Two Responses to Modernism:
Minimalism and New Complexity in Solo Flute Repertoire

by

Twila Dawn Bakker
Bachelor of Arts, University of Alberta, 2008

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Supervisory Committee

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Abstract

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Wind repertoire, especially for flute, has received little focused attention in the musicological world especially when compared with other instruments. This gap in scholarship is further exacerbated when the scope of time is narrowed to the last quarter of the twentieth century. Although Minimalism and New Complexity are – at least superficially – highly divergent styles of composition, they both exhibit aspects of a response to modernism. An examination of emblematic examples from the repertoire for solo flute (or recorder), specifically focusing on: Louis Andriessen's *Ende* (1981)*;* James Dillon's *Sgothan* (1984), Brian Ferneyhough's *Carceri d'Invenzione IIb* (1984), *Superscripto* (1981), and *Unity Capsule* (1975); Philip Glass's *Arabesque in Memoriam* (1988); Henryk Górecki's *Valentine Piece* (1996); and Steve Reich's *Vermont Counterpoint* (1982), allows for the similarities in both genre's response to modernism to be highlighted. These works are situated historically and characteristics of both styles are highlighted with particular regard to Late or Post-Modernism.

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Acknowledgments

Yarding the stars when they drift away
And towing the sun on a golden chain,
On a silver line, drinking cups of coffee.
-"Tugboats," Bob Bossin

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I would like to thank C.F. Peters Corporation for providing copyright permissions for the following examples included herein:

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Dedication

For the parents of the little girl who was always and forever asking questions.

Preface

The central goal of this thesis is to situate a small, representative corpus of works for solo flute (or recorder) into two contemporary late modernist compositional idioms - Minimalism and the New Complexity. This examination of Louis Andriessen's *Ende*, James Dillon's *Sgothan*, Brian Ferneyhough's *Carceri d'Invenzione IIb*, *Superscripto*, and *Unity Capsule*, Philip Glass's *Arabesque in Memoriam*, Henryk Górecki's *Valentine Piece* and Steve Reich's *Vermont Counterpoint* attempts to demonstrate two things. First, the ways in which these works exemplify the two opposing musical processes and second, the value of these processes and critical perspectives as tools for understanding flute works by these six composers. Beginning with an examination of the historical movement and philosophical milieux that surrounded the separate developments of Minimalism and New Complexity (defined in Chapters 2 and 4 respectively), these currents of late-twentieth-century music will then be viewed through the lens of the above works, composed from the mid 1970s to mid 1990s, which are regarded as representative of these large-scale compositional trends. Wind repertoire is useful in delineating these particular aesthetic movements mainly because many of the composers examined here were themselves trained as wind instrumentalists (notably La Monte Young and Philip Glass in the case of Minimalism, and Brian Ferneyhough in the case of New Complexity).[1] By dealing explicitly with solo repertoire for one unaccompanied melodic instrument it is possible to focus the analysis on the basic characteristics of the

[1] Philip Glass and Brian Ferneyhough likely have a deeper understanding of the functioning of the flute, then La Monte Young who was originally a saxophonist. Glass was originally trained as a flutist and Ferneyhough has stated that of his works he would be most comfortable performing those written for the flute.

music and define the musical processes of both styles. In the end, I will demonstrate that both styles, however different, also share core similarities such as: irony; disdain for structural unity; an understanding of music's wide cultural, social and political relevance; fragmentation and discontinuities; quotation of and references to music of many traditions and cultures; they embrace and engage in contradiction; they conceive of technology as a creative tool more than one of mere historical stewardship; they are pluralist and eclectic in styles, techniques and expression levels; and both explore hybridity of genre.

Additionally, scholarship on modern flute repertoire is relatively scarce, especially in comparison to the work done on the repertoire of other instruments such as the violin or piano. The majority of these limited flute repertoire studies have focused on the French flute school of the early twentieth century.[2] Little scholarship deals explicitly with flute repertoire of the late-twentieth century. Those studies which do exist on late-twentieth-century flute repertoire are mainly practical in nature, providing descriptions and discussion of the extended techniques required in their performance. Robert Dick's *The Other Flute* from 1975 and Carin Levine and Christina Mitropoulos-Bott's more recent work from 2002-2004, *The Techniques of Flute Playing*, are examples of such performance-orientated literature. The gap in flute scholarship is symptomatic of an even larger void of musicological studies on wind repertoire in general.

The literature on musical Minimalism is more wide ranging than that completed on flute repertoire. Minimalism has been explored as a cultural practice emerging from

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[2] Some studies of the French flute school and its practitioners include: Edward Blakeman, *Taffanel: Genius of the Flute* (Oxford: Oxford University Press, 2005); Claude Dorgeuille, *The French Flute School, 1860-1950,* trans. Edward Blakeman (London: Tony Bingham, 1986); Ann McCutchan, *Marcel Moyse: Voice of the Flute* (Portland, OR: Amadeus Press, 1994); Nancy Toff, *Monarch of the Flute: The Life of Georges Barrère* (Oxford: Oxford University Press, 2005).

America in the 1960s and 1970s in such books as Robert Fink's *Repeating Ourselves* (2005). Other studies have examined the movement from an interdisciplinary perspective, linking musical Minimalism to Minimalist movements in the visual arts.[3] As with the scholarship on flute repertoire, the focus of a large portion of the research completed on Minimalism is largely biographical in nature, a major example of this literature is Wim Mertens's *American Minimal Music* (1983). The biographical information provided in these studies typically is derived from first-hand accounts of the composers and performers of these works, usually written shortly after the time period in question. Keith Potter tempers the saturation of biographical information that is provided in his work from 2000, *Four Musical Minimalists*, with short discussions and analysis of a variety of compositions by Young, Riley, Reich, and Glass. Ian Quinn articulated a problem felt in the study of Minimalism in his 2006 article, "Minimal Challenges: Process Music and the Uses of Formalist Analysis" noting that theoretical discussions are somewhat stilted because formalist analysis will provide technically correct but empty results for the scholars. Attempts to rectify this problem and discover the theoretical underpinnings of Minimalist works have been undertaken in articles by Kyle Gann, Timothy A. Johnson, and Dan Warburton.[4]

In contrast, studies on the New Complexity as a compositional school of the latter half of the twentieth century focus on discerning the impetus behind such complexities of style. Richard Toop, one of the leading scholars dealing with the New Complexity, strove

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[3] Jonathan W. Bernard, "The Minimalist Aesthetic in the Plastic Arts and in Music," *Perspectives of New Music* 31/1 (1993): 86-132.

[4] Kyle Gann, "Thankless Attempts at a Definition of Minimalism," In *Audio Culture: readings in modern music*. Ed. by Christopher Cox and Daniel Warner, 299-303 (New York: The Continuum Publishing Group Inc., 2006); Timothy A. Johnson, "Minimalism: Aesthetic, Style or Technique?" *Musical Quarterly* 78/4 (1994): 742-773; Dan Warburton, "A Working Terminology for Minimal Music," *Intégral* 2 (1988): 135-159.

to establish the main characteristics of the movement in his 1988 article "Four Facets of the 'New Complexity,'" which is widely considered to contain the first use of the term. Interviews with and writings of the composers associated with the Complexity movement also comprise a significant portion of the literature on the movement.[5] Other scholars, such as Stuart Paul Duncan in his 2010 article "Re-Complexifying the Function(s) of Notation in the Music of Brian Ferneyhough and the 'New Complexity,'" seek to define the movement as something more than an excessively proscriptive notational style. While, Lois Fitch explores the idea of modernism, Post-Modernism and what she terms, 'Post-modern-modernism' in the oeuvre of Brian Ferneyhough.

Both Complexity and Minimalism as movements have not been the subject of comprehensive analytical studies. In comparison to the plethora of literature dealing with the works of Beethoven, for example, the extant scholarship on Minimalism and Complexity is negligible. Although there have been a few substantial studies of Minimalism, such as the aforementioned *Repeating Ourselves* by Robert Fink and Keith Potter's *Four Musical Minimalists*, less work from an etic perspective has been done on the Complexity movement as a whole. Brian Ferneyhough has written extensively on his own music, but his studies are not easily transposed to the works of other practitioners of Complexity, such as James Dillon, for whom all that is currently available are short interviews and articles.[6] Part of the explanation for this paucity of musicological

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[5] Some examples of interviews and writings include: Brian Ferneyhough, *Collected Writings*, ed. James Boros and Richard Toop (London: Routledge, 2003); Andrew Ford, *Composer to Composer: conversations about contemporary music* (Granada: Quartet Books, 1993); Michael Finnissy and Marilyn Nonken "Biting the Hand that Feeds You," *Contemporary Music Review* 21/1 (2002): 71-79; Richard Toop, "Four Facets of the 'New Complexity'," *Contact* 32 (1988): 4-50.

[6] Examples of works on Dillon include: Elizabeth Hoffman, "Textural *Klangfarben* in James Dillon's *La femme invisible* (1989): An Explanatory Model," *Perspectives of New Music* 43/1 (2005): 4-33; Keith Potter, "Contemporary British Composers 3: James Dillon: Currents of Development," *The Musical Times*

literature on these movements lies simply in their proximity to our own time. As western music genres, this corpus is young and is just beginning to receive sustained scholarly attention, although work has been undertaken in the wide cultural movements that support the musical genres.

Perceived constraints associated with flute playing, such as being tied to breathing, monophony[7] and diatonicism, appear at first to be limitations to some of the aesthetics of new music. However, these perceived realities have been exploited, adapted and manipulated by generations of performers to become strengths. The performer's adaptation takes the form of extended techniques such as circular breathing, multiphonics, singing while playing and the development of microtonal fingerings which create an extensive pallet of sonorities. As such, the flute has become a very versatile instrument with a wide range of extended techniques that can be employed to particular ends by a savvy composer.

Emblematic examples of Minimalism and Complexity can be found in repertoire for solo flute and more widely in wind repertoire. The solo nature of these works forces the compositional style to be crystallized by limiting the composer's choices, while the monophonic nature of a wind instrument imposes a further set of restrictions on the possible choices. Due to the scope of this thesis, a selection of emblematic works was required. Brian Ferneyhough's works were chosen for three reasons. First of all, Ferneyhough is the face of the New Complexity and he pioneered the style as an

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131/1767 (May 1990): 1253-1260; Arnold Whittall, "The Elements of James Dillon," *The Musical Times* 148/1899 (Summer 2007): 3-17.

[7] Perceived monophony is one of the biggest hurdles to the flute's employment in music of a Post-Modern aesthetic. Monophony would make attributes such as a multiplicity of temporal experience and musical lines much more difficult to achieve with a solo flute. However, composer's functioning during the late modern time period developed Post-Modern tools such as singing while playing, multiphonics and tape tracks to make such multiplicity possible.

established composer. Second, as Ferneyhough's work is widely considered to be synonymous with that of the broad category of Complexists, the development of his compositional style was interesting to trace through the same instrumental vein. And third, Ferneyhough's works are widely available in libraries and as such are more frequently performed and better known in North America than other New Complexists. *Unity Capsule, Carceri d'Invenzione IIb* and *Superscripto* were selected to demonstrate the variety of manners one composer can adopt when approaching the composition of a complex work for solo flute. Ferneyhough's ultra-virtuosic notational style is typified in *Unity Capsule* for solo flute (1975). *Carceri d'Invenzione Ilb* for solo flute (1984), and *Superscripto* for solo piccolo (1982) were selected to show the expansion of his notational style to other instruments id est, piccolo and the continuation of it with the flute. A contemporary of Ferneyhough, James Dillon also employs an extremely high level of detail in his 1985 work for solo flute *Sgothan.* This work was selected to demonstrate another composer's approach to the ideals of the New Complexity. On the other hand, composers synonymous with the Minimalist movement like Steve Reich and Philip Glass pare down musical details in favour of repetition. An early example of a minimalist piece for solo flute is Steve Reich's *Vermont Counterpoint* (1982), written for and premiered by American flutist Ransom Wilson. Philip Glass's 1988 work, *Arabesque in Memoriam,* is yet another manifestation of the minimal genre in solo flute music. Dutch composer Louis Andriessen's personal take on Minimalism is demonstrated in his work *Ende* (1981) for two alto recorders performed by a single musician. The aesthetic world of the so-called sacred or holy minimalists can be comprehended through the work *Valentines for Solo Flute* from 1996 by Henryk Górecki. In the realm of Minimalism

fewer repertoire choices are viable for solo wind instruments. The selections made demonstrate the variety of composers and their approaches to the style. See Table 0.1 for a tabulation of the works, dates, and instrumentation of the works that will be discussed in further detail in this thesis.

Year	Composer	Work	Style	Instrumentation
1975	Ferneyhough	*Unity Capsule*	New Complexity	Solo Flute
1976				
1977				
1978				
1979				
1980				
1981	Andriessen	*Ende*	Minimalism	Two Alto Recorders
	Ferneyhough	*Superscripto*	New Complexity	Solo Piccolo
1982	Reich	*Vermont Counterpoint*	Minimalism	Flute & Tape
1983				
1984	Dillon	*Sgothan*	New Complexity	Solo Flute
	Ferneyhough	*Carceri d'Inverzione IIb*	New Complexity	Solo Flute
1985				
1986				
1987				
1988	Glass	*Arabesque in Memoriam*	Minimalism	Solo Flute
1989				
1990				
1991				
1992				
1993				
1994				
1995				
1996	Górecki	*Valentine Piece for Solo Flute and Little Bell, Op. 70*	Minimalism	Solo Flute and Bell

Table 0.1. Timeline of select compositions for wind instruments involving techniques of Minimalism and New Complexity, between 1975 and 1996.

Through an examination of this flute repertoire the late modern qualities of Minimalism and New Complexity will become evident. Chapter one explores terms used in music to discuss a move beyond modernity and develops a rubric, which once established will be used throughout this thesis to discuss both Minimalism and New Complexity. Chapters two and three focus on Minimalism. The defining characteristics of Minimalism and the development of Minimalism by geographic location are dealt with in chapter two. Chapter three is centered on the study of the selected repertoire by Reich, Glass, Andriessen, and Górecki. As a counterpoint to Minimalism concepts of New Complexity are developed in chapters four and five. Chapter four elucidates features of the New Complexity movement and its geographically oriented development, while chapter five examines the repertoire of Ferneyhough and Dillon. Finally, chapter six relates New Complexity and Minimalism to one another as compositional moves beyond modernism as seen in solo flute repertoire.

Chapter 1 Features of Late Modernist Music

In order to discuss genres as seemingly divergent as Minimalism and New Complexity it is necessary to provide a forum where they can be compared with equivalent terms. This comparison is facilitated by the utilization of recent scholarly work that characterizes music from the last quarter of the twentieth century as a reaction to a certain modernist attitude. David Metzer in *Musical Modernism at the Turn of the Twenty-First Century* (2009) refers to this reactionary attitude and time frame as 'late modernism.'[8] Whereas Claus-Steffen Mahnkopf's notion of 'Second Modernism' sees the last quarter of the twentieth-century as a break from Post-Modernism and it reaffirms modernist tenets, such as experimentation and innovation.[9] Both Mahnkopf and Metzer's understandings of this time frame and attitude encompass much of what we will consider to be Post-Modern in this thesis. As I consider Post-Modernism to be pluralistic by definition, all of these currents (and more) can fall under the rubric of Post-Modernism, the term which will be used in what follows.[10]

The late modern attitude is characterized by its fundamental self-reflexive nature. At the turn of the twenty-first century theorist Jonathan Kramer described how Post-Modern musical compositions engage with the past by stating that "they simultaneously

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[8] David Metzer, *Musical Modernism at the Turn of the Twenty-First Century* (Cambridge: Cambridge University Press, 2009), 2-3.

[9] Post-Modernism as understood by Claus-Steffan Mahnkopf, is the belief that the composition of innovative, new material is no longer possible and therefore all elements of musical material regardless of former usage are equally viable as elements of composition. See: Claus-Steffen Mahnkopf, "Second Modernity–An Attempted Assessment," in *Facets of the Second Modernity*, ed., Claus-Steffen Mahnkopf, Frank Cox, and Wolfram Schurig (Hofheim: Wolke Verlag, 2008), 9.

[10] Post-Modernism is often considered by popular definition to refer to literal quotation or collage in music. The definition of Post-Modern as utilized in this thesis understands Post-Modern as such but expands this definition following literary criticism models.

embrace and repudiate history."[11] The paradoxical nature of Kramer's statement captures the most basic tensions inherent to the concept of the Post-Modern: the need to use a historicist conception, while concurrently rejecting the past as antiquated. Beyond this internal struggle for definition, a bewildering web of terminology, ambiguous in its application and its philosophical implications, has been elaborated by Post-Modern thinkers. Literary theorist Ihab Hassan describes a heightened level of tension brought to bear by the Post-Moderns internal struggle for definition.[12] The period following the modern occupies very contentious ground, one where the stakes involved in being correct are very high. In a situation where there is such tension, establishing the identity of the practitioner–composer, performer– becomes crucial.

Kramer differentiates two ways of comprehending the late modern condition, one that understands Post-Modernism as a historical time period and one that understands it as an attitude. It is the latter form that Kramer utilizes and that will be adopted for the purposes of this discussion.[13] This attitude is one expressed by individuals who are taking part in the Post-Modern condition.

Post-Modern Origins

Late modernism can be considered as being encompassed by the term Post-Modern in its broadest definition. As such it is necessary to understand the atmosphere in which it originated. Post-Modern thought was originally codified in twentieth-century

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[11] Jonathan D. Kramer, "The Nature and Origins of Musical Postmodernism," *Current Musicology* 66 (1999): 7.

[12] Ihab Habib Hassan, "From Postmodernism to Postmodernity: The Local/Global Context," *Philosophy and Literature* 25/1 (2001): 2.

[13] Kramer, "The Nature and Origins of Musical Postmodernism," 8.

literary theory. Jean-François Lyotard wrote the first comprehensive work on the movement with *La condition Postmoderne: rapport sur le savoir* in 1979.[14] In this work Lyotard is sceptical of the existence of a meta-narrative to explain the history of knowledge. Lyotard calls into question the grand overarching narrative of history by appealing to Ludwig Wittgenstein's notion of language games and the inherent contradictions which it reveals about any theory of meaning. The term "language games" was first used by Wittgenstein in his posthumously published *Philosophische Untersuchungen* (1953). The term is intended "to emphasize that the *speaking* of language" is also a part of the activity.[15] Three observations are made about these language games: first, the rules of the game are not equivalent to a legitimization of the rules but rather represent a contract between the players; second, the rules define the game and any modification to these rules changes the game; and finally, every statement should be understood as a move within the language game.[16] By drawing attention to the language games of Wittgenstein, Lyotard is able to demonstrate the inherent power of spoken discourse. Wittgenstein's notion of language games reveals the inherent difficulty when language is both the object and the very medium that is being used to discuss this object.

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[14] Translated into English by Geoff Bennington and Brian Massumi, in 1984 under the title *The Postmodern Condition: A Report on Knowledge.*

[15] Ludwig Wittgenstein, *Philosophical Investigations*, 4th Revised ed., trans. G.E.M. Anscombe, P.M.S. Hacker and Joachim Schulte, ed. P.M.S. Hacker and Joachim Schulte (Oxford: Wiley-Blackwell Publishing Ltd., 2009), 15c.

[16] Jean-François Lyotard, *The Postmodern Condition: A Report on Knowledge*, 10.

What is Post-Modernism in Music?

Throughout his influential writings, Lyotard attempts to articulate what is meant by Post-Modernism and what the condition of being Post-Modern entails. Lyotard most frequently dealt with the Post-Modern condition in literature, but also applied his philosophical attitude to music. The most explicit discussion in this vein was his 1996 essay "Music and Post-Modernity." In it, Lyotard states that Post-Modernism is an implicitly western cultural idea, owing to its being centered on the view of history as "the record of the progress of freedom in human space and time."[17] Because western culture understands history in this teleological manner, it means that there is always a movement, be it philosophical, political, or otherwise, that will replace the prevailing one. It is this idea of replacement that breeds the contradiction that Kramer elucidated above, since the present is supplanted as part of a need to move forward and to make teleological progress. Lyotard goes on to observe that the Post-Modern condition arises when humans are caught within this contradiction.[18] If people can operate within this Post-Modern condition as laid out by Lyotard, then it follows that in the realm of music, composers too can adopt such a stance. It remains to be seen how this Post-Modern stance manifests itself in the work of composers who espouse these views, however both Minimalism and New Complexity as styles both function during this time and further discussions of these styles (see chapters two and four) will crystallize this.

Aesthetic principles can be enacted in music through stages of transmission. First, the decisions of the composer govern the initial vision of the work. Second, the

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[17] Jean-François Lyotard, "Music and Post-Modernity," trans. by David Bennett, *New Formations* 66 (2009): 37.

[18] Lyotard, "Music and Post-Modernity," 38.

composer's decisions are interpreted by the performer and projected to the audience, where the final step of transmission is undertaken when the audience receives the message. The stage of this chain of transmission that has the most obvious effect on the structure of the musical work is the first, as the other steps hinge upon its completion. As such, the decisions of the composer have the ability to enact Post-Modernism or some other aesthetic principle. The decisions of the composer can be distilled into elements of compositional style and can be parsed for the aesthetic intentions through which they arose. In "The Nature and Origins of Musical Postmodernism," Kramer offers a list of elements of Post-Modern compositions, while warning against using it as a checklist.[19] These elements are musical features that are typically found in works written by composers who are operating in the late modern time frame, even if the mere existence of some of these features in a composition is not enough to classify a work as Post-Modern. The identification of these characteristics in a work nevertheless strengthens the claim that it partakes of a Post-Modernist attitude.

I propose to divide Kramer's list of sixteen elements into two distinct subcategories, that which Post-Modernism includes and that which it avoids or rejects. A broad understanding of Post-Modernism, as is employed in this thesis, requires an expansion of Kramer's list. This expansion can be found in literary theory with Ihab Hassan's writings. Such terms that are missing from Kramer's list but that are found in Hassan's are hybridity, indeterminacy, active participation of the audience, and egolessness – and have been added to it here. These Post-Modern characteristics not

[19] Kramer, "The Nature and Origins of Musical Postmodernism," 10-11.

included by Kramer are found in Hassan's writings.[20] Table 1.1 tabulates Kramer's list as well as Hassan's additional characteristics.

Post-Modernism includes…	contradiction
	irony
	a disdain for the often unquestioned value of structural unity
	fragmentation and discontinuities
	understanding music as relevant in a cultural, social, and political context
	questioning the mutual exclusivity of elitist and populist values, especially the gap between 'high' and 'low' cultures
	quotations of or references to music's of many traditions and cultures
	understanding technology as deeply implicated in the production and essence of music
	locating meaning in the listening audience, more than in a score, performance, or composer
	indeterminacy
Post-Modernism avoids…	the boundaries between sonorities
	totalizing forms, and united formal construction
	binary oppositions
	the linearity of history
	considering technology only as a method to preserve and transmit music

Table 1.1. Post-Modern characteristics as a means of definition.

To begin with, Post-Modernism emphasizes the contradiction found in the simultaneous admittance of a break from modernism along with a desire for the continuation of modernity. Another contradiction found in Post-Modernism is its multiplicity of meanings and temporalities, which can be found in a pluralism and eclecticism of styles, techniques, and levels of expression. Philosopher Roland Barthes stresses this plurality of meanings, focusing not only on the fact that there are several acceptable meanings possible but also:

[20] Hassan, "From Postmodernism to Postmodernity: The Local/Global Context," 1-13.

> that it accomplishes the very plural of meanings: an *irreducible* (and not merely an acceptable) plural. The Text is not a co-existence of meanings but a passage, an overcrossing; thus it answers not to an interpretation, even a liberal one, but to an explosion, a dissemination.[21]

The multiplicity of meanings all exist separately but are to be simultaneously thought of together as a whole.

The assertion of such contradictions in the late modern highlights the fundamental contradiction noted by Kramer at the beginning of this chapter; the concurrence of an admiration for the past with a need to push forward and away from that which had come before. These contradictions are in their basic nature ironic in their incongruence. Like contradictions and irony, Post-Modernism also expresses disdain for the often unquestioned value of structural unity. In music this element can easily be represented in a lack of formal cohesion. Musical works no longer have to subscribe to an overarching form, or in Lyotard's terminology, a "meta-narrative."[22] Another concept that can easily be mapped onto the formal nature of a musical composition is the fragmentation and discontinuity typical of Post-Modern productions. This fragmentation and discontinuity is encountered in both large-scale eventualities, such as the formal structure of a musical composition, and the smaller framework of melodic development.

Music can be understood as relevant in a cultural, social, and political context, as all utterances, including musical ones, can be viewed as moves in a language game. Music can also be seen as particularly relevant in such a context which tends to question the gap between 'high' and 'low' culture. Along with the convergence of the cultural

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[21] Roland Barthes, "From Work to Text," in *Image - Music - Text*, trans. Stephen Heath (New York: Hill and Wang, 1977), 159.

[22] Lyotard, *The Postmodern Condition: A Report on Knowledge*, xxiv.

extremes comes the utilization of references to and quotation from other musical traditions as an equalizing force. Music of the late modern era often takes the form of hybrids of these ‘high’ and ‘low’ cultures.

As part of Post-Modernism’s development away from the past, technology is now understood as deeply implicated in the production and essence of music. Along with a new understanding of technology, Post-Modernism also propagates a new manner of locating meaning in music. Post-Modernism finds more meaning in the audience than in a particular score, performance, or composer. Correcting the balance of composer-centric studies, musicology of the late modern era gives equivalent prestige to studies on the reception of works, and how music functioned in a particular time period. Finally, music which moves beyond modernism returns to an exploration of ideas of indeterminacy, a move away from previous compositional styles such as total serialism, reaching back into the past as a concept to work against.

The Post-Modern aesthetic avoids division, presenting concepts in a gradient rather than as a precise quantity. As such, it evades the boundaries of sonorities, totalizing forms, binary oppositions, and the linear nature of history with a distinct past and present. Within its new understanding of technology, this era sees more possibilities for technology than simply that of an agent of stewardship. As Kramer warns, not all of the elements in his list will be present in all Post-Modern compositions and not all works that exhibit some of these elements should be considered Post-Modern – however, they are a useful point of departure.

* * *

Minimalism and New Complexity are both approaches to composition that emerged in the late modern era as a result of dissatisfaction with previous music. Yet as they are dealing in the same idiom, that of notated music, they use the same materials as earlier music. This highlights the fact that, as Kramer has suggested, all music is in some sense Post-Modern, since it functions within this cannibalistic contradiction. It is, after all, a simultaneous embracing and repudiation of a historical tradition. Each of these categories of composition —Minimalism and New Complexity— has its own challenges, developments, and particular answers to the sensibilities of the era. However both display Late Modern tendencies, and can be discussed in equivalent terms.

Chapter 2 The Varieties of Minimalist Music: a Geographic Approach

Keith Potter succinctly described minimalist music as, "...radical reductive repetition."[23] True to its Post-Modern origins, musical Minimalism is an elusive idea that is difficult to define; it is not reducible to a set of rules or operations, and no formal mould defines the space within which all Minimalist composers operate. Incidentally, in "Music as a Gradual Process" from 1968, Steve Reich (b. 1936 –) makes a statement in which he is often thought, however erroneously, to liken his music to a machine: "although I may have the pleasure of discovering musical processes and composing the musical material to run through them, once the process is set up and loaded it runs by itself."[24] This does not mean that he views his compositions as a machine, rather that the musical material under goes a series of compositional techniques, and the reaction of the musical material to these parameters determines the piece. This is illustrated by Reich's well known phase pieces (*Piano Phase*, *Violin Phase*, *Clapping Music*, etc.), in which the interaction of the two lines as they drift out of phase with each other constitutes the musical content of the work; at the same time, the parameter that determines the piece is the technique of phase shifting. These aesthetic choices are featured in characteristics which are now associated by Potter and others with the compositional school of Minimalism namely its radical nature, reduction and repetition. If each of these characteristics is addressed, the idea of Minimalism in music will gain in clarity.

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[23] Keith Potter, "Minimalism," In *Grove Music Online*. *Oxford Music Online*, http://www.oxfordmusiconline.com.ezproxy.library.uvic.ca/subscriber/article/grove/music/40603 (accessed December 8, 2010).

[24] Steve Reich, "Music as a Gradual Process" in *Writings on Music: 1965 – 2000* (Oxford: Oxford University Press, 2002), 34.

With regard to its purported radicality, the extreme limitations to musical material or the debate that surrounds the very origins of Minimalism are both sometimes seen as responsible for the perceived radical nature of the Minimalist project. Jonathan W. Bernard puts it bluntly when he outlines a commonly accepted narrative on Minimalism:

> Of course, there is another story, widely disseminated, in which minimalism is cast as the deliverer of American music from the pharaoh of Academic Serialism, leading young composers out of the desert of atonality with the reassurance that it's okay to write consonances again. In the Promised Land of the new tonality, everyone is a postminimalist almost by definition, or so it would seem.[25]

With this statement Bernard casts Minimalism as a dissenter, fighting against an oppressive genre of composition in the form of high modernism. Mark A. Radice supports this view of Minimalism as reactionary. For him, it is a reaction to both serialism and "the dense harmonic manner of Romanticism."[26] The opposition of Minimalism and serialism is afforded some credibility in a comment made by serialist composer Pierre Boulez (1925) in a 1984 interview with Jonathan Cott. Boulez stated:

> Although I don't want to be derogatory, I think that today's type of minimalist and repetitive music appeals to an extremely primitive perception, and it reduces the elements of music to one, single component —periodicity. You have a chord changing slowly, and the rest of the components are either completely ignored or reduced to just a minimum of minimums. And people suddenly say, 'Ah, my god! I understand modern music!' But it's not modern in the least. It's simply like a detail of a painting enlarged many times, and there's no substance to it at all.[27]

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[25] Jonathan W. Bernard, "Minimalism, Postminimalism, and the Resurgence of Tonality in Recent American Music," *American Music* 21 1 (2003), 127.

[26] Mark A. Radice, *Concert Music of the Twentieth Century: Its Personalities, Institutions, and Techniques* (Upper Saddle River, NJ: Prentice Hall, 2002), 284.

[27] Pierre Boulez and Jonathan Cott, "On New Music," *The New York Review of Books* 31 11 (28 June 1984), 14.

This oft-quoted disparaging remark (which recurs, for example, in Brent Heisinger's article "American Minimalism in the 1980s")[28] illustrates that for Boulez, Minimalism does not have a place in the pantheon of modern music. This supports the claim that Minimalism and serialism - the latter symbolized by the figure of Boulez - can be set in opposition to each other. Indeed, a simple juxtaposition of the statements of Boulez and Bernard makes it apparent that there was almost certainly a reactionary element involved in the development of Minimalism. Boulez further highlights the cause and effect relationship between Minimalism and serialism in the 1984 interview when he likens generations of composers to families that also experience rebellion and in-fighting. When composers write music that is different from the preceding generation, and criticize the work that came before, it can be understood as a child rebelling against his elders.[29]

The second and third traits of Minimalism given by Potter, "reductive" and "repetition," can be considered in conjunction with one another. What is reductive about Minimalist music? Certainly there is an element in the Minimalist philosophy that encourages the utilization of less material but is that comparable to the negative connotation of reduction? The essence of reduction is certainly negative in that when anything is reduced it loses something of itself; it becomes simplified, diminished from its original conception. Reduction in music therefore posits the idea that a greater music was truncated to the reduced form, and not built up using meagre means. If a music is comprised of a limited field of elements then these elements will necessarily be featured more prominently and with greater frequency than they would perhaps otherwise be. Is this what is meant by repetition, or does it refer to the tendency of some minimalist music

[28] Brent Heisinger, "American Minimalism in the 1980s," *American Music* 7 4 (1989), 430.

[29] Boulez and Cott, "On New Music," 14.

to literally repeat a module of music many times? Does Minimalist music need to partake in this automated form of duplication to be considered Minimalist?

The perceptions of Minimalism described in the preceding section elucidate the problem of the term itself; a haphazard definition that has brought with it the baggage of a cluster of associated terms. In order to fully understand the nature and development of Minimalism in music, it is necessary to examine the musical characteristics that are linked with it as well as the historical conditions surrounding its formation. As Minimalism is both a reaction to and an extension of modernism.

Characteristics of Minimalism

Musicologists, critics, composers, and performers concerned with musical Minimalism have attempted to characterize the features of a work which account for its being considered Minimalist. If a majority of the attributes discussed below are enacted within a musical work, then it could at the very least be understood to have minimalist qualities if not be considered to be an outright example of Minimalism. Critic Kyle Gann in "Thankless Attempts at a Definition of Minimalism" offers a total of twelve characteristics that he understands to be present in many Minimalist pieces. However, many of these traits are simply variations of each other and can actually be distilled into four principle categories: stasis, process, the audible nature of Minimalist form and other influences.[30] Table 2.1 summarizes the characteristic traits that are often found in musical Minimalism as discussed by Gann. However, not all of these categories must or can in fact be met for a work to be considered Minimalist.

[30] Gann, "Thankless Attempts at a Definition of Minimalism," 300-303.

STASIS	
Motionless Harmony	An inclination to function within a single harmony, or to alternate between a limited set of harmonies typically in the same order within each iteration.
Static Instrumentation	The use of all of an ensemble's instruments, all the time. Also the utilization of an ensemble comprised of a single instrument family.
Drone-Based	The opposite of pulse-based Minimalism, drone-based Minimalism focuses on a single drone pitch or pitches, typical of many of La Monte Young's compositions. Also referred to as concept Minimalism.
PROCESS	
Additive Process	A formal process that occurs over the course of the work. The work will begin with a motivic idea that is built onto slowly, in an additive manner.
Permutational Process	A overt process involving a systematic permutation of pitches.
Phase-shifting	A technique that utilizes two identical melodic phrases, which are presented simultaneously but at minutely different tempos, so that they will become out of phase with one another.
AUDIBLE NATURE OF FORM	
Steady Rhythm	The tendency to establish and maintain a single pulse layer throughout the work, it only occurs in pulse-based Minimalism. The counterpart to pulse-based Minimalism is drone-based or concept Minimalism.
Audible Structure	Structure and form of the music is instantly and easily understood by the audience with nothing more than aural cues.
Repetition	Almost exclusively found in pulse-based Minimalism and aids in the audible structure of Minimalism.
OTHER INFLUENCES	
Pure Tuning	Found more in the drone-based Minimalism than the pitch-based Minimalism. Drone-based Minimalism as found in Young's works can be understood as a slow exploration of intervals of pure tuning.
Non-Western Influences	Primarily found in the interlocking rhythmic nature of many pulse-based Minimalist works. Different ideas on the nature of time result from the processes at work within the music, one of which is a lack of a teleological end point.

Table 2.1. Common characteristics of minimal music.[31]

[31] Information derived from Gann, "Thankless Attempts at a Definition of Minimalism," 300-303.

One of the most striking features of Minimalist music is the employment of a static harmonic system. In some cases, a work employs chords drawn from a single scale, often diatonic in origin, and in extreme cases, a work could be the exploration of a single chord over the length of a composition. *Composition 1960 #7* by La Monte Young (1935) typifies this extreme case, being comprised of nothing but an interval of a perfect fifth which is "to be held a long time."[32] Musicologist Keith Potter suggests that these static harmonies are emblematic of Minimalism's reaction to serialism.[33]

Other traits that Potter views as reactionary and deliberate deviations from serialism include a regularity of rhythm, as well as a simplicity of texture and structure.[34] For his part, Gann suggests that the Minimalist corpus can be further subdivided according to whether a work focuses on pulsation or on drones.[35] It is from the concept of the occurrence of a steady regular beat in the rhythm of some prominent minimalist works and not others that the confusion arises as to whether a work that is non-repetitive can be considered Minimalist. By considering drone-based music as an important sub-category of Minimalism, Gann is able to reconcile La Monte Young's established influence on the development of Minimalism with the fact that his compositional style typically maintains long drones, rather than the pulse music which one associates with the music of Steve Reich.[36] The acceptance of a drone-based Minimalism is further

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[32] Keith Potter, *Four Musical Minimalists: La Monte Young, Terry Riley, Steve Reich, Philip Glass* (New York: Cambridge University Press, 2000), 51.

[33] Potter, "Minimalism," In *Grove Music Online*. *Oxford Music Online*.

[34] Potter, "Minimalism," In *Grove Music Online*. *Oxford Music Online*.

[35] Gann, "Thankless Attempts at a Definition of Minimalism," 301.

[36] The work *arabic numeral (any integer) for Henry Flynt* or *X for Henry Flynt* by La Monte Young (1960) features the repeated sounding of a piano keyboard (or gong) by the forearm of the interpreter, in an even rhythm for a larger number of times (the number of soundings provides the arabic numeral of the title) every one or two seconds. This work is not typical of Young's overall compositional oeuvre, which is

crystallized by Belgian musicologists Mark Delaere and Maarten Beirens who refer to this style of Minimalism as "concept" Minimalism, as it is the concept of Minimalism that is being explored in this music.[37] Concept Minimalism is the use of restricted materials, such as a single drone, over a long term without overt repetition occurring. The distinction between concept and process Minimalism focuses the idea of minimal material onto different aspects of the compositional process. Through this distinction it becomes possible for a discussion of the works of Young to occur alongside one concerned with a more pulse-orientated form of Minimalism, such as those found in Steve Reich's compositions, because these forms of Minimalism can both be understood as closely related to one another.

Pulse-based Minimalism also exhibits a simplicity of texture, a trait that Potter sees as a consequence of Reich's distaste for the inaudibility of certain compositional structures. In his seminal essay "Music as a Gradual Process," Reich makes clear that his music will attempt to combine the process of composition and the resulting auditory experience, resulting in "a compositional process and a sounding music that are one and the same thing."[38] The duality of the structure and audible sound is one of the strongest indications that Minimalism is indeed a reaction to serialism, a genre in which, it is often maintained, the most fundamental structural unit, i.e., the tone row, remains largely inaudible. Josiah Fisk notes that serialism "was music for virtuoso listeners,"[39] people

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generally centered on slowly evolving drones that shift slowly like Marian Zazeela's shadow and light shows, whose visual displays they accompany.

[37] Mark Delaere and Maarten Beirens, "Koninklijke Vereniging voor Nederlandse Muziekgeschiedenis [Minimal Music in the Low Countries]," trans. Hilary Staples, *Tijdschrift van de Koninklijke Vereniging voor Nederlandse Muziekgeschiedenis* 54/1 (2004): 31-32.

[38] Reich, "Music as a Gradual Style," In *Writings on Music, 1965-2000*, 35.

[39] Josiah Fisk, "The New Simplicity: The Music of Górecki, Tavener and Pärt," *The Hudson Review* 47/3 (1994): 398.

who could hear the row, whereas the process of Minimalist music is immediately accessible to most listeners.

As noted in the previous section of this chapter, repetition is one of the most characteristic of Minimalism's traits. As with simplicity of texture, repetition is found primarily in pulse-based Minimalism that requires the continuation of the pattern for the maintenance of the musical fabric. Concept Minimalism, in contrast, does not feature the relentless overt repetition of pulse-based Minimalism.

The characteristic of linear transformation that Gann provides is further broken down by the ideas of additive process, phase-shifting and permutational processes. Due to the variety of possible methods for linear transformation, it will not be considered a characteristic in its own right. Additionally the concept of metamusic, or the psychological musical line that emerges from the sounding of others, will not be considered an identifiable feature of Minimal music in its own right, but as a by-product of some of the processes of linear transformation.

Pure tuning is linked mainly with the drone-based Minimalism of Young. Many Minimalist composers were exposed to non-western musics in a manner that altered their compositional behaviour. In general, the impact of this non-western music can be seen in the way in which Minimalist music does not appear to have a teleological goal, thus demanding a new listening style.[40] For example, Steve Reich studied the percussion techniques of the Ewe tribe of Ghana and the Balinese gamelan during the development

[40] K. Robert Schwarz, *Minimalists* (London: Phaidon Press Limited, 1996), 9. Some pieces such as the phase pieces of Steve Reich do seem to have a clear goal, as the two instruments start together, diverge and it is their return to rhythmic unison that heralds the culmination of the work. However, there is a suspension of the normal temporal experience in these works and it is this temporal anomaly that the lack of teleology refers to in these works.

of his minimalist aesthetic.[41] The rich interlocking character of these percussion traditions is featured prominently in much of Reich's work and other pulse-based Minimalism. Likewise Philip Glass's (b. 1937-) initial exposure to non-western music came in the winter of 1965-66 while a student in Paris when he worked with the Indian sitarist, Ravi Shankar (b. 1920-), on translating Shankar's music into western notation for performance by Parisian musicians.[42] This encounter with an Indian view of time changed the manner in which Glass understood musical time and encouraged him to seek out the idea of additive process.

Minimalism as a Style in the Late Modern Era

These categories notwithstanding, it is clear that, like most other compositional genres of the twentieth century, Minimalism defies simple definition. However if we understand the aesthetic of Minimalism as Post-Modern in origin, and if we in turn comprehend that aesthetic as being inherent to the compositions of composers such as Steve Reich, Philip Glass, Louis Andriessen (b. 1939-) and Henryk Górecki (b. 1933- d. 2010), it should be possible to note the late modern traits discussed in chapter one in their compositional styles.

One of the ways Minimalism eludes definition and amplifies its late modern tendencies is that it crosses boundaries. Louis Andriessen and to some extent Steve Reich

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[41] Wim Mertens, *American Minimal Music: La Monte Young, Terry Riley, Steve Reich, Philip Glass,* trans. by J. Hautekiet (London: Kahn & Averill, 1983), 47.

Although Reich's early phase pieces from the mid 1960s occurred before his trip to Ghana in 1970, they still occurred after his exposure to and developing interest in African music. Specifically this exposure to African music can be linked to the book *Studies in African Music* written by A. M. Jones in 1959, and recommended to Reich in 1962 by Gunther Schuller at a composition workshop in Ojai, California. See Potter, *Four Musical Minimalists*, 204.

[42] Potter, *Four Musical Minimalists,* 258.

have been able to traverse the barrier between 'low' and 'high' culture. This synthesis of 'popular' and 'learned' culture serves the central paradox of the late modern in multiple ways. First, the ability to cross between 'high' and 'low' culture challenges the mutual exclusivity of elitist and populist values, something which the Post-Modern not only condones but encourages, and demonstrates an awareness of the concept that music is not an autonomous cultural act, but rather causes rings of disturbances in the pools of society and politics as well. An awareness of the ripple effect that music creates in other areas is demonstrated by Andriessen with his Marxist politics and protest music.

The Minimalists also embrace old ideas and reinvent them in new ways. This appropriation of older traditions is sometimes linked to the re-emergence of tonality in much Minimalist repertoire, even if strict adherence to tonality is not a necessary condition for a work to be considered Minimalist. For example, Andriessen's work employs in general much more chromaticism than Glass or Reich, but is still considered Minimalist. With Reich's work, it is the idiom of counterpoint that has been removed from history and has undergone a series of changes.[43] It is this re-appropriation of older traditions in a contemporary context that makes Reich's works most evidently late modern.

Perhaps one of the most obvious ways in which Minimalism espouses a Post-Modern aesthetic stance is its development of fragmentation and the presentation of multiple meanings and temporalities. This is most easily observable in pulse-based Minimalism. Pulse-based Minimalism encourages fragmentation, with a small cell of

[43] The change referenced here is the removal of the counterpoint tradition from its traditional historical body and its subsequent re-appropriation as a single compositional trait. As Reich does in his counterpoint series including: *Vermont Counterpoint* (1982), *New York Counterpoint* (1985), *Electric Counterpoint* (1987) and *Cello Counterpoint* (2003).

music being presented repeatedly, while another version of itself is first superimposed with it and then juxtaposed against it. The seminal works in this manner are the phase pieces of Reich including *Piano Phase* (1967) and *Violin Phase* (1967). The small melodic cells found in both these works are indicative of an evident process of fragmentation, which allows the music to present ideas of multiple meanings and multiple temporalities as the cells fade in and out of phase. This process alters the listener's perception of time in the music as separate from clock-time. The multiple meanings come through when one listener hears a different interaction of the fragments than their neighbour.

The Development of Minimalism in America: San Francisco to New York[44]

Minimalism was formed in the United States initially in the 1960s and 1970s. This musical style did not emerge from a vacuum; rather, it arose in part within the ambience surrounding the arts community in San Francisco and New York. Minimalism was a response to serialism from its very inception in California. As the early proponents of Minimalism struggled through what would be the final stages of their formal education, they were being increasingly confronted with demands to compose music that conformed to the prevailing serialist aesthetic. At Mills College in Oakland, California while working on his Master's degree, Steve Reich continued to compose in the serialist manner that he had been encourage to write in at Juilliard. But rather than employ typical serialist procedures to the row, such as inversion, retrograde or transposition Reich would in his own words: "just repeat the row over and over. By doing this you can create a kind

[44] This section is based on work originally completed for Dr. Susan Lewis-Hammond and Dr. Elissa Poole's graduate seminar on Urban Music and Culture at the University of Victoria. Many thanks are due to them for their insightful comments and encouragement on the early versions of this material.

of static harmony not entirely dissimilar to the Webern orchestral variations, which are very static and intervallically constant and which suggest this kind of world."[45] Reich's experiences at Mills culminated with his professor Luciano Berio (b.1925-d.2003) finally telling him that if he wanted to write tonal music then he should just write tonal music.[46] Reich's repetition of the row was a harbinger of things to come, since from his work at Mills onwards, Reich has continued to experiment with repetitive structures.

Minimalism in many forms, music and dance for example, has Californian roots.[47] The San Francisco Tape Center,[48] was an outlet of early Minimalism, this being where works such as *In C* by Riley and *It's Gonna Rain* by Reich were premiered. However the style did not flourish in the western environment and many of the initial proponents of the musical genre such as La Monte Young and Terry Riley (born 1935) subsequently relocated to New York.[49] Young had already moved to New York in 1960[50] and Riley followed suit in 1964.[51] In 1966, Reich completed the California exodus and moved from San Francisco to New York, where he established his own ensemble.[52] Although the initial grains of the minimalist aesthetic were planted in California, once transplanted to New York the genre was able to flourish. Through the intense interconnections of the

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[45] Andrew Ford, *Composer to composer: Conversations about contemporary music* (London: Quartet Books, 1993), 63.

[46] Reich, *Writings on Music, 1965-2000*, 203.

[47] Strickland, *Minimalism: Origins* (Bloomington and Indianapolis: Indiana University Press, 1993), 10.

[48] A history of the San Francisco Tape Center has recently been researched and compiled by David W. Bernstein, see *The San Francisco Tape Music Center: 1960s Counterculture and the Avant-Garde*, ed. David W. Bernstein (Berkeley and Los Angeles: University of California Press, 2008).

[49] Strickland, *Minimalism: Origins*, 154.

[50] Mertens, *American Minimal Music,* 19.

[51] Mertens, *American Minimal Music,* 35.

[52] Mertens, *American Minimal Music*, 47.

Soho artists the style was fostered and was able to experience a period of astonishing growth in the 1960s and 70s.

Philip Glass entered the Minimalist scene during his time as a student in Paris. Previously a composition student at Juilliard, Glass had been studying abroad with Nadia Boulanger during 1964-6 when he met Ravi Shankar and his concept of musical time was altered.[53] This change in the understanding of musical time was not initially supported in Paris: "not surprisingly, nearly everyone he [Glass] showed them [his early Minimalist compositions] to in Paris hated them. It was only after he had returned to New York that he slowly began to find allies..."[54] Prior to his shift to Minimalism, Glass wrote music that he has described as " 'straight, middle-of-the-road Americana'" and Keith Potter sees as "rhythmically quite unadventurous."[55] Glass's change in compositional style that had been sparked in Paris, was fanned into a full fire in New York with the friends, and allies who emerged from the arts community.

New York City in the 1960s was unique among urban cultural centres. In New York generally the focus was not on the art and culture that was emerging from institutions. Henry Flynt, a philosopher involved in the New York arts scene throughout the 1960s and 70s, recounted in a video-taped interview in 2005 of the early 1960s that

> New York is the only city in the world which has a culturati that is not academic. Yeah, I don't know of any other situation like this...so you get down here, and you have these milieus that have been created outside of the university, Cage for example could not have done what he did, you know, in an academic setting...The composers are really, they are doing something sophisticated, something

[53] Potter, *Four Musical Minimalists,* 258.

[54] John Rockwell, *All American Music: Composition in the Late Twentieth Century* (New York: Alfred A. Knopf, 1983), 111.

[55] Potter, *Four Musical Minimalists*, 253.

> which is split off from the computationalism, of the, you know, European modernism at that time but completely non-academic, and academically unacceptable...[56]

This non-institutionalized culturati who were responding to modernism as described by Flynt allowed for a greater interchange between artistic disciplines. Music critic John Rockwell goes as far to state that the "plethora of sixties paintings with analytically reductive, repetitive structures and simple, even childlike formal elements all fed into a common pool of inspiration in lower Manhattan."[57] The artistic environment that Young, Riley and Reich moved into in New York was one that allowed for the interaction of a variety of disciplines, and not the compulsory division of the academy. Additionally almost unanimously the uptown avant-gardists, those who were functioning in the institutions, expressed extreme hostility towards Riley, Reich and Glass.[58]

These artistic groups that Glass, Reich, Riley and Young functioned within would proliferate their aesthetic ideas through small gatherings in their New York lofts and apartments before moving onto performances in bigger and more elaborate spaces, like local art galleries and museums. The performance space was significant for the musically focused artists in that it had not previously been inhabited by their art form. Glass noted that during the late 1960s and early 1970s his ensemble would perform "in the same places used by the theater groups, whether it was a concert presented by Ellen Stewart at La Mama Etc., or at the Whitney Museum ... And there were countless gallery and loft concerts as well."[59] This was the environment that fostered the growth of Minimalism;

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[56] Henry Flynt and Ben Piekut, "119 Bank St., La Monte Young Apt., 1 of 3," in *Henry Flynt in New York*, filmed 2005-2007. 29 Vimeo Videos, 7:15, Posted July 2008, http://vimeo.com/benjaminpiekut.

[57] Rockwell, *All American Music: Composition in the Late Twentieth Century*, 115.

[58] Rockwell, *All American Music: Composition in the Late Twentieth Century*, 116.

[59] Philip Glass, *Music by Philip Glass*, Ed. by Robert T. Jones (New York: Harper & Row Publishers, 1987), 22-23.

the key artists of the Minimalist movement in both the visual and musical realms were living and working in close proximity in lower Manhattan. Through these interconnections it is possible to understand how the minimalist aesthetic in music developed in part as a result of similar aesthetic movements in the realm of the visual art.

Glass was involved with the visual artists, through work with Richard Serra, Nancy Graves and Sol Le Witt, he even became Serra's full time studio assistant.[60] Such personal interactions between Glass and the artist necessarily had an impact on the young composer. As Potter suggests Glass's artistic output was "affected by his unusually intimate knowledge of Serra's work and the ideas which lay behind it."[61] The intimacy of Glass to these visual artists speaks to the closeness of the artistic community in New York. A "community of support —a sizeable following that provided both enthusiasm and emotional feedback— and worked mainly in the same neighborhood of New York, the as yet unfashionable Soho."[62]

As Rockwell points out, the connections between the musical and the visual Minimalists are quite explicit. The Minimalist affinity extended beyond this "into all areas of the downtown SoHo arts community."[63] Although Minimalist composers such as Glass and Reich do not like to draw concrete connections between their compositions and works in the plastic and visual arts – when Reich was questioned about links between his music and minimalist art in 1972[64] he acknowledged a relationship that he subsequently

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[60] Potter, *Four Musical Minimalists*, 268.

[61] Potter, *Four Musical Minimalists*, 269-270.

[62] Glass, *Music by Philip Glass*, 27.

[63] Rockwell, *All American Music: Composition in the Late Twentieth Century*, 116.

[64] Emily Wasserman, "An Interview with Composer Steve Reich," *Artforum* Vol. X No. 9 (1972), 48.

became scornful of in a 1986 interview.[65] Glass's view on the topic is that he was drawn towards artists because they were more open minded than musicians and demonstrated a genuine interest in his ideas.

Reich also was involved directly with the visual arts. In particular he was in contact with artist Sol LeWitt between 1967 and 1970 and LeWitt's 'Paragraphs on Conceptual Art' were an exceptionally strong influence on Reich's 'Music as a Gradual Process.'[66] LeWitt began the trend of writing about the art that he was creating, with 'Paragraphs on Conceptual Art' and it was based on this model that Serra's wife, Nancy Grave, suggested Reich write about his own art, in this case music.[67] While 'Music as a Gradual Process' is now known as a cornerstone of Reich's *Writings on Music* it was originally published in a catalogue for an exhibit of works by Bruce Naumann, Michael Snow, Serra and others at the Whitney Museum, entitled "Anti-Illusion: Procedures/Material."[68] In 'Paragraphs on Conceptual Art' LeWitt expounds upon the idea of process. He states that, "it is the process of conception and realization with which the artist is concerned. Once given physical reality by the artist the work is open to the perception of all, including the artist."[69] This idea is taken up by Reich in "Music as a Gradual Process" particularly when he states "James Tenney said in conversation, 'Then the composer isn't privy to anything.' I don't know any secrets of structure that you can't hear. We all listen to the process together since it's quite audible, and one of the reasons

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[65] Potter, *Four Musical Minimalists*, 171-172.

[66] Potter, *Four Musical Minimalists*, 171-172.

[67] Reich, "Music as a Gradual Process," in *Writings on Music: 1965-2000*, 34.

[68] Potter, *Four Musical Minimalists*, 172.

[69] Sol LeWitt, "Paragraphs on Conceptual Art," *Artforum* 8/5 (Summer 1967), 80.

it's quite audible is because it's happening extremely gradually."[70] In addition to similarities of content, both miniature manifestos employ a similar structure of abrupt statements that are compiled in a somewhat random conglomeration without much cohesion from sentence to sentence. LeWitt's influence on Reich was more than simply minor inflections of aesthetic ideals; he also was literally aiding in the financial survival of the composer. Through purchases of Reich's original scores of works such as *Four Organs* and *Drumming*, LeWitt provided funds for Reich to continue his experimentation with sound.[71]

Figure 2.1 highlights some to the interchanges of the New York network of Minimalists. These connections provide a portrait of the community that fostered the broad development of the Minimalist aesthetic.

[70] Reich, "Music as a Gradual Process," in *Writings on Music 1965-2000,* 35.

[71] Potter, *Four Musical Minimalists,* 172.

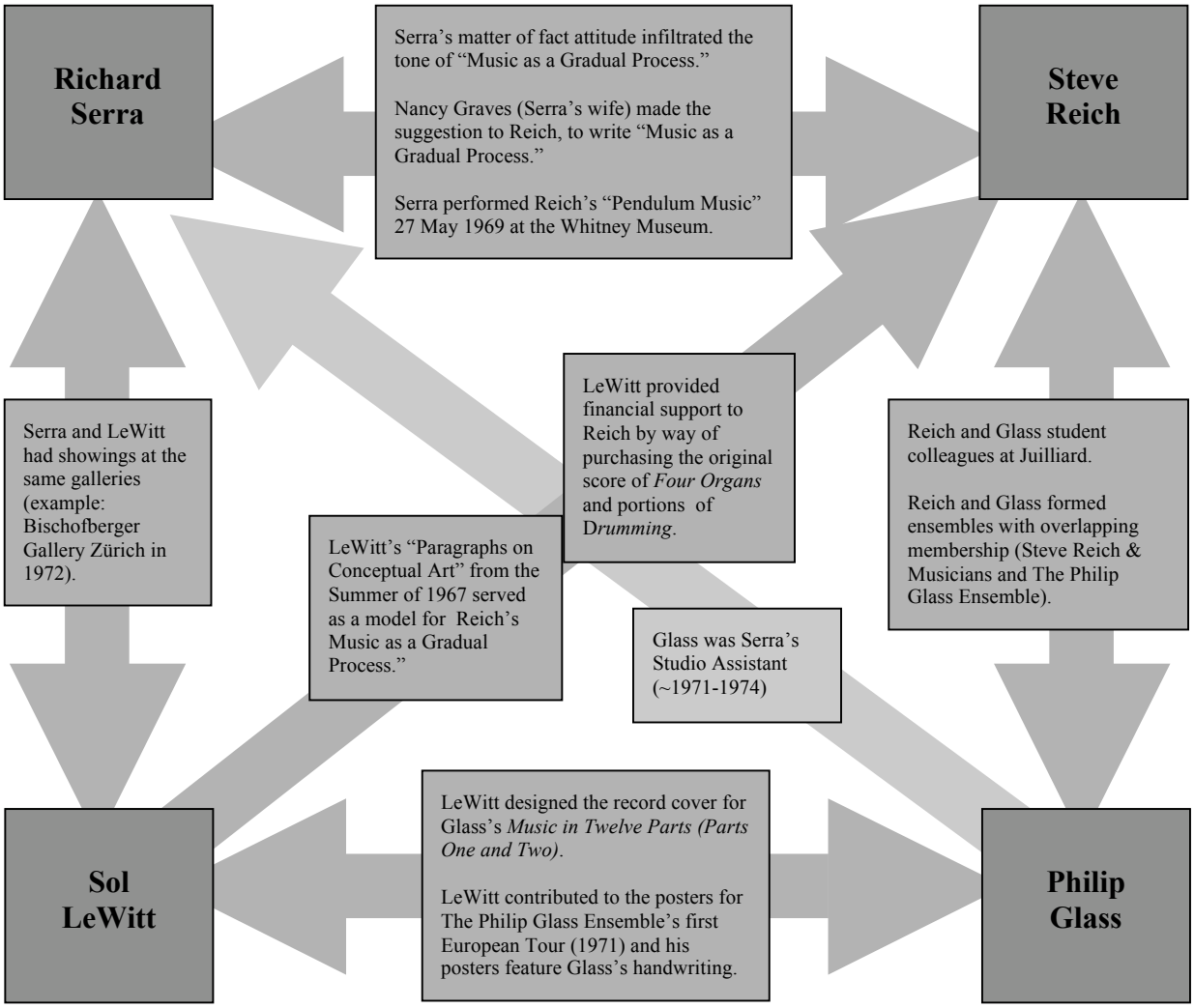

Figure 2.1. Surface connections of the New York network focusing on the figures of Richard Serra, Steve Reich, Philip Glass and Sol LeWitt.

Minimalism in Holland and the Legacy of Louis Andriessen

After the initial sprouting in San Francisco and growth to New York, Minimalism moved across the Atlantic to Europe, where this seemingly American genre of music took on new life. Two groups were featured prominently in the European branch of Minimalism, the Dutch Minimalists and the so-called "Sacred Minimalists." The Dutch

Minimalists are exemplified by the seminal composer, Louis Andriessen, and the Sacred Minimalists, by Henryk Górecki and John Tavener (b.1944-). The Sacred Minimalists will be discussed in further detail in subsequent sections of this chapter and thesis.

Louis Andriessen (b.1939-) explained the movement of Minimalism's counter-culture aesthetic to Europe in a 1999 interview with musicologist Maja Trochimczyk: "the coming-out of the minimalists – Terry Riley, Steve Reich and Philip Glass – happened in the late 1960s ... What is important to know is that the movement and its influence in Holland started with the recording of *In C* by Terry Riley...For me, the year 1970 was a turning point."[72] Recordings initially brought the Minimalist aesthetic from America to Europe and it was through this fixed medium that Andriessen directly experienced the compositional movement.

Prior to his introduction to American Minimalism, Andriessen had been an active student composer at the Royal Conservatory of Music in The Hague, under Holland's first serial composer, Kees van Baaren (b.1906-d.1970). He admits that he was initially drawn to serialism as it was so different from what his childhood had exposed him to. However, within three years he had abandoned serialism for more experimentalist musics. Andriessen studied with Berio in both Milan and Berlin, through whom he came to know the avant-garde musics of Pierre Boulez, Karlheinz Stockhausen (b.1928-d.2007), John Cage (b.1912-d.1992) and the Darmstadt school. For Andriessen, Minimalism allowed him to have enough flexibility to bring together high and low culture. Art music within the Minimalist aesthetic could be written that incorporated jazz and pop idioms. In a 1992 interview with Maja Trochimczyk, the composer commented

[72] Louis Andriessen and Maja Trochimczyk, "Dialog 1: Learning" in *The Music of Louis Andriessen*. Ed. by Maja Trochimczyk (New York: Routledge, 2002), 19-20.

that pop music was mostly too simple for his tastes but that he learned how to write certain musical gestures and a bass line by listening to it. However not all pop music is overly simplistic in Andriessen's world; what he finds most interesting is the pop music that traces jazz, funk and soul as its heritage.[73]

This interest in jazz is one of the connecting features between Andriessen and the early American Minimalists. In its Californian roots with Young and Riley, Minimalism was very much linked to jazz. This trend continued with Reich's adoption of the style. Minimalism includes a blending of high and low cultures. The 'high' art of it being a written tradition, with classically trained composers and performers and the low art of audible small forms, tonality and jazz influenced motives. The freedom experienced through the improvisatory nature of jazz, allowed the Minimalist composers to think about music differently than their serialist predecessors. In 1971, during his first European tour, Reich met with Andriessen. During this meeting in Amsterdam Reich confided to Andriessen that his music was performed in art galleries because it was misunderstood when it was performed in concert halls.[74] Reich's music likely was bewildering to many trained musical audiences as it called for a new manner of listening, whereas the art audiences would not have experience the same expectations. Due to the audience's lack of knowledge of the music that preceded Minimalism, the art audiences were more able and likely to accept what Reich presented without judgement.

Over the course of his study with Berio, Andriessen became a committed Marxist and found there to be a disconnection between the ideals of the avant-garde and their

[73] Andriessen and Trochimczyk, "Dialog 1: Learning" in *The Music of Louis Andriessen*. 21.

[74] Andriessen and Trochimczyk, "Dialog 1: Learning" in *The Music of Louis Andriessen*. 20.

elitist nature.[75] (A similar situation was described by Glass while he was a student in Paris. Glass felt that "modern music as represented by Boulez was a cul-de-sac...it was a one-way-ticket – to nowhere.")[76] Andriessen's form of Minimalism is a hybrid of styles that was encouraged by his political beliefs. These Marxist beliefs were apparent in Andriessen's work, especially in the way in which he organized his performing ensembles. Much like Reich, Glass and Young before him, through the years Andriessen organized new ensembles to play his works, including the Orkest de Volharding and Hoketus. Schwarz notes that after his orientation towards a minimalist aesthetic, the first thing that Andriessen did was to write for non-traditional musical ensembles.[77] This sensibility was clarified by Andriessen in a conversation with Andrew Ford when he said, "I don't want to write for musicians who don't like my music. Also the public should not be bothered with music they don't like. The way I solved this was to form my own bands, which I think is a very elegant and simple solution."[78] These ensembles or bands were dedicated to deconstructing the boundaries between 'high' and 'low' art, and were democratic in nature. They took music from the concert halls of Europe for a privileged few and brought the music to the streets. Andriessen's ensemble, De Volharding, would perform in such divergent locations as political rallies, factories, neighbourhood centers and school assemblies.[79] Although Andriessen's turn to Minimalism was ignited by the recording of Terry Riley's *In C* that he acquired, it was further expanded by his Marxist

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[75] Schwarz, *Minimalists*, 205.

[76] Philip Glass quoted in Mark Prendergast, *The Ambient Century: From Mahler to Trance - The Evolution of Sound in the Electronic Age* (London: Bloomsbury, 2000), 134.

[77] Schwarz, *Minimalists*, 205.

[78] Ford, *Composer to Composer*, 83.

[79] Yayoi Uno Everett, *The Music of Louis Andriessen* (Cambridge, UK: Cambridge University Press, 2006), 67.

beliefs: "we were very active in protests against the Vietnam war; our activities were filled with the same intensity, craziness, and anger as they were in America...All those things came together with the jazz influence and the avant-garde experiments."[80]

Although Andriessen's music superficially presents a similar trajectory of development to the American Minimalists, with the blending of jazz elements, a dissatisfaction with the tendency of serialism and the employment of a ensemble uniquely organized to perform his music, similarities are largely superficial. Andriessen appropriated the Minimalist aesthetic from the Americans with a Marxist political intent.[81] For Andriessen and his legacy, the Minimalist idiom of repetition was melded with "the 'European' concern for an internal musical opposition which yet contains that potential for an ultimate synthesis."[82] Andriessen believes that since his music is grounded in its European heritage, it is necessarily more chromatic. He nevertheless acknowledges the debt his music from the 1970s onwards owes to the American Minimalist tradition, admitting that " I could not have thought of the pieces I have written in the last 20 years without La Monte Young or Terry Riley or Steve Reich or Feldman, to name only a few."[83].

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[80] Andriessen and Trochimczyk, "Dialog 1: Learning" in *The Music of Louis Andriessen*. 20.

[81] An example of such works is Andriessen's *Workers Union* from 1975. This work is demonstrative of Andriessen's Marxist sympathies.

[82] David Wright, "Louis Andriessen: Polity, Time, Speed, Substance," *Tempo* New Series No. 187 (1993), 8.

[83] Ford, *Composer to Composer*, 85.

The Sacred Minimalists: Tavener, Pärt, Górecki

The group of composers which have come to be known as the sacred Minimalists or as members of the new simplicity movement[84] are all, like Andriessen, European; however, the path to their Minimalist oeuvre is quite distinct from his and the Americans. Critics of the sacred Minimalists find a fundamental flaw in their music. This flaw is that practitioners of the new simplicity, John Tavener, Henryk Górecki and Arvo Pärt (1935), are asking their audiences to "return to a past of putative innocence: not just to use old texts or musical ideas in creating something new, but to *go back* to being as we once were."[85] What these composers are actually attempting is something far different from what these critics imply. Naturally, it is impossible for us to go backwards, but listening always occurs in relation to some historical time frame. Rather the holy Minimalists are each presenting to the audience their concept of a spiritual music. Groupings of composers just as groupings of people are always somewhat arbitrary and imperfect, and this imperfection is more evident in the assembly of Tavener, Górecki and Pärt than elsewhere in this chapter. The sacred Minimalists are all individual composers, working in different countries and religious traditions, whose aesthetics and general concepts had the good fortune to overlap with one another.

This overlapping has been observed by the composers themselves. In 1992 Andrew Ford began an interview with British composer John Tavener by commenting that Tavener's music could be considered part of a musical movement that included Górecki and Pärt and that features "simple, static, modal harmonic fields, long, arching,

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[84] New Simplicity in this usage has no relation to the short lived German movement of Neue Einfachheit which may also use the term 'New Simplicity' in English translation.

[85] Fisk, "The New Simplicity, The Music of Górecki, Tavener and Pärt," 410.

elegiac lines, and much repetition."[86] This connection is one that Tavener recognized, while simultaneously noting other influences on his thought process and subsequently his musical style. Tavener lamented the fact that art has become dissociated from a religious reality in modern times:

> Art's become so disconnected with divine realities, whereas in Plato's day – or in any *great* civilisation – it was the norm that it was connected with divine realities. I think we live in a culture in ruins, at the end of an epoch.[87]

This culture in ruins, a culture in a state of decay, is a human creation; what Tavener's music is working to create is a sacred art, one which is not disconnected from religiosity. His works incorporate echoing silences alongside repetitions and chants, with which he creates an ethereal music that looks to the past for inspiration.[88] Like Young, Riley, Reich, Glass and Andriessen, Tavener did not find the initial impetus for Minimalism in a western-based tradition but in eastern musics such as Byzantine singing and Sufi music.[89]. Rather Minimalism grew out of a combination of dissatisfaction with his contemporary musical situation and exposure to an Eastern musical aesthetic.

K. Robert Schwarz sees Arvo Pärt and Henryk Górecki as Eastern European composers, who caused Minimalism, an originally secular American idiom, to sing in an overtly spiritual and therefore essentially un-American manner.[90] During the 1960s and 70s, the Estonian-born Pärt studied and was exposed to a variety of musical styles, traditions and writings. When he decided to write a music that was at once both 'time and

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[86] Ford, *Composer to Composer*, 89.

[87] Ford, *Composer to Composer*, 90.

[88] Prendergast, *The Ambient Century*, 172.

[89] Ford, *Composer to Composer*, 90-91.

[90] Schwarz, *Minimalists*, 194.

timelessness,' the variety of styles blended within his musical language. Pärt's works began to exhibit the most basic elements of tonality in an incredibly clear texture punctuated with extended silences.[91] By presenting a work that is shrouded in modesty and turns away from the extravagance of Romanticism, Pärt reiterates the musical goal of the sacred Minimalists to attain simplicity and purity in their musical character and material.[92] Pärt's quest for a music that experiences both time and timelessness is Post-Modern in the desire for a plurality of time experience.

Polish composer Henryk Górecki presents another aspect of the loose conglomerate of Holy minimalists. Like many of the composer's in the proceeding discussion, Górecki began his compositional career in the serialist manner.[93] This style of composition lasted longer in Górecki's case than many of the other composers already mentioned, and he was a well established member of the Polish avant-garde along with Krzysztof Penderecki. However, by the late 1970s Górecki had re-embraced Roman Catholicism and had turned away from the serialism of his youth. In the place of serialism Górecki introduced a simple form of consonance to his music. "[S]trictly diatonic and highly repetitive, Gorecki's setting was indeed akin to the music then being composed by Pärt and the western minimalists."[94] A famous example of this turn towards diatonicism and repetition can be drawn from Górecki's Symphony No. 3 (*Symphony of Sorrowful Songs*) from 1976. With regards to linking Górecki's work with Pärt and the American Minimalism of Glass and Reich it must be noted that he did not know any of

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[91] Schwarz, *Minimalists*, 214

[92] Fisk, "The New Simplicity, The Music of Górecki, Tavener and Pärt," 402.

[93] Adrian Thomas, *Górecki*, (New York: Oxford University Press, 1997), 18.

[94] Richard Taruskin, *The Oxford History of Western Music Vol. 5* (New York: Oxford University Press, 2004), 407.

these other composer's works, arriving at his minimalist aesthetic on his own without an artistic community of support. This change of aesthetic was radical and in the emerging musical tide Josiah Fisk offers the critical comment that Górecki ignores the idea of a musical dialogue that when there are two lines sounding in canon, in fact there is no musical content. Part of this change centers around the idea of the interaction of musical lines. Rather than understanding two musical lines as sounding in canon, Górecki shifted his understanding so that the lines were just overlaid monologues. Fisk notes Górecki's Post-Modern appropriation of the rules of writing a canon while evading the logic behind the rules, Górecki "has scrupulously followed the basic specifications for a canon, taking a musical line and overlapping it with itself at regular intervals, but has ignored the principals which give the form interest and life."[95] The perceived lack of life by Fisk is actually a lack of what might be called intellectual rigour. Unlike the serialist music that was written for the virtuosic of listeners, Górecki's new aesthetic was presented in a manner that could be understood aurally with minimal assistance.

* * *

These three main branches of Minimalism—American, Dutch and Sacred—form something of a confused family tree, the seeds of which were planted in San Francisco with the works of Young and Riley. These seeds then came to maturity in New York with the addition of Glass and Reich. When the genre made the leap across the Atlantic to Europe, Andriessen's Dutch school sprouted off this original shoot and began to twine itself around the branch. When it came to name this new tree, it was noticed that an additional branch had been grafted on to it. This grafted branch of sacred Minimalism fit

[95] Fisk, "The New Simplicity, The Music of Górecki, Tavener and Pärt," 401.

well with the original aesthetic of the minimalist tree, but it was comprised of slightly different material. So although the tree has continued to thrive, however, there was always evidence of the original graft.

Works for solo flute from the composers of Minimalism demonstrate the most crystallized and basic forms of the aesthetic. Examples for solo flute, found in chapter three, drawn from all three branches of Minimalism in order to demonstrate the diversity and similarities of the approaches of composers inscribed in the above historical framework.

Chapter 3 Minimalism in Solo Flute Repertoire: Analysis of Emblematic Works by Reich, Glass, Andriessen and Górecki

The varieties of Minimalism described in the previous chapter can all be illustrated with examples taken from solo flute repertoire. As we shall see, this repertoire is not necessarily monophonic, since the instrumentalist is often asked to complete additional musical tasks set for them – tasks which make the performance more complex and challenging. By extending the performers' responsibilities, the music, although for a solo instrument, has more depth than might initially be perceived. The flute is a monophonic instrument but this is not necessarily a limiting feature rather it fosters the innovation of extended techniques. The flute provides very rich and fertile ground for new music composers as the capabilities of a flutist versed in extended techniques can coax the most subtle shadings of tone colour and pitch imaginable from the flute. Through the study of these pieces we can isolate moments in which the composers crystallized their formal ideas into a concise format.

Vermont Counterpoint – Steve Reich

In terms of sheer length the most substantial work discussed in this chapter is *Vermont Counterpoint*, which was written in 1982 by Steve Reich at the request of American flutist Ransom Wilson. *Vermont Counterpoint* can be performed by a flute ensemble consisting of a solo flutist (performing on piccolo, C-flute and alto flute) and ten accompanying flutes (splitting amongst themselves piccolo, C-flute and alto flute) or as originally performed by Wilson, with soloist and tape. Wilson describes his first encounter with Minimalism at one of the 1976 performances of Philip Glass's *Einstein on*

the Beach at the Metropolitan Opera House in New York as being a transmutative experience. From a state of extreme boredom Wilson was moved to irritation and anger until this state too was transformed. Expressed by Wilson as crossing a threshold in which suddenly the music affected him emotionally, he "began to perceive within it a whole world where change happens so slowly and carefully that each new harmony or rhythmic addition or subtraction seems monumental."[96] Following this intense transformation Wilson sought out more of Glass's music, eventually learning that other composers were writing in a similar manner, notably Steve Reich. With Reich however, Wilson found an employment of a technique that "immediately engages the listener in a brilliant, shimmering mosaic of interlocking rhythmic patterns and long, bittersweet sustained chords," and it was this mosaic that spurred him to engage Reich's compositional prowess in a work for flute that would eventually become *Vermont Counterpoint*. [97]

Reich has said of the work that it harkens back to such earlier compositions as *Violin Phase* and *Piano Phase* in a few ways. As in *Violin Phase*, in the solo version of *Vermont Counterpoint*, which is the version which will be dealt with here, the instrumentalist plays against a recording of himself.[98] Moreover, as in the earlier phase pieces, the work's overall texture is comprised of a single timbre, in this case the general timbre of the flute expands upwards with the piccolo and downwards with the alto flute. The employment of a single timbre is utilized to create a contrapuntal web of sound and

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[96] Ransom Wilson, *Reich, Glass, Becker*, 1982, Capitol Records, Inc., DS-37340.

[97] Wilson, *Reich, Glass, Becker*, 1982, DS-37340.

[98] Prior to a solo live performance of *Vermont Counterpoint* the flutist is to record each line of the counterpoint and multi-track these recorded lines together for a single taped recording for the flutist to play against. In lieu of this a commercial recording of the tape part has been made and is available for rental from the Hendon Music/Boosey & Hawkes Rental Library.

an ambiguity of downbeat.[99] The contrapuntal web of sound is what Wilson heard as a shimmering mosaic comprised of many smaller parts. Reich divides *Vermont Counterpoint* into four sections that are marked in the score,[100] each of which indicated by an audible shift in the key signature. Section III is further demarcated from the other sections by a shift of tempo. Sections I, II and IV are all to be performed at eighth note equals 232 MM, whereas Section III is to be performed with the eighth note at 155 MM, a deceleration of approximately one third. Section III is also the only section of the work that does not feature a substantial section of the higher timbre of the piccolo. In this section, the piccolo is only played in a single section, between rehearsals 66–69, and this is over a full complement of pre-recorded flute lines. Thus it is not as noticeable as it might otherwise be. In fact, rehearsal 66 is the first point in the work in which Reich uses all eleven lines simultaneously. The taped piccolo lines (Piccolo 1-3) are acting in their alternate capacity as flute lines (Flute 4-6) and the tape solo also adds a seventh flute part. The three alto flute lines are the only other timbres which colour these seven flutes, so the live piccolo line is combating this lush deep texture alone. As such, the piccolo is really only heard as a reinforcement of the overtones of the full flute textures. A full charting of the resultant timbres in *Vermont Counterpoint* can be found in Appendix A, while a synoptic chart which notes the timbre in relation to tempo, tonality and sections can be found in Table 3.1.

[99] Reich, *Writings on Music*, 140.

[100] Steve Reich, *Vermont Counterpoint: for Flute and Tape or Flute Ensemble.* United States: Hendon Music, 1989.

Section		I		II	III			IV	
Key		d minor		e minor	d minor			D major	
Tempo		1/8th note = 232		1/8th note = 232	1/8th note = 155			1/8th note = 232	
Rehearsals		1-30		31-53	54-65; 66-69; 70			71-92	
Timbre	Piccolo		x	x		x			x
	Flute	x	x	x	x	x	x	x	x
	Alto		x	x		x	x		x

Table 3.1. Overview of formal elements in Steve Reich's *Vermont Counterpoint*.

A similarity can be drawn between sections I and IV, if you examine a general trend in timbre employment. Reich initiates both section I and IV with a flute timbre before expanding out, about half way through the section, to incorporate both the higher timbre of the piccolo and the lower of the alto flute. Additionally both these sections feature a focal pitch of 'D', with section I being in the tonality of d minor and section IV being in the tonality of D major. Section II maintains the intensity that Reich wound up in Section I by continuing with the previously established tempo and texture. Therefore the shift between section I and II is primarily one of tonality.

Reich comments in the score note that the compositional techniques employed utilize short repetitive cells to build a canon between the lines. The repetitive cells become melodic lines from the performance of the initial fragmented forms. Initially very sparse the fragmented motivic cell undergoes the substitution of rests with pitches and takes on a more complete form. This development can be seen in the live flute line at rehearsal 2 through 4, as shown in Figure 3.1. Rehearsal 2 demonstrates the fragment, rehearsal 3 has the first addition of the 'G' on the fourth sixteenth note of beat 2,

rehearsal 4 contains the complete melodic fragment which incorporates the addition of a ‘D’ on the fourth sixteenth of beat 1 and an ‘A’ and ‘E’ sixteenth note pairing on beat 2.

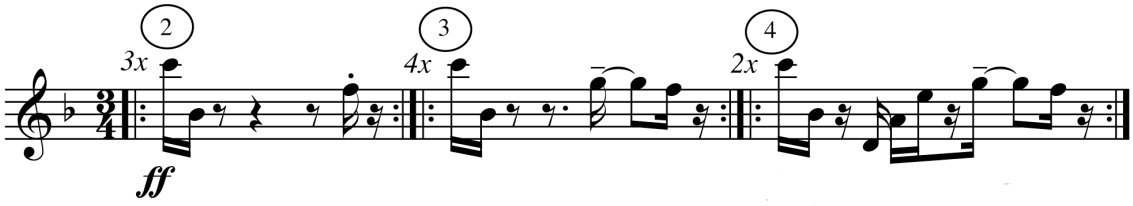

Figure 3.1. The development of the fragment in rehearsal 2 to the melody of rehearsal 4 in Reich's *Vermont Counterpoint*.[101]

This melodic fragment is then transferred to the flute 2 (tape) line and the live flute plays a metrically displaced version of it, shifted three sixteenth notes apart from the original, once again beginning with a fragment which will be built up piece by piece. All while, the flute 2 (tape) line is maintaining the original melodic fragment, which itself is a displaced version of the very beginning material which occurs in the flute 1 (tape). The initial melodic cell undergoes a displacement of three sixteenth notes, before it appears in the fragmented form in rehearsal 2.

The processes that are undertaken by Reich included the additive process as indicated above, motionless harmony within each section, a static instrumentation in that the ensemble is comprised entirely of the family of flute instruments, steady rhythm, audible structure and repetition. Reich pays an acknowledgement to the technique of

[101] Reich, *Vermont Counterpoint*, 1-2.

phase-shifting[102] through the permutations of the displaced melodic cell, rather than employing it in an outright manner such as in *Violin Phase*.

Vermont Counterpoint is specifically suited to the flute with its rapid passagework and periodic nature, which although perpetual is not mechanical and rests are included frequently enough that breathing is not a difficulty for the performer. Even with such a brief exploration of the musical material employed by Reich it is obvious that *Vermont Counterpoint* falls into the category of pulse-based Minimalism, with the pulse as the sixteenth note.

Arabesque in Memoriam – Philip Glass

Another Minimalist work in which the Post-Modern concepts of fragmentation and periodicity are explored is Philip Glass's *Arabesque in Memoriam.* Glass wrote *Arabesque in Memoriam* in 1988, and dedicated it to the memory of Britton Johnson, his flute teacher at the Peabody Conservatory.[103] Unlike *Vermont Counterpoint*, this work requires solely the resources of the standard solo transverse flute. Beginning with an outline of the flute's registers with coupled As, the motion is reduced to single iterations of Ds in a narrower range. However, by rehearsal 2 the music has taken on the insistence of a repetitive triadic pattern. This is not a simple repetition of the triad for four measures; rather, each measure's first two beats present a D major triad, in which the final two beats present an inflected form of it, dropping the original D down to a C-sharp in the first measure, and in the second an A natural on beat three and C natural on beat four. As the D

[102]Phase-shifting can be understood as the process where two instruments play the same material at slightly different rates, although they begin together. The melodic contour of the work begins to blur and separate until complete dissociation of lines occurs, as the process continues the lines will eventually return to the cyclic starting point.

[103]Philip Glass, *Arabesque in Memoriam* (United Kingdom: Dunvagen Music Publishers Inc., 1988).

triad is the only one triad that is repeated and returned to it is the triad that appears to be developed.

The second half of rehearsal 2 demonstrates a similar development of the D major triad, and Glass's beginnings of fluidity. The concept of fluidity is shown in the expansion and contraction of the music's metrical layer. The final section of rehearsal 2 switches from the triplet pattern into a sixteenth note pattern. The rapidity of the notes is not permanent, as the repeat signs that encapsulate those measures force the alternation of sixteenth notes and triplet eighth notes. This alternation is again featured in rehearsal 3, the only difference between rehearsal 2 and rehearsal 3 being the inclusion of both the ascending and descending triadic figure, where rehearsal 2 only included the ascending form. Again like the first two measures it is a subtle yet significant development.

In reference to the title,[104] the repetition is a decoration and does not function as a formal element. A life-like quality is lent to the music by the fluid development of the metrical layer. The rhythms literally seem to be breathing in the majority of *Arabesque in Memoriam,* perhaps a nod to Johnson's work as a flutist and wind player. The sixteenth note rhythm is only truly established at rehearsal 9, although it was hinted at strongly at both rehearsals 4 and 5. It is interesting to note that the sixteenth-note figure only appears in an ascending fashion, and never in the arch form achieved in both the eighth-note and triplet eighth-note patterns at rehearsal 5. Due to this oddity the

[104]Arabesque is a term from art which describes a variety of vegetal ornamentation that particularly flourished in Islamic Art spanning the range of the 10-15 centuries. One of principal characteristics of an 'arabesque' is its infinite correspondence and subsequent ability to be expanded infinitely in any direction. Arabesque's feature a "geometrization of the stems of the vegetation, the particular vegetal elements used and the fact that these elements can grow unnaturally from one another, rather than branching off from a single continuous stem." See, "Arabesque." In *Grove Art Online. Oxford Art Online*, http://www.oxfordartonline.com/subscriber/article/grove/art/T003513 (accessed April 14, 2011).

sixteenth note patterns exhibit a form of urgency and abruptness not featured anywhere else in the work. By being only half of their full form they seem stunted in their development. As with other forms of pulse-based Minimalism the process is very audible to the listener.

The concept of additive process is used in a different manner by Glass than it was by Reich. In *Arabesque in Memoriam*, Glass presents a series of musical ideas between rehearsals 1 and 5. These musical ideas are linked together, and as previously noted are in fact at times the logical development of the material that preceded it. Rehearsal 6 is an abrupt return to the initial material presented. This time the idea within the rehearsal, that of outlining the flute's register, is expanded. This concept of outline is the only one which is presented three times in the work, the constant weaving of triplet eighth and sixteenths is bypassed by Glass the second time, and rehearsal 9 plunges the listener into a previously unknown urgency, which is slackened in rehearsal 10 with the reintroduction of the triadic triplet eighth notes before the final concept of outline the flute's registers is returned to in rehearsal 11. See Table 3.2 for a complete mapping of the presentation of musical motives according to rehearsal number in *Arabesque in Memoriam*.

Motive	Occurrence in Rehearsal Number		
Outline of Flute's register	1	6	11
Ascending triad in triplet eighth notes	2	7	
Ascending and descending triad in triplet eighth note pattern	3	8	
Triadic triplet eighth note & ascending sixteenth note pattern	4		
Ascending sixteenth note & triadic triplet eighth note pattern	5	10	
Ascending sixteenth note pattern	9		

Table 3.2. Presentation of musical motives in *Arabesque in Memoriam* by Philip Glass.

Once again with limited materials Glass has created a music that captures the essence of its title in its very form. The formal structure implied in Table 3.2 with the reoccurring first motive (Rehearsals 1, 6 and 11) does not belie the Post-Modern's avoidance of a meta-narrative of formal unity. Rather it demonstrates an attempt to fragment the initial pattern, and develop that fragmentation into the form of the work.

Ende – Louis Andriessen

Ende, composed by Louis Andriessen in 1981, is a work for a soloist, employing two instruments simultaneously rather than playing along with a pre-recorded part. It is dedicated to world renowned Dutch recorder player Frans Brüggen.[105] Two alto recorders are played concurrently, one hand assigned to each line and recorder. By employing a second recorder, Andriessen has transformed the recorder player from a monophonic instrumentalist to the equivalent of a pianist who has to separate the tasks of coordinating independent movements with each hand. The alto recorders begin by alternating pitches with one another. This develops and occasionally, as in measure 5, one of the lines will repeat the same note while the other line moves by leap rather than stepwise, enclosing the pitch being stated by the other recorder. In measures 4 and 5 the leap between D and F, inscribes the pitch E. Such moments cause a momentary expansion of range, although the immediate motion is still that of a second. After this moment of intertwining the parts, Andriessen returns to the initial alternation of pitches.[106]

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[105]J.M. Thomson,"Brüggen, Frans" In *Grove Music Online*. *Oxford Music Online*, http://www.oxfordmusiconline.com.ezproxy.library.uvic.ca/subscriber/article/grove/music/04132 (accessed December 15, 2010).

[106]Louis Andriessen, *Ende* (Houten, NL: Ascolta Publishing Ltd., 1988), 1.

This contrapuntal line is intrinsically fascinating, while still presenting the hard-edged repetitive sound demanded of Andriessen with the expression marking *preciso, agressivo.* With the problem of playing two lines solved, the next concern becomes breathing and accents. Andriessen aligns the majority of accents between the parts, the exception being in measure 100 where the second alto recorder bears an additional accent. Along with this accent is the instruction "*ff as a scream*," which affords the player liberty of interpretation.[107]

An extremely limited musical vocabulary is utilized by Andriessen within this work, due to the fact that each recorder can only be played with the top holes. He was limited to only five pitches: C, D, E-flat, E and F. The rhythm of the work could however be much more flexible, a fact which is demonstrated in table 3.3.

Time Signature	Number of occurrences (measures)
3/16	28
4/16	61*
5/16	13*
6/16	6
7/16	2
8/16	3
2/4	7
4/4	2

*With three repetitions of measures 93-99.

Table 3.3. Utilization of time signatures in Louis Andriessen's *Ende*.

[107]The instruction of "*ff as a scream*" can be interpreted a number of ways, and the performer has the liberty to decide which interpretation should be presented. Possible interpretations include, screaming with the voice through the recorder or causing the recorder to shriek by flooding the instrument with a large amount of air in a short period of time.

The time signature most often used in *Ende* is 4/16, which is woven in throughout the work. The most typical movement of the time signature is by step from 4/16 to both 3/16 and 5/16. Therefore, Andriessen's use of time signatures emulates his response to the restriction of the pitches, specifically the manner in which they are related by stepwise motion, even though at first the time signatures appear to be an entirely free compositional element within *Ende*.

Andriessen also employs a steady pulse and there is a strong rhythmic feeling even in section like measures 71 to 75, in which the time signature changes with every measure. This strong pulsation is characteristic of the hard edged Minimalism for which Andriessen is famous.

Valentines for Solo Flute – Henryk Górecki

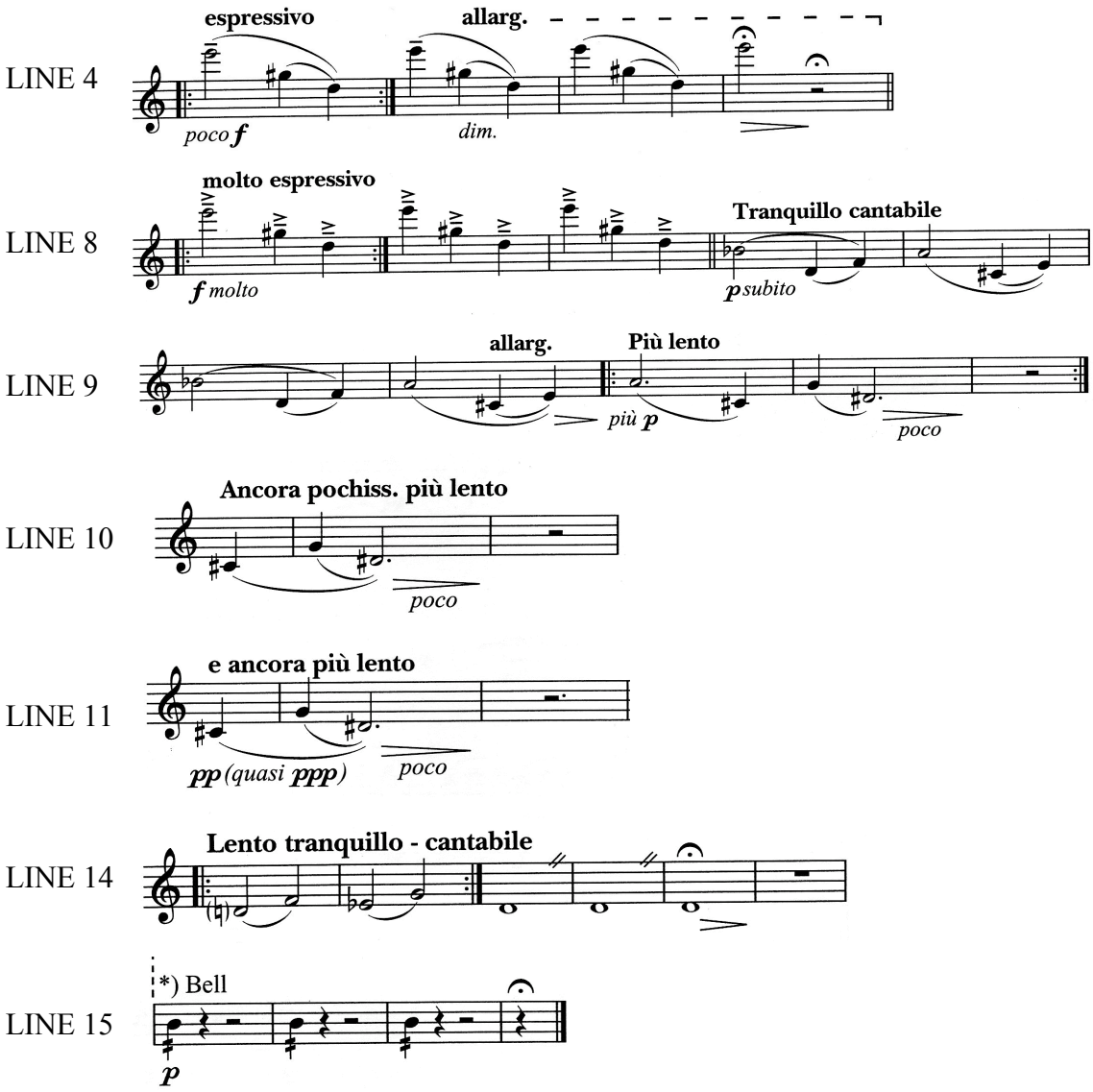
Henryk Górecki's *Valentine Piece for Solo Flute and Little Bell*, Op. 70 was written and premiered in 1996 by the American flutist Carol Wincenc to whom it was also dedicated.[108] An exemplary instance of compositional Minimalism, its score offers up a variety of already familiar late modern characteristics, including repetition, melodic development from fragmentation and avoidance of boundaries, in this case registral ones.

This work can be divided into three sections. Section I encompasses lines 1 through 4, section II lines 5 through 11 and section III lines 12 to 15 of the score. Within each of these sections the first few lines present musical material common to all three sections, the second half of the section is where individuation and expression can occur. In section I the only line that falls into the individualized category is line 4, beginning on

[108] Henryk Górecki, *Valentine Piece,* in *Valentines for Flute: works by Górecki, Rouse* (New York: Boosey & Hawkes, 1997), 1-2.

E6, the highest note in the work, and ending on E6.[109] The next portion of music that shows the efforts of individuation is lines 8 through 11. Once again Górecki begins on E6 however, over the course of these lines the flutist comes to rest on D-sharp4, bridging the gap of the register boundaries. The final moment of individualization occurs in lines 14 and 15, with only line 14 being performed by a wind instrument. In line 14 we once again are brought into the same register that we left in the second section, this time entering on a D4. Section III's second half has very little registral movement remaining entirely in the extremely low depths of the flute's register. If these sections are presented one after another, as in figure 3.2 then the linking nature of section II is apparent.

[109] Octave nomenclature in this thesis will utilize the system of The Acoustical Society of America where the octaves are numbered from lowest to highest. Example: Middle C on the piano is considered to be C4.



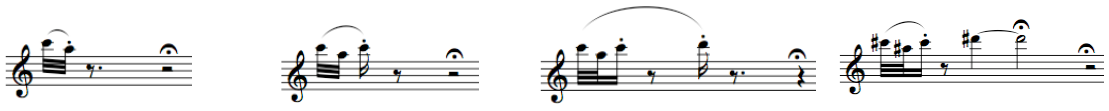
Valentine Piece, Op. 70 by Henryk Mikolaj Gorecki

Figure 3.2. Lines of individuation in Henryk Górecki`s *Valentine Piece*.

The linking nature of the lines 8 through 11 can also be seen in the performance indications given in them. Line 4's indication is *espressivo*, line 8 begins *molto espressivo* but becomes *tranquillo cantabile*, and then line 9 is *Più lento*, line 10 is *Ancora pochiss. più lento* and finally line 11 is *e ancora più lento.* The indications of section II's second half move their emphasis from the expressive nature of the music to

the slowing and tranquil. It is the concept of tranquility that is revisited in section III, with the indication *Lento tranquillo – cantabile*. This causes section II to be the bridging section, between two very different ideas being presented in two distinct registers.

However individual the second half of the sections might be, the opening material of each of these sections bears remarkable resemblance to one another, with only slight deviations. If we compare line 1 with line 5 and line 12, we can see the development of the initial motivic cell (A) throughout (see figure 3.3).



Valentine Piece, Op. 70 by Henryk Mikolaj Gorecki

Figure 3.3. Development of initial motivic cell (A) in Henryk Górecki’s *Valentine Piece*.

Figure 3.3 shows how the initial material is altered by the addition of an extra sixteenth note, except in the case of A’’’ where the change is one of pitches. Like in *Vermont Counterpoint* by Reich, Górecki creates a sense of repetition with slight modifications in the melodic cell rather than continuous repetition of a single cell. Using the nomenclature for motivic cells found in figure 3.3, table 3.4 will demonstrate the motivic component of each of the three sections.

	Section I	Section II	Section III
First Line of Section	AAA’ AAA’	AAA’ AAA’	AA A’A’ A’’A’’
Second Line of Section	A’ A’	A’	-
Third Line of Section	A’’A’’ A’’	A’’A’’ A’’	A’’ A’’’

Table 3.4. The development of the initial motivic cell in the opening material of the three sections of Henryk Górecki’s *Valentine Piece*.

By reading across the rows in table 3.4 it is possible to compare how Górecki presents the motivic material in the first three lines of the section. The three lines that open each section are identified by more than their order of appearance. Their justification on the score is also indicative of their role. The first line of the section is right justified, and does not reach the left side of the page. The second line of material is centered on Górecki’s score, and the third line begins in the center and ends on the right hand side of the page. It should be noted that the second line in section III has been omitted, there is only two lines of opening material prior to the individuated lines occur, and their justification on the score indicates that they are the first and third lines of the section, a premise that is supported by a comparison of the rows in table 3.4 which shows the gradual complexification of the materials from section I to section III.

Ironically, what initially appears to be fragmentary in its small level repetitions and unusual layout is actually linked material. The areas of individuation are connected and can be seen as one continuous section that is interrupted by the repetitive opening material of each section. Górecki has created a simultaneous sense of stasis in the repetitive music of the opening section, and flux, in the teleological development of the individuated sections.

* * *

All four of these composers—Reich, Glass, Andriessen and Górecki—have undertaken the task of presenting something meaningful with an extremely limited arsenal of tonal tools and with solo wind repertoire they have increased the challenge ten-fold. As solo flute repertoire is an exemplar of a monophonic music that has been adapted to move beyond the constraints of its monophony it is suited to a study of the nature of this thesis. The adaptations required by a monophonic instrument to present Minimalist music focus the study on the stylistic features of the genre itself. Challenges of monophony in Minimalist music include but are not limited to: how to present multiplicity, discontinuities, hybridity and a questioning of the role that technology will play in the production of music. A multiplicity of lines, as would be required in Minimalism's phase-shifting becomes difficult, if not impossible with a single instrument that is only presenting a single line of music. However, Minimalism has thwarted this problem by utilizing tape-tracks, often recorded by the live musician before the performance, to create a sound world of multiplicity. This in turn leads to a new understanding of the role of technology in music, moving it beyond the role of stewardship and into a creative role. Creating a hybridity of technology and live performance. Ideas of discontinuity are likewise problematic to portray without an adapted understanding of a monophonic instrument because the utilization of a single timbre makes realizing a disruption of the music more difficult to experience. However, in Minimalist flute repertoire, the idea of discontinuity is demonstrated gradually. An example is Philip Glass's *Arabesque in Memoriam* in which the shifts are with pitch

content and are experienced ever so slightly because they are grounded in small scale repetitions.

Composers of Minimalist of music necessarily have overcome the challenges of a monophonic instrument like the flute in a number of ways. In a uniquely Post-Modern fashion, Steve Reich created his shimmering mosaic of sound through the use of the mechanical doubling of a tape track. Philip Glass simply presented what might be heard as repetition, but which is full of deliberate little flaws which an attentive listener can catch. Louis Andriessen doubled the musical forces but retained one individual as the performer, accepting with this doubling of forces a drastically reduced set of fundamental playing techniques. Henryk Górecki returns to the pure soloist of Glass, yet he offers repetition and then variety, employing the repeated material as section markers.

Chapter 4 The Development of New Complexity: a Geographic Approach

According to British composer Christopher Fox, the composers associated with the so-called 'New Complexity' "pushed the prescriptive capacity of traditional staff notation to its limits."[110] The group of composers which include Brian Ferneyhough, Michael Finnissy (1946), Chris Dench (1953), Richard Barrett (1959) and James Dillon are less of a cohesive compositional school and more of a loose assemblage of individuals. These individuals whose aesthetic interests overlapped in the 1970-80s are similar in this respect to the sacred Minimalists of Chapter Two, however different their specific aims might be. Notably all of the above listed composers spent time in both the United Kingdom and at the Darmstadt summer school. It is the geographic as well as aesthetic reasons that have encouraged an understanding of these very divergent composers as a genre. However, as the opening quote attests, the works of the New Complexity composers undeniably pushed traditional notation's prescriptive capacity to the brink. Fox makes the connection between New Complexity's desire to realize music in a primarily acoustic fashion as instigating the requirement for the heavy notation that characterizes the genre, saying that:

> Their scores necessarily pushed the prescriptive capacity of traditional staff notation to its limits, with a hitherto unprecedented detailing of articulation. Microtonal pitch differentiations, ametric rhythmic divisions and the minutiae of timbral and dynamic inflection were all painstakingly notated; the technical and intellectual difficulties which such notations present for performers

[110]Christopher Fox, "New Complexity," in *Grove Music Online. Oxford Music Online,* http://www.oxfordmusiconline.com.ezproxy.library.uvic.ca/subscriber/article/grove/music/51676 (accessed December 19, 2010).

> were regarded as a significant aesthetic feature of the music.[111]

It is this attention to detail that is the most telling feature of the New Complexity movement.

Characteristics of New Complexity

Musicologist Richard Toop, reputed to be the first person to have grouped Brian Ferneyhough, Michael Finnissy, Chris Dench, Richard Barrett and James Dillon together into a compositional genre, nevertheless warned against "lumping together [of] composers who, from many points of view, might prefer to remain separate."[112] His article, "Four Facets of 'The New Complexity,'" lists characteristics that he believes the term New Complexity to encompass and records responses to a questionnaire that he administered to four leading composers in the field – Finnissy, Dench, Barrett and Dillon. He questioned these composers on four categories: complexity, microtones, style, cyclomania,[113] and lastly their tastes and influences and how they related to tradition. Each of the composers had widely varying views on these topics. This begs the question, how can they be thought to belong to a coherent compositional group? It is perhaps sufficient that they are all dealing with similar problems, regardless of how they view

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[111]Fox, "New Complexity," In *Grove Music Online, Oxford Music Online.*

[112]Richard Toop, "Four Facets of 'The New Complexity,'" *Contact* 32 (1988): 4.

[113]Cyclomania referring to the size of the projects undertaken by composers of the New Complexity. A majority of the composers (Michael Finnissy is the exception) that Toop deals with in the article are committed to the composition of extended cycles of works. See Toop, "Four Facets of 'The New Complexity,'" 7.

these issues. Toop also makes clear that these composers all exhibit surface similarities, in that they all compose complex, meticulously notated scores.[114]

Not surprisingly, the results of Toop's questionnaire yielded many important divergences. For Ferneyhough, complexity describes the relationship that connects musical situations or states and does not refer to a particularly 'complex' timbre of sonic material.[115] More literally for Finnissy and Barrett, they do not see their music as overly complex, while Dench seeks historical antecedents of complexity. Dench's perspective thus recalls a Post-Modern engagement with the past. Dillon's complexity arises from his maximalist notation style. The use of microtones is another trait common to all the so-called New Complexity composers, but again it arises from different compositional situations. For Dillon and Finnissy the use of microtones comes from the influence of ethnic musics, another engagement with the Post-Modern aesthetic. Dench was inspired to employ microtones after hearing Bernd Alois Zimmerman's *Photoptosis* (1968), whereas Barrett's use developed from the untempered tuning world of improvised music.[116] Ferneyhough's inclusion of microtones can be understood as an extension of the totality of serialism, as all music for Ferneyhough has some element of microtonality. Style is generally viewed by these composers as an unconscious outcome of their individual compositions, not something that they are trying to attain or maintain. It is perhaps best put by Ferneyhough when he says that he constructs himself *through* the work.[117] Each of these composers has also claimed at least a single influence from a previous musical generation, the most common of which is Iannis Xenakis, who affected

[114]Toop, "Four Facets of 'The New Complexity,'" 5.

[115]Ferneyhough, "Response to a Questionnaire on 'Complexity,'" in *Collected Writings,* 66.

[116]Toop, "Four Facets of 'The New Complexity,'" 4-8.

[117]Ferneyhough, "Interview with Richard Toop," in *Collected Writings,* 250.

the compositional styles of Dench, Barrett and Dillon.[118] Returning to the notion of complex notation being an identifiable feature of the New Complexity, each of the five composers once again has a slightly different view of notation. They are however united on one front, in that they consider there to be a problem with traditional notation, especially in how it is involved in multiple layers of transcription concerning an abstract idea. The notation that the composers have derived, sometimes thought to be overly prescriptive, is how they have come to deal with this particular musical problem. Although the surface notation of these composer's works bears a certain resemblance, the impetus behind their compositional decisions are quite varied. The individual reactions of Ferneyhough, Finnissy, Dench, Barrett and Dillon to the above situations are represented in summary form in Table 4.1

[118]Toop, "Four Facets of 'The New Complexity,'" 7-8.

	Ferneyhough	Finnissy	Dench	Barrett	Dillon
Complexity	Refers to the relationship that links situations, tendencies or states and not to a particular type of sonic material.	Music is not complex, no more so than people are.	Complexity comes from past traditions.	Complexity of notation is not an insurmountable problem.	Maximalist notation.
Microtones	Integration of microtones, expansion for the listener.	From Yugoslav folk songs.	From hearing microtones used in Bernd Alois Zimmermann's *Photoptosis* (1968).	From free improvisation and an 'untempered' world.	Does not hear diatonic tunings due to extensive exposure to bagpipes at a young age.
Individual Style	Construction of self through composition.	Something to work against.	Important not to consciously interfere with skin of the music, not to force a style.	Comes to his style through the act of composition. This allows stylistic attributes to rise to the surface as a result and not as guidelines.	Outside of the composer's control and should not be identified by the composer.
Tastes, Influences and Relation to Traditions	Early Pierre Boulez. Ferneyhough has also written on Anton Webern, Carl Ruggles and Finnissy.	Folk music early on in his career. Drawn to Eastern European music. Composers such as: Charles Ives, Percy Grainger, Conlon Nancarrow and Bernard Stevens. Contemporaries are not influences.	20th Century individuals including: Alexander Scriabin, Iannis Xenakis, Pascal Dusapin, Luigi Nono, Horatiu Radelescu, Ferneyhough, Dillon and Finnissy.	Iannis Xenakis, Gustave Flaubert, Comte de Lautréamont and Samuel Beckett.	Iannis Xenakis.
Notation	Notation is relative to intention and as such it is not possible to over notated music.	Notation is a transcription of an abstract idea.	Music should be playable, but can feasibly stretch the performer.	Would rather set musical ideas down as he wants them, and except a certain amount of indeterminacy from the players then to water it down.	There is an inherent problem with notation.

Table 4.1. Summary of stances held by five composers associated with the New Complexity movement.[119]

[119]All information is derived from: Brian Ferneyhough, "Response to a Questionnaire on 'Complexity,'" in *Collected Writings,* 66-71; Richard Toop and Brian Ferneyhough, "Interview with Richard Toop (1983)," in *Collected Writings*, 250-289; Toop, "Four Facets of 'The New Complexity,'" 4-50.

New Complexity as a Style in the Late Modern Era

Brian Ferneyhough, the composer whose name is almost synonymous with the New Complexity movement, has garnered a reputation for producing incredibly daunting scores with notation so intricate that it can easily overwhelm both the performer and the page. It is this notation that is the most easily identifiable feature of Ferneyhough's works. On the employment of this compositional strategy, Ferneyhough said, "composers who tend to restrict their notational specifications to a bare minimum end up getting one-dimensional representations of a possible sound-world rather than entering into that world's inner workings."[120] By providing the performer of his work with so many directions, Ferneyhough allows what seems like an endless stream of interpretations. The variety of interpretations that are possible and allowable by Ferneyhough fit into the Post-Modern concept of the multiplicity of time, as there is a myriad of performance possibilities and no one of these possibilities is favoured over another. In addition to the multiplicity of time another consequence of this complex notational style is the creation of what Jonathan Harvey has described as a new musical standard, one that causes in the performer "a new speed of thinking and feeling where hyper-intellectual meets manic raver. They experience an energy born of rapid switching, for all humans are monophonic in consciousness and only learn to be multiphonic by activating an energized unconscious."[121] This comment by Harvey brings up two issues: first, that the music of Ferneyhough requires its own manner of approach; and second, that of human monophonicity. That Ferneyhough's music and by extension the associated work of other

[120] Brian Ferneyhough and James Boros, "Shattering the Vessels of Received Wisdom: In Conversation with James Boros," in *Collected Writings*, 377.

[121] Jonathan Harvey, "Forward," in *Collected Writings*, xi.

New Complexity composers necessitates a unique method of understanding, suggests that it has broken away from previous musical idioms. This demonstrates nevertheless that the New Complexity is indeed engaged with historical traditions, even if only in the sense of being a repudiation of them. Another New Complexity composer, Chris Dench, claims that the 'complex' moniker applies most appropriately to music of the past. Dench has stated that, "funnily enough, the notion of complexity came about through much older pieces, which were very much more skin-deep."[122] This engagement with the earlier traditions is enacted as another feature of the late modern in the New Complexity works of Ferneyhough in his attempt to "reinject vitality back into the idea of closed-form composition through integrating excessive, unstable, and chaotic structures."[123] An older idea of formal unity is the closed-form composition, so what Ferneyhough is attempting is neither a complete rejection nor a continuance of the past tradition. In this sense Ferneyhough's and Dench's works are truly embracing and repudiating history simultaneously and as such are Post-Modern.

That Ferneyhough's reinvigoration of closed-forms involves the use of excess is another characteristic of a move past modernism. It has often been said that Ferneyhough's music goes beyond itself. Jonathan Harvey has said that "Ferneyhough's subjectivity is palpably present: the music is emotional. But it is sometimes developed to a point where it seems to go beyond itself."[124] Ross Feller states that, "unlike some of the orthodox serialists, his [Ferneyhough's] compositions don't seek to exhaust material but

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[122] Chris Dench quoted in Richard Toop, "Four Facets of 'The New Complexity'," *Contact* 32 (1988), 5.

[123] Ross Feller, "Resistant Strains of Postmodernism: The Music of Helmut Lachenmann and Brian Ferneyhough," In *Postmodern Music/Postmodern Thought*, Ed. by Judy Lochhead and Joseph Auner (New York: Routledge, 2002), 249.

[124] Harvey, "Forward," in *Collected Writings*, x.

rather to unleash its future potential."[125] Rather than simply going beyond itself, Ferneyhough's music goes beyond modernism.

This particular state of moving beyond serialism, when expressed in conjunction with Ferneyhough's use of certain serialist traits, makes a paradox of Post-Modern proportions. Jonathan Harvey placed Ferneyhough firmly in the Post-Modern tradition when he made that now famous comment that the composer "apparently absorbed the discoveries of total serialism to a profounder degree than almost anyone else of his generation, without actually subscribing to its orthodoxies...these discoveries, as they hit the ear rather than as they left the composer's pen, were revealed to be a kaleidoscopic contrapuntal vivacity."[126] This is evidence that Ferneyhough's music, although expressed through a tangled notation that seems to unite and tie-up the whole of the piece, demonstrates sonic fragmentation. These kaleidoscopic shards reinforce the Post-Modernism of his engagement with the serialist tradition while also moving beyond it.

James Dillon's works engage in late modernity in a very similar manner to Ferneyhough's. Dillon also employs a maximalist notation style that is as overwhelming and intricate as Ferneyhough's, again causing the experience of temporal multiplicity. Through the saturation of the performer's senses Dillon is able to control which musical ideas are brought to foreground and which are pushed back.

The Development of New Complexity in the United Kingdom

As we have seen, the first major composer associated with New Complexity is Brian Ferneyhough. Born in Coventry in 1943, Ferneyhough studied at the Birmingham

[125]Feller, "Resistant Strains of Postmodernism: The Music of Helmut Lachenmann and Brian Ferneyhough," 252.

[126]Jonathan Harvey, "Brian Ferneyhough," *The Musical Times* 120/1639 (1979), 723.

School of Music and the Royal Academy of Music in London. After winning the Mendelssohn Prize, Ferneyhough moved to continental Europe, studying in both Amsterdam and Rome. For three years, 1968-1970, Ferneyhough won a Gaudeamus Prize and in 1970 he also won a scholarship to study at the Basel Conservatoire.[127] According to Jonathan Harvey, Ferneyhough "lived the experience of Boulez' and Stockhausen's total serialism while starting at the next stage, the first loosening of the strait-jacket."[128] Ferneyhough has been an active composition teacher teaching all over Europe and America. Between 1973 and 1986 Ferneyhough was the composition professor at the Musikhochschule in Freiburg, Germany. Following his time in Germany, he taught at the Royal Conservatoire of The Hague in the Netherlands for a year, before moving to California, where he taught in San Diego from 1987 to 1999 and is currently teaching at Stanford University.[129] Ferneyhough was also a figure at Darmstadt taking on the co-ordination of the composition courses between 1984 and 1992.[130]

The second composer of New Complexity music that is of interest here is James Dillon (b.1950-). Unlike his counterparts, Michael Finnissy (b.1946-) and Ferneyhough, Dillon is not British by birth but rather Scottish. Dillon considers that his Scottish heritage affects his understanding of nature which, as a result of his living on the west coast of Scotland, is that of constant change and mutation in a system in permanent flux, which he claims is not understood in the south of Britain. It is this difference with respect to the understanding of nature that first pointed his aesthetic sensibility towards Iannis

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[127]Keith Potter, "Brian Ferneyhough: Introduction," *Contact* 20 (1979), 4.

[128]Harvey, "Brian Ferneyhough," *The Musical Times* 120/1639 (1979), 723.

[129]Lisa M. Cella, "A Resource Manual for the Solo Flute Repertoire of the Twentieth Century," (DMA diss., UCSD, 2001), 53-54.

[130] Christopher Fox, "British Music at Darmstadt, 1982-92," *Tempo New Series* 186 (1993): 21-22.

Xenakis, another composer from Europe's fringes.[131] Dillon's work is also quite variable, changing greatly between works, and is dependent upon many layers of complexity. However, we seem to be moving towards a second-order complexity, deeper than the surface of the music which is most notably commented upon. This transformation of complexity depth is seen with both Dillon and Ferneyhough.[132]

It seems that many of these composers were something of rebels and perhaps could be seen as continuing the tradition of maverick composers, from the fringes both geographically and aesthetically. But in their own way they developed a manner of composition that fits underneath the umbrella of New Complexity.

New Complexity at Darmstadt

Events held in a particular location will often take on that place's name in the discourse. This is the case with Darmstadt, which has become synonymous with the Internationale Ferienkurse für Neue Musik that is held there. It is the Darmstadt of the International Summer Courses that is of most interest here, as Ferneyhough was highly involved in the material espoused by Darmstadt for many years, particularly during the time frame most in question for this thesis. Darmstadt, Germany has been the centre of new music and the propagation of radical and abstract music expression in Europe since 1946. In his article "Music After Zero Hour" by Christopher Fox traces the history of Darmstadt from its conception through the 1950s. Fox argues against the at one time traditional view that there could be a "Darmstadt School" of composition, claiming that

[131] Toop, "Four Facets of 'The New Complexity,'" 38-41.

[132] Paul Griffiths, *Modern Music and After: Directions Since 1945* (Oxford: Oxford University Press, 1995), 314-315.

"on closer examination it becomes clear that, rather than being monolithic musical construction, the Darmstadt School is really an amalgamation of a number of quite different projects."[133] Some of the projects that composers pursued at Darmstadt were abstraction, surrealism, musical borrowings that were not just Eastern looking but also looked to America and jazz music as acceptable fields from which to borrow.[134] Over the course of the 1960s, Darmstadt became more divided in what music should be presented. The institution of Darmstadt was being forced to accept the revolutionary actions of the international avant-garde. Pianist David Tudor was on the front lines of the division which was made obvious through his performances, such as his 1961 performance of La Monte Young's *X for Henry Flynt*, in which he played a gong 566 times while sitting cross-legged on the floor. This performance caused someone to call an ambulance and when the emergency response squad came they "observed the bizarre performance situation, and departed, understandably bewildered."[135] By the time the composers of the New Complexity movement attended Darmstadt the establishment had begun to recognize the radical nature of the international avant-garde. Before then, the British had remained on the outskirts of the action. A handful of British composers had attended the courses over the years and occasionally British music was programmed for the concerts, but these moments occurred in relative isolation before Brian Ferneyhough took Darmstadt by storm in 1976 through his leading of analysis and composition seminars.[136]

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[133]Christopher Fox, "Music After Zero Hour," *Contemporary Music Review* 26 1 (2007), 14.

[134]Fox, "Music After Zero Hour," 15-16.

[135]Amy C. Beal, "David Tudor in Darmstadt," *Contemporary Music Review* 26 1 (2007), 84.

[136]British composers in attendance at the Darmstadt Summer Course: In 1949: Peter Racine Fricker; In 1957: Richard Rodney Bennett, Cornelius Cardew and Peter Maxwell Davies; In 1970: Tim Soutster; See Fox, "British Music at Darmstadt 1982-92," 21-22.

Ferneyhough's command of the composition summer courses was strengthened in 1984 when he took on the responsibility for the co-ordination of the composition courses. He held this position until 1992. Previously he had led an analysis seminar in 1976, and composition seminars in 1978, 1980, and 1982. 1984 was also the year when Friedrich Hommel took over the overall direction of Darmstadt from Ernst Thomas. Under Hommel's organization a shift began in the pedagogy of Darmstadt, from a rather individual and limited exposure of new music to a more pluralistic set up. The majority of composers were invited to present a single lecture and then partake in the Composers' Forum where they would discuss their own work as well as that of other composers. Another difference in Darmstadt in 1984 is noted by Christopher Fox, specifically that unlike Stockhausen who had run the composition courses prior to Ferneyhough, Ferneyhough's domination arose from "the exhilarating rigour of the discourse which he extrapolated from his composing."[137]

Over the course of the 1980s, while New Complexity was gaining momentum as a genre of composition, Darmstadt saw an influx of British composers, few of whom were students of Ferneyhough, but most were nevertheless aligned with the New Complexity movement. A demonstration of this increased momentum as a school of composition is demonstrated in the recipients of the Kranichsteinerpreis. The winners of the Kranichsteinerpreis in composition, Darmstadt's recognition of exceptional achievement, included at least one composer per year who was associated with musical complexity, see Table 4.2 for a listing of all the winners in composition, those associated with complexity

[137]Fox, "British Music at Darmstadt 1982-92," 22.

are highlighted with italics. Of the highlighted composers only Redgate and Hübler were actually pupils of Ferneyhough.[138]

Year	Composer
1982	*James Dillon* Robert HP Platz
1984	*Chris Dench* Calin Ioachimescu Bernhard Wambach
1986	*Richard Barrett* Mario Garuti Bunita Marcus Alessandro Melchiorre Kaija Saariaho
1988	*Klaus K. Hübler*
1990	Joël-François Durand Luca Francesconi *Roger Redgate* Rodney Sharman
1992	Ignacio Baca-Lobera James Clarke *Frank Cox* Chaya Czernowin Eric Tanguy

Table 4.2. Winners of the Komposition Kranichsteinerpreis.[139]

As a consequence of the milieu of Darmstadt, complexity in music came to be valued, as is evidenced by the winners of the Kranichsteinerpreis. The work of Dillon, Dench, Barrett, Hübler, Redgate and Cox found recognition in part as a result of prevailing aesthetic trend of complexity. It is within the surroundings of the Darmstadt

[138]Fox, "British Music at Darmstadt 1982-92," 23.

[139]"Kranichsteiner Musikpreis," Internationales Musikinstitut Darmstadt, http://www.internationales-musikinstitut.de/images/stories/PDF-Datein/bersicht_Kranichsteiner_Musikpreis.pdf (accessed 28 January 2011).

summer school that many of the examples of New Complexity in wind repertoire were composed and initially performed.

* * *

Solo flute repertoire is fertile ground for composers of the New Complexity genre to explore. Initial appearances of simplicity are deceiving in the case of the flute, as it can be a tool of great complexity when the flutist employs extended techniques. Chapter five draws four examples from the repertoire for solo flute and demonstrates how the music fit into the historical framework developed above.

Chapter 5 New Complexity in Solo Flute Repertoire: Analysis of Emblematic Works by Ferneyhough and Dillon

The nomenclature that allows the classification of certain music compositions as examples of New Complexity in solo flute repertoire seems somewhat oxymoronic. How can a solo monophonic instrument perform music which is distinguished by its complexity? Paul Griffiths offers a few reasons why these composers would be drawn to this style of instrumentation. He posits that it might reach back to Varèse's and Debussy's development of repertoire for the instrument.[140] He also suggests that it could have to do with it the challenges of writing within limitations, which would thereby awaken "prodigious energy in the acts both of composition and of performance. For complexity is by nature a virtuoso art, and finds its proper ensigns in virtuoso performers."[141] It must also be remembered that in flute music, unlike more percussive music for instruments such as the piano, the quality of the tone can and is manipulated after the initial sounding. Therefore there is greater possibility for subtle changes in tone colouration and as a result more layers of complexity.

Unity Capsule – Brian Ferneyhough

Arguably one of the most identifiable examples of the New Complexity movement, *Unity Capsule* by Brian Ferneyhough, was written during the years of 1975

[140]Both Edgard Varèse and Claude-Achille Debussy composed relatively short works for solo flute that have become standards in the repertoire. Debussy wrote *Syrinx for flute* in 1913 and Varèse wrote *Density 21.5 for solo flute* in 1936.

[141]Griffiths, *Modern Music and After: Directions Since 1945*, 315.

and 1976 for French flutist Pierre-Yves Artaud.[142] The piece comprises twenty pages of meticulous notation and constitutes a drastic departure from Varèse and Debussy's shorter works for solo flute. In addition, the score includes three pages of equally exacting instructions for performance.

The notes for performance are divided into two main sections, one concerning the production of the flute sounds and the other concerning vocal production. Although *Unity Capsule* is written for solo flutist, it is in fact written for two voices, since the performer is asked to concentrate (and supply air for) both the flute part and the simultaneous vocal part. This creates a direct link with the Post-Modern concept of plurality as discussed in Chapter 1, for they are separate lines experienced in a single individual -here the flutist. These indications provide a sense of the exacting, plural nature of the score.

Ferneyhough employs a system for the notation of pitch which divides it into three categories. For the tempered intervals there are divisions of "(a) semitonal intervals (or larger) (b) 1/4-tones (24-note scale) [and] (c) 1/5-tones (31-note scale)."[143] For the use of interval tones smaller than a semitone, Ferneyhough distinguishes between fixed notated intervals and microtones. Such detail takes a toll on the performer but is not insurmountable, even the smallest tonal inflection is utilized by Ferneyhough. Within the quarter-tone notation which appears in both ascending and descending forms, there are three different notes between tones. For example between A-natural and B-natural in ascending form there is A quarter sharp, A sharp and A three-quarters sharp. In

[142]Kathleen Chastain interviewed Pierre-Yves Artaud in 1998 about his involvement with contemporary music; See "In Search of Musical Sounds: An interview with Pierre-Yves Artaud," *Flute Talk* (September 1998): 8-11.

[143]Brian Ferneyhough, *Unity Capsule* (London: Peters Edition Ltd., 1975), Notational Conventions.

descending form there is B quarter flat, B flat and B ¾ flat. See figure 5.1 for an example of this notation.

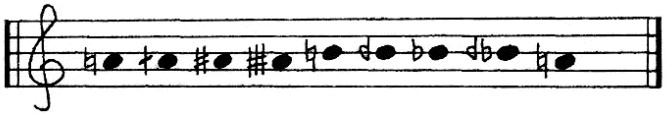

Figure 5.1. Quarter-tone notation utilized by Brian Ferneyhough in *Unity Capsule*.[144]

Ferneyhough also appeals at times to 1/5-tone and microtonal notation. Such specificity of pitches is part of what makes this work so daunting for a flutist to perform. A new fingering is required for each of these pitches, and Ferneyhough provides possible fingerings for all of the pitches that he notates. However, not all of the fingerings work on all instruments or for all flutists, so there is some sense of exploration when it comes to the mere fingerings.

Layered on this fastidious division of the tonal spectrum are indications of tone quality. Like Ferneyhough's precise division of pitch, the tone quality is equally precise. He uses five forms of note-heads that indicate how 'diffuse'[145] the tone-quality should be, going from one extreme in which the flute sound is subordinate to a predominance of the vocal line, to the other, in which a normally produced pure pitch is required. See figure 5.2 for a spectrum of these qualities. The two forms of flutter-tonguing (throat and tongue) and the two types of glissando (finger and lip) are also differentiated in the score. Additional information is provided in the direction of the embouchure hole, the desired percussive effects, and the production of a spectrum of vibrato speeds. This is a

[144]Ferneyhough, *Unity Capsule*, Notational Conventions.

[145] The diffuseness of the tone here refers to the amount of air sound that is incorporated into the flute tone.

substantial amount of information, but nothing that is particularly unplayable with appropriate practice. What makes this work difficult is the postscriptum that follows these descriptions: "These extreme values are often combined, or merged gradually one into the other."[146] By mixing these extended flute techniques rapidly and liberally, Ferneyhough increases their difficulty significantly.

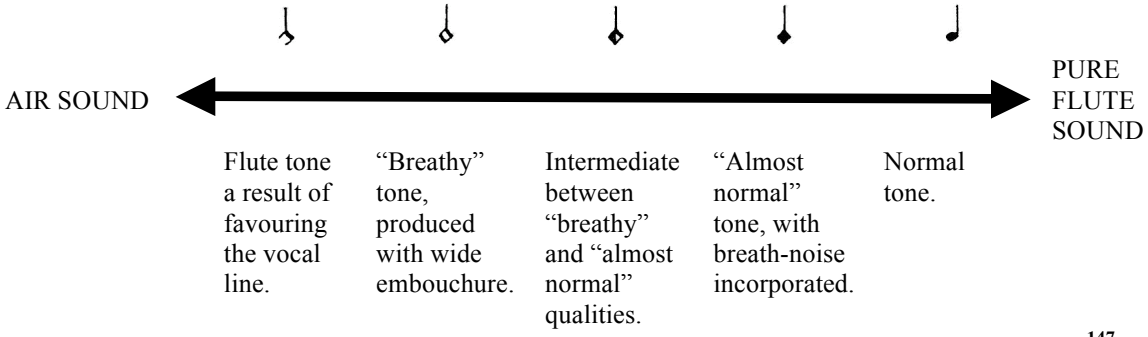

Figure 5.2. Spectrum of flute tone quality utilized by Ferneyhough in *Unity Capsule*.[147]

Following these explanations, Ferneyhough introduces the notation for the voice line.[148] Like his scrupulously indicated fingerings for all notated pitches, Ferneyhough provides each vocal symbol taken from the international phonetic alphabet with a common word (in any of English, French or German) that includes the same sound so that there is no question of the proper sound production. Most interestingly, Ferneyhough describes the vocal techniques in relation to the musical action in the flute line. Vertical lines bind the parts together in appropriate locations. As with all other aspects of the composition discussed up to now, it is again meticulously planned. Ferneyhough provides examples that demonstrate the interaction of the lines in both notation and verbal

[146]Ferneyhough, *Unity Capsule*, Conventions of Notation (Instrument Line).

[147] Ferneyhough, *Unity Capsule*, Conventions of Notation (Instrument Line).

[148] Ferneyhough calls for the performer to simultaneously sing and play. This is done by humming a pitch (vocalized in the throat) and maintaining an exhalation of air across the flute's embouchure hole. See Robert Dick, *The Other Flute: A Performance Manual of Contemporary Techniques* (Oxford: Oxford University Press, 1975), 135.

description, differentiating situations where one line is to have supremacy from those where the lines are to be equal.

As for the form the work is divided into three sections that are played continuously without break, thereby blurring the formal divisions of the work for the listener in a Post-Modern wash. These sections are the posts around which Ferneyhough weaves his web of complexities, and are only explicitly evident to those with a score. Each section is indicated in the part by a uppercase Roman numeral, perceived by the audience rather nebulously as a readjustment of tempo. Section I begins at *Presto*, and an *A Tempo* controls the tempo at the start of section II. The most notable of the tempo changes occurs at the beginning of section III with a *Meno mosso* that is approximately 3/5ths of the original tempo, and which gradually regains the initial tempo.

Each of these sections has smaller parts nested within it. After the uppercase Roman numeral the next level of each section is provided in Arabic numerals; further subdivisions return to Roman numerals, lowercase this time and then to letters. So the listing II. 3. ii. a., refers to the first half of the second bit of the third part of the second section. Certainly Ferneyhough's alpha-numeric system is much easier to use in discussion than a strictly numeric one. It also allows for some sections to have more divisions than others. Section I, for example, never resorts to the alpha division, while both sections II and III do. Each of the smaller divisions provides an idea that lasts for the length of that division, id est I. 2. i – ii offers more interaction between the voice and the flute lines than did I. 1. i – iv. These groupings provide the performer (the first member of the audience) some semblance of structure within the tangled web of complexities. The layers of this nesting add the additional depth of complexity at exactly half way through

the segments. Section I boasts twelve segments, section II has eighteen, and section III returns to twelve for a total of forty-two segments. The increased depth of the layers of complexity is notated between segment twenty-one and twenty-two. See figure 5.3 for a graphical representation of the nesting layers of *Unity Capsule*, segment twenty-one is notated by an asterisk.

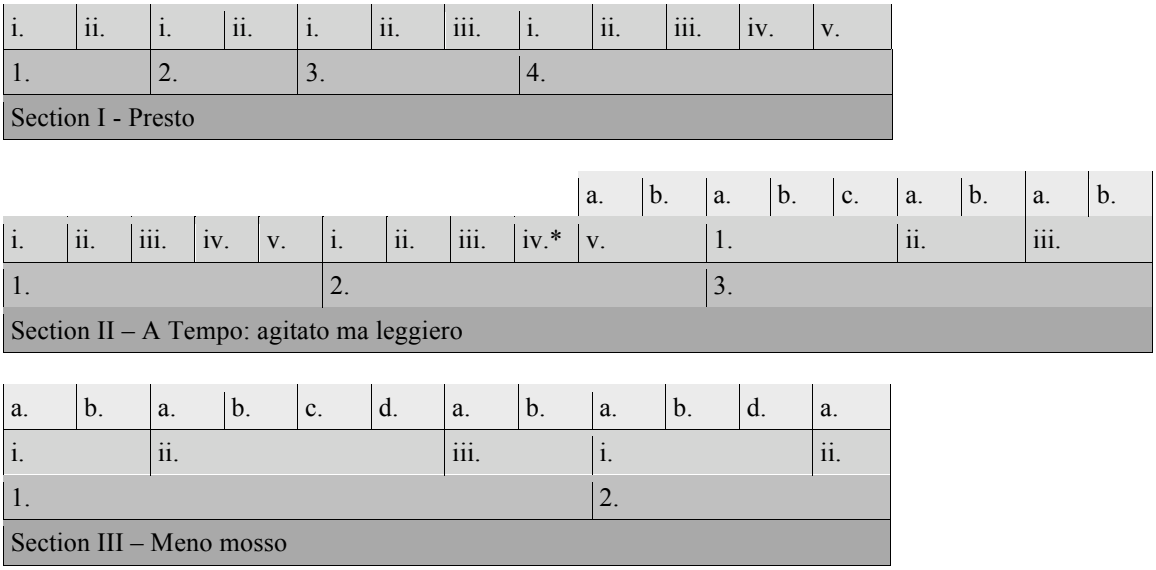

Figure 5.3. A graphical representation of the notated segments of Brian Ferneyhough's *Unity Capsule*.

Section II is further demarcated from section I by the absence of the vocal line. The voice as an independent line only returns in section III. Another similarity between section I and III is that each begins with silence and a lack of motion. For section I it is fifteen seconds and for section III it has been reduced to nine seconds. I would argue that both of these periods of motionless silence achieve a similar effect of tension on the audience, even though they occupy different intervals of time. Ferneyhough indicates that the first

silent segment is to be performed with a playing stance, thus creating tension before the first note is sounded. This silence raises questions in the audience about when exactly the first note will be played, or if this work is going to be a variation on Cage's *4'33''*. Once the first section is underway, the listener understands retrospectively that the silence was a way for Ferneyhough to highlight the opposition between sound and silence that is revealed through the work. Like the recalibration of the tempo at the beginning of section II, the silence before section III reorients the audience to the opposition of sound and silence, recalls the initial tension, and acts as a structural marker.

Ferneyhough invokes a multitude of such nested layers throughout *Unity Capsule*; this causes the intricate web of complexities to appear tangled and knotted on the surface. Without a deeper examination of the underlying principles of the work it is possible to dismiss this work as simply a lot of black dots or overly prescriptive mapping for the sounds produced. Further examination reveals that each marking has a purpose and contributes to the work as a whole.

Superscripto **– Brian Ferneyhough**

Superscripto was written by Brian Ferneyhough for flutist Roberto Fabbriciani in 1981. The work engages an instrumental force of a single piccolo, without an added vocal line. Superficially *Superscripto* appears to be less complex than *Unity Capsule*; yet it also employs many layers of complexity that must be understood separately to understand the work as a whole.

Ferneyhough enlightens the performer to a few aspects of the performance in the work's "Preface," including the emotional response he is attempting to elicit:

> The sound of any extremely high or low instrument tends, at least for me, to evoke associations with borders, boundaries, and with whatever lies beyond. Thus, in this little one-movement composition, I attempted to reflect these sensations in such a way as to suggest the fleeting sketching-in of the brittle outline, the trace without dimensions representing some ultimate 'inside of the outside', itself never to be captured in sound.[149]

The piccolo's range represents the extreme upper range of the flute family, covering over three octaves. It is these boundaries that Ferneyhough explores within *Superscripto*. Ferneyhough traverses the piccolo's complete range, the upper ends of which are incredibly difficult to produce. By covering the entire range of the piccolo, Ferneyhough is able to capture the idea of a boundary within a boundary. In this case the nesting idea is realized through the piccolo exploring the upper boundary of the flute family, and Ferneyhough pushing the boundaries of the piccolo itself.

Unlike *Unity Capsule*, *Superscripto*'s notation is type set rather than hand-written and as such appears neater. This contributes to what on a cursory exploration of the score appears to be a lack of much of the visual aspect of complexity. This appearance of relative simplicity is belied by the work's metrical structure. The time signatures are a combination of conventional and unconventional notations. Such unconventional time signatures include unfamiliar notations such as 1/10 and 3/20, which require the majority of performers to pause and calculate them in relation to what it follows. Therefore when the time signature switches from 1/8 to 1/10 in *Superscripto*, the sixteenth-note triplet in the 1/10 measure is faster by 0.2 than the same figure would be in the 1/8 measure (1/10 = 1/8 x 0.8).[150]

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[149]Brian Ferneyhough, *Superscripto* (London: Peters Edition Ltd., 1982), Preface.

[150]Brian Ferneyhough, *Carceri d'Invenzione IIb* (London: Peters Edition Ltd., 1984).

Beyond irregularities in the notation of the meter, as previously discussed, Ferneyhough utilizes the entirety of the piccolo's register with the addition of another boundary, that of dynamic volume. In the section that sweeps through the majority of the piccolo's available notes Ferneyhough has notated localized dynamics that swell and decay with the contours of the music, from piano to mezzo-forte while crossing two and a half of the piccolo's three octaves; see Figure 5.4.

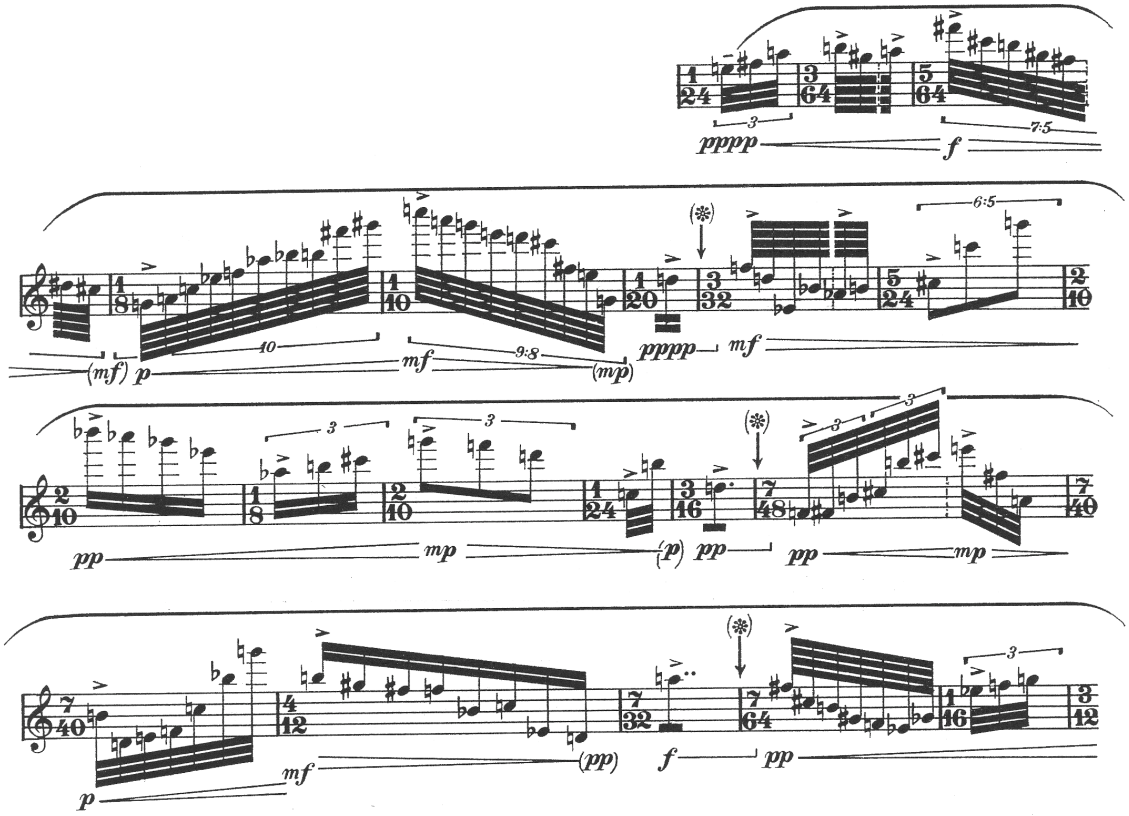

Figure 5.4. *Superscripto* mm. 43-45 by Brian Ferneyhough.

The combination of dynamics that are fighting the natural tendencies of the piccolo along with the unusual meters causes this work to be highly complex.

Carceri d'Invenzione IIb – Brian Ferneyhough

The final Ferneyhough work to be discussed here, *Carceri d'Invenzione IIb*, is actually an extraction of the solo flute in *Carceri d'Invenzione II*, which was written for the instrumentation of a solo flute and a chamber orchestra. *Carceri d'Invenzione IIb* does not form any part of the larger *Carceri d'Invenzione* cycle.[151] Like *Superscripto*, *Carceri d'Invenzione IIb* was written at the request of Roberto Fabbriciani and is also typeset. However unlike *Superscripto, Carceri d'Invenzione IIb* returns to the multiplicity of detailed symbols previously employed in *Unity Capsule*. In *Carceri d'Invenzione IIb* Ferneyhough utilizes the quarter-tone system and the eighth-tone system, of which pitches are only approximate on a wind instrument. Yet these microtones, although "approximate, should also be fingered and articulated as precisely as possible."[152] By using the eighth-tone system, even though it is approximate, Ferneyhough adds four more tone pitches between each tone to his arsenal. The spectrum of pitches has moved from the traditional one pitch, the semi-tone, to a range of seven. This is not an expansion from *Unity Capsule* but rather a move towards more precision in the realm of division. With the eighth-tone system there is equality of increment, so that the ¼ tone and 1/8th tone systems nest within each other.

In *Carceri d'Invenzione IIb* as with *Superscripto* Ferneyhough continues to employ the combination of conventional and unconventional time signatures. With perhaps even greater frequency than previously. Another similarity between *Superscripto* and *Carceri d'Invenzione IIb* is that both works are single movement works, unlike *Unity*

[151]Ferneyhough, *Carceri d'Invenzione IIb.*

[152]Ferneyhough, *Carceri d'Invenzione IIb*, Performance Notes.

Capsule which has three distinct sections. To find the posts around which Ferneyhough weaves his complexity web takes a bit more digging in *Carceri d'Invenzione IIb* than it did in *Unity Capsule* where the surface yielded them easily.

An example of the nesting that occurs in *Carceri d'Invenzione IIb* comes through somewhat in the meter. As the only way to understand the unconventional, irrational measures is to hear them in relation to the measure that occurred directly prior to it,[153] everything within *Carceri d'Invenzione IIb* appears to be at least one level self-referential. These layers of self-reference are visually apparent in the score at measure 74-75; see figure 5.5.

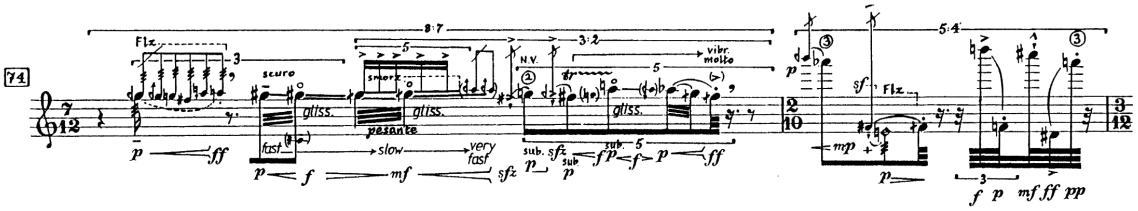

Figure 5.5. ***Carceri d'Invenzione IIb*** **mm. 74-75 by Brian Ferneyhough.**

Measures 74 and 75, shown above, demonstrate the nesting of self-referential rhythms. The performance of measure 75 relies on references to the metrical divisions performed in measure 74. In measure 74 there is the overall notation of 8 divisions of the measure taking place in a notated 7, within that ratio is a 3:2 ratio that encloses two quintuples. This is followed by measure 75 which also utilizes an unconventional ratio. Measure 75's durations must be worked out mathematically from measure 74 which employs an overall ratio of 5:4 and provides additional complexity with the inclusion of a triplet rhythm. The technical difficulties that are wrought from the continuous self-reflexivity of *Carceri*

[153]See section on *Superscripto* for derivation formula.

d'Invenzione IIb are exacerbated by Ferneyhough's employment of dynamics, which like in *Superscripto* tend to work against the natural tendencies of the instrument.

Although Ferneyhough employs many procedures to create his webs of complexity, the main impetus behind the procedures is always that of the division of a larger whole into smaller increments that can then be rearranged into whatever form he chooses. These increments tend to be equal so their interchangeability value increases and they can easily be nested within one another.

Sgothan – James Dillon

Another work for Pierre-Yves Artaud was written by James Dillon in 1984. *Sgothan* is something of a tour de force for the flutist, since it demands virtuosic control of the air-linked aspects of flute performance. *Sgothan,* which is a Gaelic word meaning clouds, evokes haunting wind-swept images.

Much like Ferneyhough, Dillon provides a detailed listing of special symbols that require further explanation than that provided on the score itself. The palate of chromaticism employed by Dillon in addition to the typical twelve tones of western music is that of the quarter tone system. One addition to Ferneyhough's line-up of symbols is that of circular breathing,[154] which is called for at both the beginning and end of the work.

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[154]Circular-breathing is a breathing technique that allows a wind instrumentalist to replenish their air supply while continuing to exhale and produce a continuous musical sound from their instrument. On the flute this technique is achieved by storing air in the cheeks, which is used to produce the musical sound, while the performer draws air into their lungs through the nose. See, Susan J. Maclagan, *A Dictionary for the Modern Flutist* (Toronto: The Scarecrow Press, 2009), s.v. Circular Breathing.

Additionally, a step by step procedures for learning to circular breath (particular to the difficulties experienced by the flutist) can be found in *Flute Talk*. See John Barcelona, "The Basics of Circular Breathing," *Flute Talk* 24/7 (2005): 32 and Michèle Gingras, "Circular Breathing for Wind Players," *Flute Talk* (May-June 1990): 25.

As with Ferneyhough, Dillon is playing with details to achieve the sonic space he wants to create. Dillon's space is one which is strictly inhabited by wind. Almost every notational symbol that he deals with in the "Special symbols" section is intended to produce an air inflection on the flute's tone. Each of the inflections of tone colour is controlled by Dillon through his notational indications. Some of these symbols are more explicit than others with regards to their employment of breath and air elements. These are listed in Table 5.1.

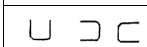
Symbol	Description
	smorzato; interrupted vibrato, abrupt and jerky and produced by small changes of lip pressure
	aeolian sound; pitch with high breath element
	pitch with low (but perceptible) breath element
	sung pitch, simultaneous with flute note. A suitable vowel should be chosen to resemble the instrumental note as closely as possible
w.t.	whistle-tone, produced by blowing on a very open flute aperture so as to boost upper partials
	circular breathing, to produce a continuous sound
	all flz. with the tongue, unless otherwise stated (e.g. throat flz.)
	flute apertures (normal, closed and open)
	mouth position and flute aperture (normal, blocked by lips, and blocked by tongue)
	embouchure (loose, normal and tight)
s.v. v.n. v.m.	vibrato (senza, normale, and molto)

Table 5.1. Symbols used by Dillon to indicate an air inflection on the flute's tone in *Sgothan*.[155]

[155]Chart derived from James Dillon, *Sgothan* (London: Peters Edition Ltd., 1984), Special symbols.

As the link to nature evoked in the title suggests, *Sgothan* develops in an organic manner. It begins after a pizzicato note with whistle tones[156] than become normal tones. This normal tone then becomes distorted by a fluttertongue, first alternating between throat and tongue forms of it.

The piece's initial five measures offer great insight into the rest of the work, as seen in figure 5.6.

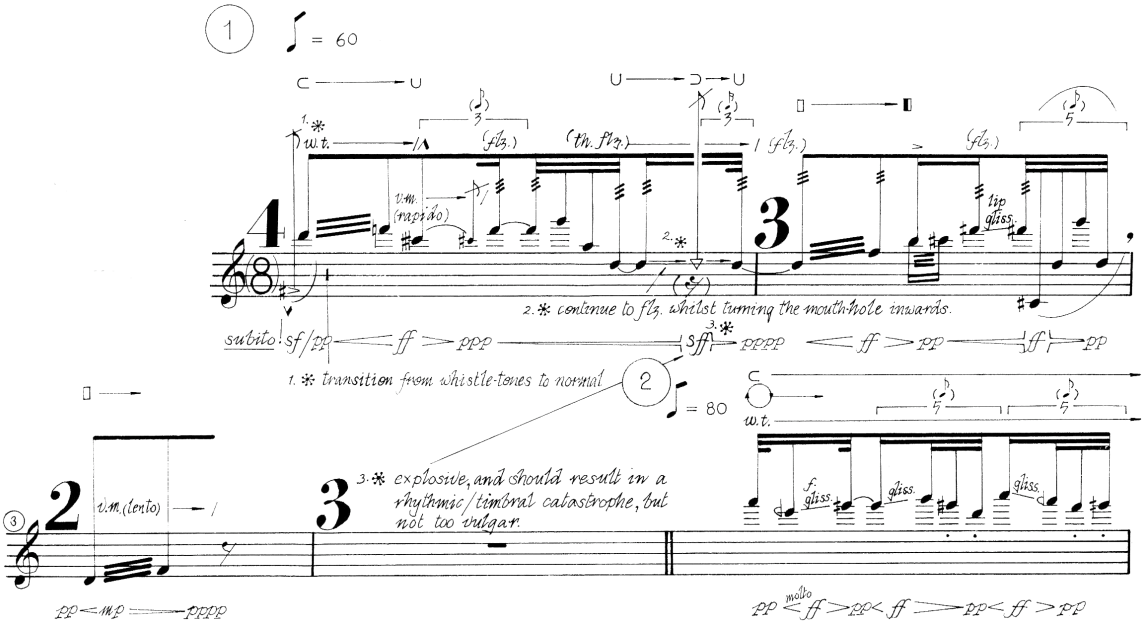


Figure 5.6. *Sgothan* mm. 1-5 by James Dillon.

As measure 1 indicates there is a natural development of the flute's tone from whistle tone to fluttertongue. Measure 2 sees the first instance of prescribed embouchure tension and measure 5 the first moment requiring circular breathing. These elements all demonstrate unity of idea with the development of the wind image; however these

[156]Whistle tones on the flute sound like very faint delicate kettle whistles. It is a particularly difficult tone-colour to maintain with any semblance of stability as the volume and clarity of the tone fluctuates greatly. This technique can be produced with any fingering on the flute, as it simply requires the flute player to play in the normal manner with a steady stream of air and a very relaxed embouchure.

elements work independently of one another, giving voice to the Post-Modern idea of fragmentation and multiplicity.

* * *

Although they had a variety of tools available to them in the composition of complex music, a large number of the New Complexists wrote works for solo monophonic instruments such as the flute. Placing themselves into the role of virtuosos, alongside their interpreters, these composers limited their total options for expression to a single individual. By forcing themselves to work within the limited confines of a solo wind instrument, many of their compositional traits became crystallized and refined for further use in other works. A number of the compositional traits which developed in response to were very much in the vein of the Post-Modern tradition. Traits such as fragmentation and multiplicity of temporal experience were explored by both Ferneyhough and Dillon, and these characteristics found their expression differently in both composers: Dillon's fragmentation comes in the notational separation of lines, while Ferneyhough's focuses on a multiplicity of acceptable performances. The extensive utilization of extended techniques, such as fluttertonguing, circular breathing and whistle tones all demonstrate a late-modern approach to surmounting the perceived limitations of a solo wind instrument.

Chapter 6 Conclusions

Histories dealing with music of the twentieth-century often focus on the attributes of a particular style of music that differentiates it from another. However such differentiation creates arbitrary and artificial boundaries between these styles. Music critic Alex Ross put it succinctly when he stated:

> There is no escaping the interconnectedness of musical experience, even if the composers try to barricade themselves against the outer world or to control the reception of their work. Music history is too often treated as a kind of Mercator projection of the globe, a flat image representing a landscape that is in reality borderless and continuous.[157]

One such artificial boundary is that between Minimalism and New Complexity. On the surface these two styles are very different, and speaking of them in the same sentence seems peculiar. However when these styles are compared and understood on a level field, such as the arena of them both being responses to modernism, these boundaries can be disassembled. It is nevertheless not possible to say that the last quarter of the twentieth century was defined musically by a particular style of composition. As has been demonstrated, there are umbrellas of larger stylistic trends that can be held over groupings of these compositions and this serves to organize the confusion.

Indeed, the confusion and chaos in twentieth-century musical trends is further exacerbated by the introduction of Post-Modern aesthetics. Both Minimalism and New Complexity utilize techniques that support the central idea of the late modern. As

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[157] Alex Ross, *The Rest is Noise: Listening to the Twentieth Century,* (New York: Farrar, Straus and Giroux, 2007), 589.

previously discussed in chapter one, Post-Modernism is an ambiguous term that has largely evaded definition by musicologists and music theorists. It has its roots in literary theory, architecture and philosophy but it has come to have a far reaching influence. Even if we assume that Post-Modernism is no more than a clash with modernism, it still has come to be "a filter through which we view history, interpret reality, see ourselves; Post-Modernism is now our shadow."[158] It is on this shadow that the study of Minimalism and New Complexity in flute repertoire is attempting to focus.

The composers and pieces that have been discussed in the previous chapters all demonstrate very different techniques of composition that can indeed be confounding to the uninitiated. All the works that have been discussed were completed in a period of twenty years. Although this is by no means an exhaustive treatment of the compositions in either genre that were written for the instrumentation of a single wind musician, it does demonstrate the simultaneity of certain compositional movements. This thesis constitutes the first steps towards a more comprehensive survey of these genres within wind literature. On the New Complexity side of the equation, more works for solo flute can be found in the catalogues of Chris Dench and Michael Finnissy, in particular, the latter of whom has a large body of material for both clarinet and oboe. Under the guise of Minimalism, the works for solo wind instrumentalists are more limited, but works exist by Steve Reich for clarinet and saxophone, by Louis Andriessen for oboe, bassoon and flute, and by John Tavener for flute.

Composing for a solo instrumentalist puts the composer in the role of the virtuoso. In such situations the composer's craftsmanship is exposed and the fundamental aspects

[158] Hassan, "From Postmodernism to Postmodernity," 10.

of the work must be solid in order to stand up to the scrutiny of the performer and public. By limiting the composer's choices to that which is possible employing a solo instrumentalist, and further imposing the restrictions implicit in wind music, the compositional style is distilled. Such restrictions have inspired innovation on the part of composers, including but not limited to solutions for the restrictions of breathing, monophony, and articulation controlled by tempo. The solution to the restriction of necessary breaks for breathing is the technique of circular breathing. For the problem of monophony the use of multiphonics and the human voice in addition to traditional fingering, has been employed to the end of virtual polyphony. The limitation of articulation being tied to tempo, has been solved through the employment of double and triple tonguing, providing the option of clear articulation at high speeds.

Chapter one broke the Post-Modern aesthetic down into concepts embraced by Post-Modernity and those rejected by it. These are revisited here noting the particular characteristics shared by both Minimalist and New Complexist composers. Concepts of the Post-Modern that are shared between Minimalism and New Complexity are:

- the contradiction of breaking with and extending of modernism
- irony
- disdain for the unquestioned value of structural unity
- understanding music as a culturally, socially and politically relevant tool
- possessing fragmentation and discontinuities
- presenting and accepting multiple meanings and temporalities
- quotations of or references to music of many traditions and cultures
- embracing and engaging in contradictions
- understanding technology as deeply implicated in the production and essence of music
- pluralism and eclecticism in styles, techniques and expression levels

- hybridity in any sense
- avoidance of boundaries between sonorities
- avoidance of binary oppositions
- avoidance of a meta-narrative and the linearity of history
- avoidance of a distinct present

It is notable that neither Minimalism nor New Complexity fully adheres to all of the characteristics listed in chapter one. This returns to Kramer's initial indication that not all the categories need to be fulfilled for a work to be understood as Post-Modern. All of the works discussed here have elements of late modernity embedded into their very cores, although superficially divergent in almost all other manners. It is in this core that the similarities between the stylistic techniques of Minimalism and New Complexity lies. Perhaps by first focusing on the analogous aspects of Minimalism and New Complexity as they appear in their most basic form that is works for a monophonic solo instrument, such as the flute, the boundaries described by Ross will eventually be eliminated and a more faithful representation of the musical landscape of the last quarter of the twentieth century will be possible.

Bibliography

Andriessen, Louis and Maja Trochimczyk. “Dialog 1: Learning” in *The Music of Louis Andriessen*. Edited by Maja Trochimczyk, 3-30. New York: Routledge, 2002.

"Arabesque." In *Grove Art Online*. *Oxford Art Online*. http://www.oxfordartonline.com/subscriber/article/grove/art/T003513 (accessed April 14, 2011).

Barcelona, John. “The Basics of Circular Breathing.” *Flute Talk* 24/7 (2005): 32.

Barthes, Roland. *Image – Music – Text*. Translated by Stephen Heath. New York: Hill and Wang, 1977.

Beal, Amy C. “David Tudor in Darmstadt.” *Contemporary Music Review* 26/1 (2007): 77-88.

Bernard, Jonathan W. “Minimalism, Postminimalism, and the Resurgence of Tonality in Recent American Music.” *American Music* 21/1 (2003): 112-133.

Bernard, Jonathan W. “The Minimalist Aesthetic in the Plastic Arts and in Music.” *Perspectives of New Music* 31/1 (1993): 86-132.

Blakeman, Edward. *Taffanel: Genius of the Flute*. Oxford: Oxford University Press, 2005.

Boulez, Pierre and Jonathan Cott. “On New Music.” *The New York Review of Books* 31/11 (28 June 1984): 14-15.

Cella, Lisa M. “A Resource Manual for the Solo Flute Repertoire of the Twentieth Century.” DMA diss., University of California, San Diego, 2001. ProQuest (AAT 3025156).

Chastain, Kathleen. “In Search of Musical Sounds: An interview with Pierre-Yves Artaud.” *Flute Talk* (September 1998): 8-11.

Delaere, Mark and Maarten Beirens. “Koninklijke Vereniging voor Nederlandse Muziekgeschiedenis [Minimal Music in the Low Countries].” Translated by Hilary Staples. *Tijdschrift van de Koninklijke Vereniging voor Nederlandse Muziekgeschiedenis* 54/1 (2004): 31-78.

Dick, Robert. *The Other Flute: A performance manual of contemporary techniques*. Oxford: Oxford University Press, 1975.

Dourgeuille, Claude. *The French Flute School, 1869-1950*. Translated by Edward Blakeman. London: Tony Bingham, 1986.

Duckworth, William. *Talking Music: Conversations with John Cage, Philip Glass, Laurie Anderson, and Five Generations of American Experimental Composers.* New York: Schirmer Books, 1995.

Duncan, Stuart Paul. "Re-Complexifying the Function(s) of Notation in the Music of Brian Ferneyhough and the 'New Complexity.'" *Perspectives of New Music* 48/1 (2010): 136-172.

Everett, Yayoi Uno. *The Music of Louis Andriessen*. Cambridge, UK: Cambridge University Press, 2006.

Feller, Ross. "Resistant Strains of Postmodernism: The Music of Helmut Lachenmann and Brian Ferneyhough." In *Postmodern Music/Postmodern Thought.* Edited by Judy Lochhead and Joseph Auner, 249-262. New York: Routledge, 2002.

Ferneyhough, Brian. *Collected Writings*. Edited by James Boros and Richard Toop. London: Routledge, 2003.

Fink, Robert. *Repeating Ourselves: American minimal music as a cultural practice.* Berkeley and Los Angeles: University of California Press, 2005.

Finnissy, Michael and Marilyn Nonken. "Biting the Hand that Feeds You." *Contemporary Music Review* 21/1 (2002): 71-79.

Fisk, Josiah. "The New Simplicity: The Music of Górecki, Tavener and Pärt." *The Hudson Review* 47/3 (1994): 394-412.

Fitch, Lois. "Brian Ferneyhough, 'Postmodern Modernist.'" In *The Modernist Legacy: essays on new music*. Edited by Björn Heile, 159-176. Surrey, England: Ashgate Publishing Limited, 2009.

Flynt, Henry and Benjamin Piekut. "Henry Flynt in New York." Filmed 2005 – 2007. 29 Vimeo videos, 7:15, 6:11, 8:22, 4:38, 7:31, 6:49, 6:59, 5:57, 6:15, 2:04, 7:42, 6:05, 5:59, 4:21, 6:16, 5:04, 8:38, 5:17, 8:20, 9:36, 2:37, 9:13, 5:09, 5:04, 3:07, 6:42, 2:28, 2:44, 2:53. Posted July 2008. http://vimeo.com/benjaminpiekut.

Ford, Andrew. *Composer to Composer: Conversations about contemporary music.* London: Quartet Books, 1993.

Fox, Christopher. "British Music at Darmstadt 1982-92." *Tempo New Series* 186 (1993): 21-25.

Fox, Christopher. "Music After Zero Hour." *Contemporary Music Review* 26/1 (2007): 5-24.

Fox, Christopher. "New Complexity." In *Grove Music Online. Oxford Music Online.* http://www.oxfordmusiconline.com.ezproxy.library.uvic.ca/subscriber/article/grove/music/51676 (accessed December 19, 2010).

Gann, Kyle. "Thankless Attempts at a Definition of Minimalism." In *Audio Culture: readings in modern music*. Edited by Christopher Cox and Daniel Warner, 299-303. New York: The Continuum Publishing Group Inc., 2006.

Gingras, Michèle. "Circular Breathing for Wind Players." *Flute Talk* (May-June 1990): 25.

Glass, Philip. *Music by Philip Glass*. Edited by Robert T. Jones. New York: Harper & Row Publishers, 1987.

Griffiths, Paul. *Modern Music and After: Directions Since 1945*. Oxford: Oxford University Press, 1995.

Harvey, Jonathan. "Brian Ferneyhough." *The Musical Times* 120/1639 (1979): 723-728.

Hassan, Ihab Habib. "From Post-Modernism to Post-Modernity: The Local/Global Context." *Philosophy and Literature* 25/1 (2001): 1-13.

Heisinger, Brent. "American Minimalism in the 1980s." *American Music* 7/4 (1989): 430-447.

Hoffman, Elizabeth. "Textural *Klangfarben* in James Dillon's *La femme invisible* (1989): An Explanatory Model." *Perspectives of New Music* 43/1 (2005): 4-33.

Internationales Musikinstitut Darmstadt. "Kranichsteiner Musikpreis." http://www.internationales-musikinstitut.de/images/stories/PDF-Datein/bersicht_Kranichsteiner_Musikpreis.pdf (accessed 28 January 2011).

Johnson, Timothy A. "Minimalism: Aesthetic, Style, or Techinque?" *Musical Quarterly* 78/4 (1994): 742-773.

Kramer, Jonathan D. "The Nature and Origins of Musical Postmodernism." *Current Musicology* 66 (1999): 7-20.

Levine, Carin and Christina Mitropoulos-Bott. *The Techniques of Flute Playing* [*Die Spieltechnik der Flöte*]. Basel: Bärenreiter Kassel, 2002.

LeWitt, Sol. "Paragraphs on Conceptual Art." *Artforum* 8/5 (1967): 79-83.

Lukas, Kathryn. "Brian Ferneyhough: Cassandra's Dream Song & Unity Capsule."*Contact* 20 (1979): 9-11.

Lyotard, Jean-François. “Music and Post-Modernity.” Translated by David Bennett. *New Formations* 66 (2009): 37-47.

Lyotard, Jean-François. *The Postmodern Condition: A Report on Knowledge.* Translated by Geoff Bennington and Brian Massumi. Minneapolis: University of Minnesota Press, 1984.

Maclagan, Susan J. *A Dictionary for the Modern Flutist*. Toronto: The Scarecrow Press, 2009.

Mahnkopf, Claus-Steffan. “Second Modernity-An Attempted Assessment.” In *Facets of the Second Modernity*, edited by Claus-Steffan Mahnkopf, Frank Cox, and Wolfram Schurig, 9-15. Hofheim: Wolke Verlag, 2008.

McCutchan, Ann. *Marcel Moyse: Voice of the Flute.* Portland, OR: Amadeus Press, 1994.

Mertens, Wim. *American Minimal Music: La Monte Young, Terry Riley, Steve Reich, Philip Glass*. Translated by J. Hautekiet. London: Kahn & Averill, 1983.

Metzer, David. *Musical Modernism at the Turn of the Twenty-First Century.* Cambridge: Cambridge University Press, 2009.

Potter, Keith. “Brian Ferneyhough: Introduction.” *Contact* 20 (1979): 4-5.

Potter, Keith. “Contemporary British Composers 3: James Dillon: Currents of Development.” *The Musical Times* 131/1767 (May 1990): 1253-1260.

Potter, Keith. *Four Musical Minimalists.* New York: Cambridge University Press, 2000.

Potter, Keith. “Minimalism.” In *Grove Music Online. Oxford Music Online.* http://www.oxfordmusiconline.com.ezproxy.library.uvic.ca/subscriber/article/grove/music/40603 (accessed December 8, 2010).

Prendergast, Mark. *The Ambient Century: From Mahler to Trance–The Evolution of Sound in the Electronic Age*. London: Bloomsbury, 2000.

Quinn, Ian. “Minimal Challenges: Process Music and the Uses of Formalist Analysis.” *Contemporary Music Review* 25/3 (2006): 283-294.

Radice, Mark A. *Concert Music of the Twentieth Century Its Personalities, Institutions, and Techniques.* Upper Saddle River, NJ: Prentice Hall, 2002.

Reich, Steve. *Writings on Music: 1965-2000.* Oxford: Oxford University Press, 2002.

Rockwell, John. *All American Music: Composition in the Late Twentieth Century.* New York: Alfred A. Knopf, 1983.

Ross, Alex. *The Rest is Noise: Listening to the Twentieth Century.* New York: Farrar, Straus and Giroux, 2007.

Schwarz, K. Robert. *Minimalists*. London: Phaidon Press, 1996.

Strickland, Edward. *Minimalism: Origins*. Bloomington and Indianapolis: Indiana University Press, 1993.

Taruskin, Richard. *The Oxford History of Western Music*, vol. 5. New York: Oxford University Press, 2004.

Thomas, Adrian. *Górecki*. New York: Oxford University Press, 1997.

Thomson, J.M. "Brüggen, Frans." In *Grove Music Online*. *Oxford Music Online*, http://www.oxfordmusiconline.com.ezproxy.library.uvic.ca/subscriber/article/grove/music/04132 (accessed December 15, 2010).

Toff, Nancy. *Monarch of the Flute: The Life of Georges Barrère.* Oxford: Oxford University Press, 2005.

Toop, Richard. "Four Facets of the 'New Complexity." *Contact* 32 (1988): 4-50.

Trochimczyk, Maja. "Unisons and the Republic: Andriessen's Minimalism" in *The Music of Louis Andriessen*. Edited by Maja Trochimczyk, 91-110. New York: Routledge, 2002.

Warburton, Dan. "A Working Terminology for Minimal Music." *Intégral* 2 (1988): 135-159.

Wasserman, Emily. "An Interview with Composer Steve Reich." *Artforum* Vol. X No. 9 (1972): 44-48.

Whittall, Arnold. "The elements of James Dillon." *The Musical Times* 148/1899 (Summer 2007): 3-17.

Wilson, Ransom. *Reich, Glass, Becker*. 1982. Capitol Records, Inc. DS-37340

Wittgenstein, Ludwig. *Philosophical Investigations*. 4th Revised edition. Translated by G.E.M. Anscombe, P.M.S. Hacker and Joachim Schulte. Edited by P.M.S. Hacker and Joachim Schulte. Oxford: Wiley-Blackwell Publishing Ltd., 2009.

Wright, David. "Louis Andriessen: Polity, Time, Speed, Substance." *Tempo* New Series No. 187 (1993): 7-13.

Scores

Andriessen, Louis. *Ende*. Houten, NL: Ascota Publishing Ltd., 1988.

Dillon, James. *Sgothan*. London: Peters Edition Ltd., 1984.

Ferneyhough, Brian. *Carceri d'Invenzione IIb*. London: Peters Edition Ltd., 1984.

Ferneyhough, Brian. *Superscripto*. London: Peters Edition Ltd., 1982.

Ferneyhough, Brian. *Unity Capsule*. London: Peters Edition Ltd., 1975.

Glass, Philip. *Arabesque in Memoriam.* United Kingdom: Dunvagen Music Publishers Inc.,1988.

Górecki, Henryk. *Valentine Piece,* in *Valentines for Flute: works by Górecki, Rouse*. New York: Boosey & Hawkes, 1997.

Reich, Steve. *Vermont Counterpoint: for Flute and Tape or Flute Ensemble.* United States: Hendon Music, 1989.

Selected Discography

Balmer, Hans. *Minimal Flute.* Switzerland: Fontastix, 2010. CD322502.
Includes performances of Philip Glass's *Arabesque in Memoriam* and Steve Reich's *Vermont Counterpoint*.

Bjarnason, Kolbeinn. *Brian Ferneyhough: Music For Flute.* New Rochelle, NY: Bridge Records, 2002. BRIDGE 9112.
Includes performances of Brain Ferneyhough's *Unity Capsule* and *Carceri d'Invenzione Ilb*.

Ruffer, Nancy. *Mulitiplicities: Music for Flute*, 2003. Metier 92063.
Includes recordings of Brian Ferneyhough's *Superscripto* and James Dillon's *Sgothan.*

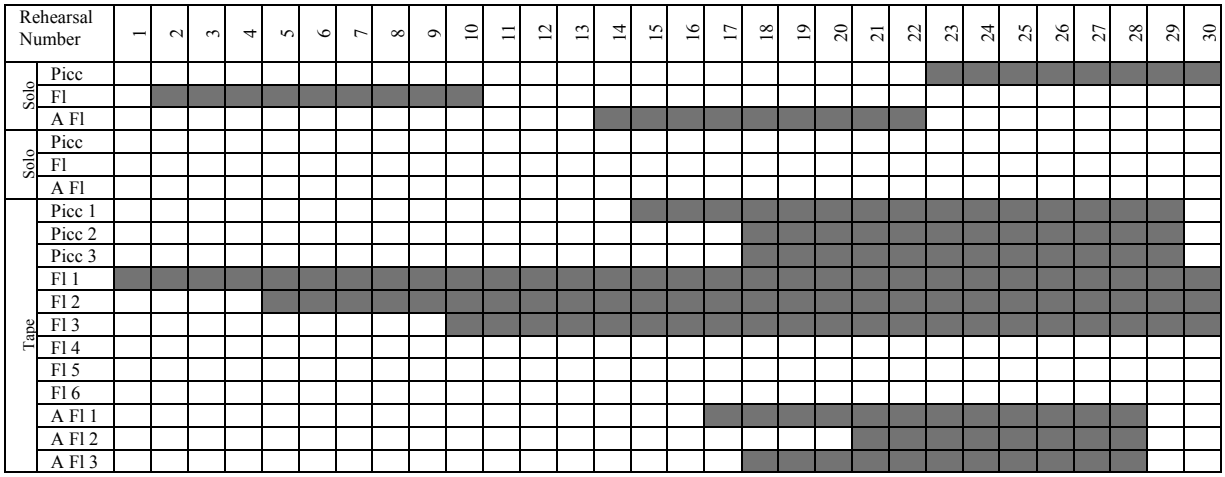
Laurin, Dan. *Recorder Grafitti*, 2006. Intim Records. B00000DGP3.
Includes a recording of Louis Andriessen's *Ende*.

Wilson, Ransom. *Grand Pianola Music.* U.S.: Angel, 1985. CDC7 47331 2.
Includes Ransom Wilson's performance of Steve Reich's *Vermont Counterpoint.*

Wolstenholme, Anna and Chamber Domaine. *Henryk Górecki: Life Journey,* 2009. Landor Records. B001LB1IEO.
Includes Górecki's *Valentine Piece for Solo Flute and Little Bell Opus 70*.

Appendix A Textural Analysis of Steve Reich's Vermont Counterpoint

Shaded regions indicate an active line during the noted rehearsal number.



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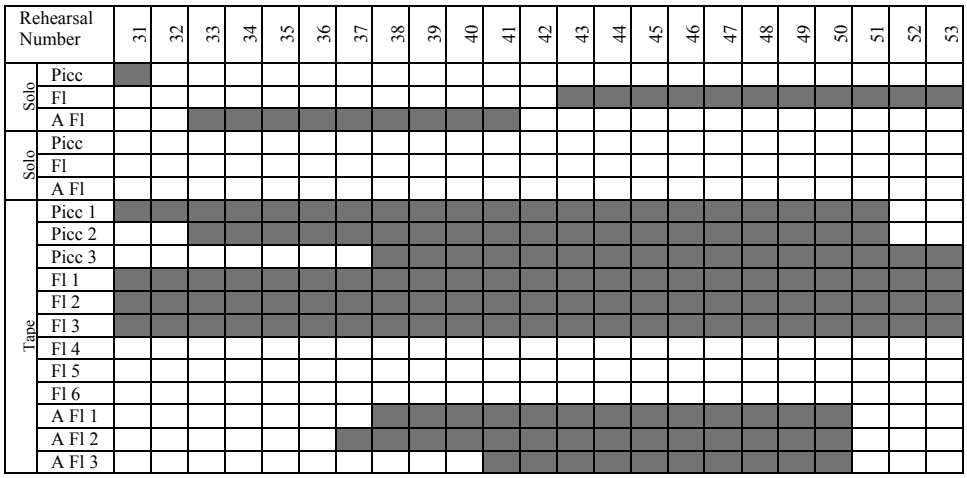

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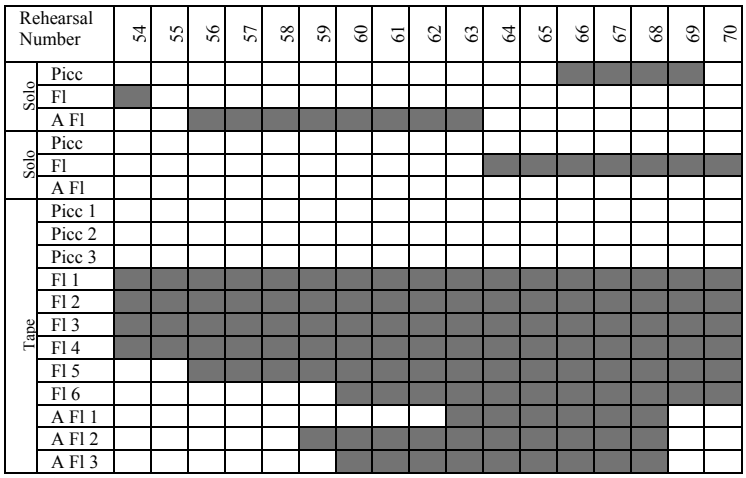

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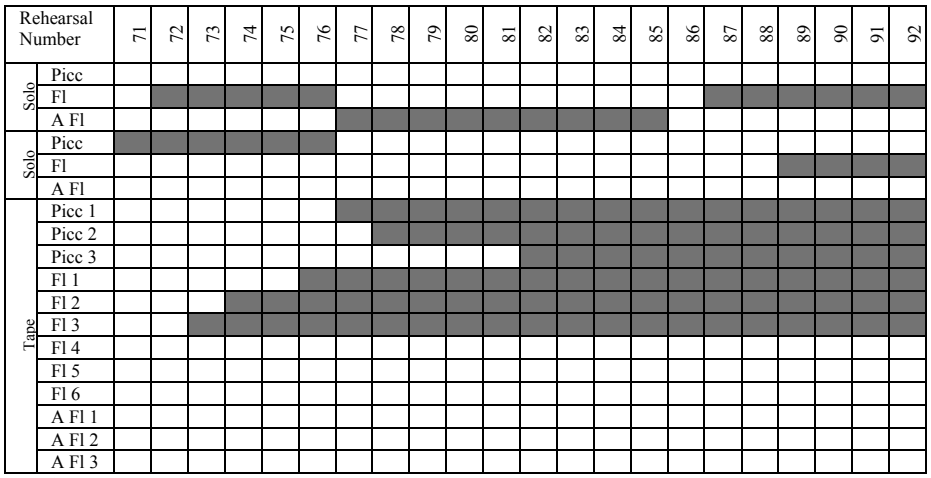

Section IV