 105) & \quad A18 \ (r = 105) \\
\text{pp} & \quad \text{pp}
\end{align*}

\begin{align*}
\text{d/iii} & \quad \text{d/iii} \\
A19 \ (r = 63) & \quad A19 \ (r = 63) \\
\text{pp} & \quad \text{p}
\end{align*}

\begin{align*}
\text{e/ii} & \quad \text{a/i} \quad \text{a/vii} \\
A20 & \quad I \ (B1) \quad \text{VII} \ (A21) \ (r = 105) \\
\text{pp} & \quad \text{p} \quad \text{p}
\end{align*}
Les Litanies d'Icare

\[ d/iv \]
\[ B24 (\sigma = 84) \]
\[ (\sigma = 105) \]
\[ (\sigma = 63) \]

\[ e/iii \]
\[ B23 (\sigma = 105) \]
\[ (\sigma = 63) \]
\[ (\sigma = 42) \]

\[ a/iv \]
\[ IV (C7) (\sigma = 126) \]
\[ (\sigma = 73) \]
\[ (\sigma = 105) \]

\[ b/iii \]
\[ C8 (\sigma = 73) \]
\[ (\sigma = 105) \]
\[ (\sigma = 63) \]

\[ c/ii \]
\[ C (\sigma = 84) \]
\[ (\sigma = 63) \]

\[ d/i \]
\[ C10 (\sigma = 42) \]
Les Litanies d'Icare

IV (7)

Pf.

b/iii

Pf.

c/ii

Pf.

d/i

Pf.

o/vii

IX (830) (d = 84)

D10 (d = 63)
Les Litanies d'Icare
Les Litanies d'Icare

\[ \text{d/vii} \]

\[ X (B33, \text{q} = 84) \]

\[ \text{e/vi} \]

\[ (B34, \text{q} = 105) \]

\[ \text{a/vii} \]

\[ \text{VII} (C21, \text{q} = 126) \]

\[ \text{b/vi} \]

\[ (C22, \text{q} = 73) \]

\[ \text{c/v} \]

\[ (C23, \text{q} = 126) \]

\[ \text{d/iv} \]

\[ (C24, \text{q} = 126) \]

\[ \text{e/iii} \]

\[ (C25, \text{q} = 73) \]

\[ \text{fff} \]

\[ \text{mf} \]

\[ \text{pp} \]

\[ \text{fff} \]

\[ \text{mf} \]

\[ \text{fff} \]
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