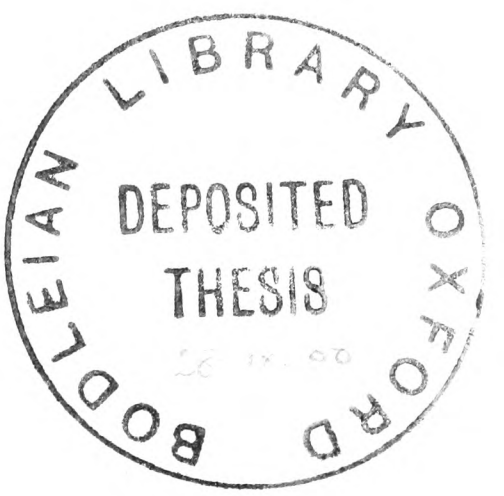
An Analysis and Sketch Study of the Early Instrumental Music of Sir Harrison Birtwistle (*c.*1957-77)

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St Cross College
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DPhil Thesis

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2000



ABSTRACT

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Sir Harrison Birtwistle is one of Britain's leading contemporary composers. His intellectually challenging music has so far proved difficult to analyse. This thesis aims to account for the significance of Birtwistle's earliest published works, commenting on existing analyses, developing new approaches and, where available, drawing on the composer's own sketches, drafts and other manuscripts, reflecting my belief that the early music represents a clear blueprint for later works.

The thesis is in two parts. The first consists of chapters 1 and 2, which deal with works for which no sketch material survives. The emphasis is initially on accounting for Birtwistle within a broader historical context, as well as developing new ways of investigating the works based on links with other contemporary artists and musicians, and interests the composer declared. This part also includes extended discussion of a work thought to have been lost, but which is in fact stored in the *Birtwistle Sammlung* at the Paul Sacher Foundation, Basel.

Whilst the chapters incorporate theoretical tools, works are treated on their own terms, and analytical methods are developed which respond to apparently new concerns, rather than subsume each work within an over-arching theoretical model. However, a number of themes are developed at this stage and carried throughout the thesis: especially, the use of tone rows, associative pitch projection, motivic permutation and forms of textural association.

The second part, represented by chapters 3, 4 and 5, covers works for which a substantial amount of manuscript material exists, stored at the Sacher Foundation. Whilst earlier themes are continued, new issues relating to time and evocations of the pastoral are introduced in response to developments in the 1970s. Another theme developed through these chapters concerns problems surrounding the status of sketch material, its value to analysis, and the extent to which the sketches make different analytical demands from the scores.

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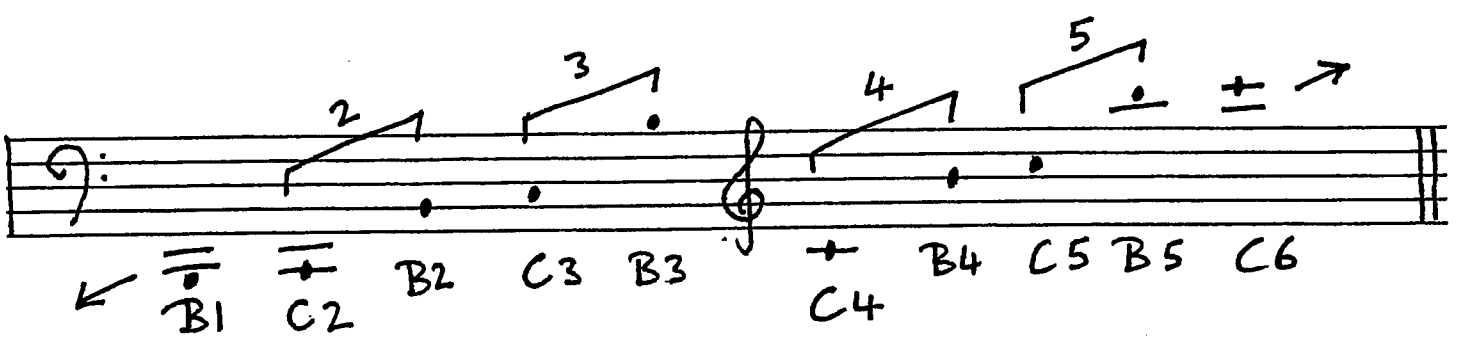
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Prefatory Notes

The thesis has been arranged in such a way that nearly all examples, tables, sketch transcriptions, and other non-text based items are located in a separate volume, labelled "Volume II: Appendix". This volume begins with a list of contents, outlining the nature of the examples and their respective page numbers.

Throughout the thesis I have made use of the Acoustical Society of America's system when referring to the specific register of pitches. This operates on the following basis: from middle C to the B natural 11 semitones above this, the suffix "4" is added. Correspondingly, the three octaves below middle C are labelled 3, 2 and 1, respectively, and those above 5, 6 and 7. This may be summarized graphically as follows:



Other systems of reference and shorthand are explained as and when they appear in the text.

Acknowledgements

I am greatly indebted to Dr John Milsom for the inspirational hours he devoted to discussing my research during its inception at Christ Church, Oxford. Following Dr Milsom's departure to start a new job in America, I was very fortunate when both Professor Arnold Whittall and Dr Peter Franklin agreed to step in as replacement supervisors - their help and generosity has been invaluable.

The project would not have been possible without the support of the British Academy. I am also indebted to the Paul Sacher Foundation for a research scholarship, to the staff for their advice and encouragement, and for permission to use transcriptions and copies of Birtwistle manuscripts in their collection. Invaluable financial assistance was also provided by St Edmund Hall, through a William R. Miller Postgraduate Award, and by St Cross College, through the Paula Soans O'Brian Graduate Scholarship. Further generous support was provided by New College School (ensuring I got some fresh air on the Longwall sports field). Miranda Jackson at Universal Edition has offered generous assistance, including the provision of scores; John Wagstaff was ever witty and obliging (my thanks to the Music Faculty Library for the acquisition of a microfilm from the British Library); and thanks also to Musica Britannica for their support in granting a Louise Dyer Award.

Universal Edition have kindly given permission for the reproduction of extracts of Birtwistle scores, and Boosey and Hawkes have similarly permitted the use of extracts from Stravinsky scores, for which I am grateful.

I should also like to record my gratitude, for their words of advice and assistance, to Dr Michael Taylor, Michael Hall, Professor Roger Parker, Dr Nicholas Marston and Robert Piencikowski. My thanks to Dr Paul Fugler for proof-reading the text, and to Elina Aebi for providing essential computer advice and for looking over the bibliography. To the friends and colleagues I have made during this period, both in Oxford and Basel; to Pallavi, for weathering storms so well; and, not least, to my (ever patient) parents and grandparents, I should like to dedicate what follows.

Introduction

Existing Birtwistle Studies

At the start of the new millennium, Birtwistle scholarship seems to be flourishing with two monographs recently completed by Jonathan Cross and Robert Adlington.[1] These studies follow the recent publication of a book by Michael Hall which covers Birtwistle's music composed since 1984.[2] Michael Hall's earlier study, *Harrison Birtwistle*,[3] in many ways set the course for subsequent work and it should be said that, laying inevitable criticisms aside, Hall's book constitutes a remarkably insightful, often inspirational treatment of what, in 1984, was largely uncharted territory. Prior to this, a number of short articles had been published, mostly in newspapers and journals such as *Tempo* and *The Musical Times*. Notable amongst these were pieces by Michael Nyman, Robert Henderson, Meirion Bowen, Roger Smalley and Stephen Walsh. Subsequent to Hall's book, a number of writers, including Arnold Whittall, Paul Griffiths, Andrew Ford and Andrew Clements, have responded with a series of articles and interviews, but only in the 1990s has Birtwistle's music become the subject of academic theses. The first doctoral thesis which focused on Birtwistle was written by Jonathan Cross (submitted in 1994),[4] and this has been followed by a number of articles by him which develop a clear analytical approach to the subject.[5] Around the same time, a sizeable number of studies have appeared, for instance various Master's and Bachelor's theses, including an undergraduate thesis written

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[1] Since the ideas set out in this thesis were finalized well before the publication of the books by Jonathan Cross and Robert Adlington, it has not been possible to account for their new ideas, other than in response to conversations and previews of some early drafts of their work.

[2] *Harrison Birtwistle in Recent Years* (London: Robson Books, 1998). Cited henceforth by author and date alone.

[3] (London: Robson Books, 1984). Cited henceforth by author and date alone.

[4] Jonathan Cross, 'Modernism, Analysis and New Music: Studies in the Music of Stravinsky and Birtwistle', PhD, King's College, London, 1994.

[5] There are also sections that deal with Birtwistle's music in Cross's book *The Stravinsky Legacy* (Cambridge: Cambridge University Press, 1998).

in 1992 by Robert Adlington[6] and a recent American PhD by Brian Robison which is based on a detailed analysis of *Carmen Arcadiae Mechanicae Perpetuum* (1977-8).[7] Besides a few remarks about fragments of sketches in Hall's 1984 book, the first discussion based entirely on Birtwistle's sketch material was an article regarding the sketches for *The Triumph of Time*, written by Michael Taylor.[8] Michael Hall's second book also discusses sketches, but for works which fall outside the period treated during this thesis (1957-77).

Aims of the Thesis

The main contention of this thesis is that Birtwistle's early instrumental works have not received the detailed attention that they deserve, and that a better understanding of the ways in which these pieces operate will ultimately strengthen our ability to discuss the later works, and to assess Birtwistle's position in relation to other composers. It has therefore been designed to contribute to the present need for detailed discussion of sketches and close analytical readings of the early works.

The intention has certainly not been to provide a 'Life and Works' style study, although contextual and biographical information is supplied where necessary in order to clarify the sequence of events, and to suggest explanations of issues of a more aesthetic nature. Instead, the thesis attempts to build on the existing body of analytical work devoted to Birtwistle, offering critiques where necessary, and supplying new heuristic approaches to the subject through an application of existing theories where they seem most appropriate (such as Stockhausen's theory of moment form). The intention of this study has not been to develop a single methodological approach to Birtwistle's music.

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[6] 'Aspects of Form in the Recent Music of Harrison Birtwistle', BA thesis, University of Oxford, 1992.

[7] 'Toward a Methodology for Analysing Birtwistle's *Carmen Arcadiae Mechanicae Perpetuum*', PhD, Cornell University, 1999.

[8] 'Birtwistle's First *Triumph of Time*', *Mitteilungen der Paul Sacher Stiftung*, Nr 8, März 1995, pp.17-21. Taylor has since contributed a short article on the sketches for *Endless Parade* (1986-87) which appears as Chapter 10 in *Settling New Scores*, ed. Felix Meyer, (Mainz: Scott, 1998), pp.41-3.

Significant contributions have already been made in this area, notably by Hall and Cross.[9] On the contrary, the aim has been to apply varied approaches to the works under investigation in order to move away from the idea of Birtwistle as a 'hedgehog rather than a fox', a composer with one big idea.[10] To pursue the impression of Birtwistle as hedgehog inevitably reinforces the stereotype offered by Birtwistle himself, of a solipsistic, inward-looking composer, only concerned with reworking his own ideas. Where possible, this thesis will explore the opposite tendency by examining multiple aspects of the music.

The issue of Birtwistle's relationship to the music of other European and American composers has, I feel, largely been neglected, and this subject could receive even fuller attention than it does here. This neglect may stem from the belief that Birtwistle was resistant to the avant-garde experiments of the Darmstadt period of the late 1950s and early '60s.[11] What interests me are the manifold regions in which his interests seem to

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[9] Hall (1984) develops the idea of what he calls a 'central organising principle', derived from Isaiah Berlin (see footnote 10). Hall argues that Birtwistle's central organising principle is based on the symbiotic relationship of regular, predictable features, and irregular, capricious elements. This might be seen as a trope of Boulez's thoughts on the dialectical operations in composing, as expressed in Pierre Boulez: 'The Composer and Creativity', *Journal of the Arnold Schoenberg Institute*, 9/2 (1988), pp.109-22. On page 113, Boulez comments that, "The empirical and theoretical approaches complement each other, and are both necessary. I believe in that very strongly. They are like two mirrors that reflect your personality. The mirror of technique reflects the imagination, and the mirror of imagination reflects the technique." And, on pages 121-2: "You have a mixture of the rational and the irrational; the two are like a knot that is impossible to untie ... when a composer invents, he stands between two mirrors ... that infinitely multiply his imagination, the mirror of invention face to face with [the] mirror of technique." Another analytical tool, based on the idea of a binary process, was presented by Jonathan Cross during his doctoral thesis, and in the article 'Lines and Circles: On Birtwistle's *Punch and Judy* and *Secret Theatre*', *Music Analysis*, 13/2-3 (1994), pp.203-25. Cross's idea stems from Paul Klee's notion of line and circle. This may be applied to the linear and circling elements in Birtwistle's music, most obviously in the distinction between a cantus and continuum.

[10] Following the line "The fox knows many things, but the hedgehog knows one big thing", from the Greek poet Archilochus (frag. 201 in M. L. West (ed.), *Iambi et Elegi Graeci*, vol. 1 (Oxford: 1971)), Isaiah Berlin characterizes as hedgehogs those "who relate everything to a single, central vision, one system less or more coherent or articulate, in terms of which they understand, think and feel - a single, universal, organizing principle in terms of which alone all that they are and say has significance." Berlin, *Russian Thinkers* (London: Hogarth Press, 1978), p.22, cited in Hall (1984), p.12.

[11] Andrew Clements has written of Birtwistle's "refusal to be swept along with the prevailing current of European music", as a "remarkable display of independence for a young composer in the 1950s ... even if the spiky sharp edges of his early works betray at least a textural debt to Boulez in particular, his music has pursued a steady individual progress." *The Guardian*, Friday 21 August (1998), 'Friday Review' supplement, p.2.

intersect with the preoccupations of other avant-garde composers, rather than the ways in which he departs from them. Whilst it is true to say that Birtwistle's musical style moves on, his movements have always remained within easy reach of developments in avant-garde music in general.

The thesis is divided into two unequal parts. Chapters 2 and 3 are concerned with works for which no sketch material is extant. Consequently, the discussion in this part is primarily analytical, although it aims to draw on extra-musical sources which have been suggested by a consideration of some of Birtwistle's wider interests, such as the theories of Paul Klee, and the relationship between music and text. Chapters 4, 5 and 6 discuss works for which extensive autograph material exists, and here the focus of the study shifts on to the nature of the relationship between sketch material and analysis of the published score. These final chapters also explore wider, critical issues, in particular notions of time and the pastoral in Birtwistle's music.

Each chapter will deal with a small group of works, usually concentrating on two or three specific pieces in detail. A different approach has been adopted in each case in order to reflect the changing concerns of the works. The analytical techniques used are determined by decisions I have made regarding the problems or compositional issues which I believe Birtwistle was concerned with in each case. For example, in the analysis of *Refrains and Choruses* (1957) in Chapter 2, the lack of motivic ideas, and the emphasis on a gradually evolving music which expands and contracts through registral space, suggested the use of a graphing technique developed by Jonathan Bernard in his book *The Music of Edgard Varèse*.[12] Other contextual information about Birtwistle's interests at this time also pointed to the relevance of Varèse. Whilst this technique may yield interesting results in later works, I have preferred to move with what I perceive to have been Birtwistle's shifting interests, such as the development of independently composed musical objects, attention to instrumentation and texture, and the development of techniques which express Birtwistle's conceptions of the pastoral and time.

Underlying these shifting approaches are two constant concerns. One is the analysis of pitch, in particular regarding the use of an ordered tone row, and the projection of pitch centres by association. The establishment of local tonal centres is an integral part

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[12] New Haven: Yale University Press, 1987.

of the process of movement in Birtwistle's music, from areas which are focused on specific pitches to periods where pitch does not matter. The other recurrent theme is the attempt to develop a more relational form of analysis, exploring the associative aspects within works. My contention is that Birtwistle's ideas follow a logic of progression, that ideas relate to their context, and that events proceed from one to another in a manner which indicates that each event has a specific cause and effect.

A more detailed picture of Birtwistle's early music will also help elucidate the elements of his compositional style which, from the first published work in 1957 onwards, are unique to Birtwistle and which distinguish him from his contemporaries. In the first detailed account of Birtwistle's music, written in 1964, Robert Henderson remarked:

> Although for Birtwistle each work has been a new discovery, an exploration of new territory, a reaction to new and unsolved problems, there is about his music as a whole a recognizable unity. This unity is one of mood, language and feeling. A music of delicately poised nuance, of an essential lyricism which yet never precludes muscular strength and dramatic tension, behind it one is always aware of a deeply human personality, of a calm, unhurried, yet compelling creative imagination.[13]

One could argue over the use of the word "unity" here, offering instead "coherence", in the sense of being consistent within the terms of an internally prescribed logic: following a personal set of rules. One of the aims of this thesis, therefore, is to balance the elements which are particular to Birtwistle with those that are part of a shared, cubist-inspired, modernist inheritance.[14]

Critical Issues Regarding Sketch Study

The decision to consult autograph manuscripts seems at first natural enough, resulting from curiosity regarding the composer's initial thoughts, and perhaps also from a desire to bring the historical 'author' into the picture a little more than analysing the published

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[13] *The Musical Times*, March (1964), p. 189.

[14] Alexander Goehr has commented to me that Birtwistle has a unique way of looking at things, musical and non-musical: "If you or I were to look out of the window now, we would describe a tree and a garden. Harry, on the other hand, would describe something completely different." What he would describe, Goehr suggested, would reflect Cubist notions of perspective and dimension, a form of expression which is fundamental to modernist thought.

score will permit. However, it is only through interpretation, a notoriously biased activity, that manuscripts are brought to life. Several objections have arisen regarding the use of sketch material in relation to analysis, and I will deal with two of these: intention and the notion of 'compositional process'.

> If nothing else, I have almost certainly provided the most detailed framework yet for anyone wishing to emulate Birtwistle's style. In particular, by applying the techniques of seriate shuffling, harmonic permutation, and motivic permutation as I've described them, across multiple parameters, a composer is unlikely to create music that sounds like anything other than Birtwistle's.[15]

When analysis concerns itself with what is commonly known as 'compositional process', there is a risk that the emphasis may lie too greatly on the mechanical aspect, rather than on what Hall and Boulez have described as the imaginative, or intuitive.[16] This binary relationship lies not only at the heart of the compositional act but also at the centre of the interpretative, analytical one too. If the above quotation aptly summarizes the intention of one music theorist working on Birtwistle's music, its opposite would conveniently account for my own aims. There seems little benefit, to my mind, in analysing Birtwistle with the purpose of generating a means of reproducing, or reassembling his 'style'. One danger of analytical work which places too much emphasis on the creative and the operational aspects of music is that it may lead away from the idea of a work as a culturally situated object; one which responds to external stimuli as much as internal, creative concerns. An overly theoretical approach risks reducing the idea of a work to a set of internal components, and the notion that understanding these elements would somehow enable works to be dismantled and reproduced at will. This is not to say that theoretical approaches are misguided, but they must be sensitive to the aspects of works which are resistant to theory.

Richard Taruskin has remarked:

> to equate music ... with the techniques of manufacturing music, to regard the manufacturing of music as the only legitimate professional concern of musicians,

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[15] Brian Robison, 'Towards a Methodology for Analysing Birtwistle's *Carmen Arcadiae Mechanicae Perpetuum*', PhD Cornell University, 1999, Chapter 8, 'Birtwistle's music after *Carmen*' [footnote 20, p.256, in first draft].

[16] See footnote 9.

> and to sanction only such locutions as may describe or analogically represent that manufacture, is ... merely to practice another politics of exclusion.[17]

Such an accusation, however, strikes not only at the work of music theorists but also at studies which consult sketch material, such as this one, which aims to deal with the issue of the relationship between analysis and sketch study.[18] However, even Richard Taruskin has had to defend his own use of sketch material. In response to an article written by Matthew Brown and Douglas Dempster on the scientific application of music theory,[19] Taruskin wrote:

> Because I have expressed the view that a composer's 'theoretical environment' offers clues to an appropriate analytical approach to his music, I am saddled willy-nilly with responsibility for the view that sketches ... invariably provide 'neutral tests for theoretical claims.' And this makes me Brown and Dempster's chief abuser of the intentional fallacy. [I have] had frequent occasion to deplore

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[17] Richard Taruskin, 'Back to Whom? Neoclassicism as Ideology', *Nineteenth Century Music*, 16 (1993), p.288.

[18] The issue of the relevance of sketch study to analysis was raised during a series of exchanges about Beethoven in the 1970s, principally in the pages of *Nineteenth Century Music*. The attack by Douglas Johnson (in 'Beethoven Scholars and Beethoven's Sketches', *Nineteenth Century Music*, 2 (1978-9), pp.3-17) focused on the issue of analytical insights. Johnson argued that sketches are irrelevant to analysis; that they will always lend support to analyses of the score because they document a teleological process towards the final version. Each step in the sketches, he argues, moves in the direction of anything an analyst observes in the final form. However, Johnson's idea of analysis appears to have been a very narrow one, divorced from issues of context which he believed belonged firmly in the realm of biographical study. Subsequently, Nicholas Marston has described Johnson's attack on Beethoven sketch study as isolated, noting that the field has expanded significantly since the 1970s (*The Beethoven Compendium: a Guide to Beethoven's Life and Music*, ed. Barry Cooper (London: Thames and Hudson, 1996), p.323). It should also be noted that the issues arising from Beethoven's sketch practices differ from those in twentieth century works, where the act of composing often reveals composers' analyses of their own ideas, and where compositional practice is often closely linked to form. Consequently, numerous scholars have successfully used sketches when criticising existing analyses of twentieth century music. For example, Susannah Tucker was able to critique Joseph Straus's analysis of Stravinsky's *Agon* (presented in 'Stravinsky's Tonal Axis', *Journal of Musicology* 26 (1982), p.114), in particular his argument that the work is based on a normative unit, a (0,1,3,4) tetrad, leading her to comment: "To recognize only the tetrachordal pattern ... is to deny the functional role of the longer serial units - an inappropriate approach for a movement like the Four Trios, in which twelve-tone forms are the basic structural components of the canon", 'Stravinsky and his Sketches: Compositional Concerns, 1953-7', University of Oxford, DPhil, 1992, p.242.

[19] 'The Scientific Image of Music Theory', *Journal of Music Theory*, 33/1 (1989), pp.65-106.

> the mindless and mechanical way in which sketches are described by musicologists who then attempt to pass their descriptions off as an account of a work's 'genesis' or its 'compositional process' .... In my own work I have used sketches ... only as a means of testing empirical statements ('observables' if you will), not theoretical ones.[20]

Taruskin's concern, it seems, is that sketches should not be used to support an analytical exercise which divorces the work, and the idea of its creation, from its historical and cultural context. However, Taruskin's statement that he has only used sketches "as a means of testing empirical statements ... not theoretical ones" is called closely into question when certain passages from his two-volume text on Stravinsky are considered. For instance, on page 831, he discusses examples of Stravinsky going "out of his way to conceal his octatonic thinking - or else, to put it positively, to liberate his writing from the narrowly circumscribed parts octatonically conceived harmony tends to travel ...." The concealment of octatonicism in Stravinsky's music may be related to cultural and historical forces, but it remains a theoretical issue, and here Taruskin is using sketches to support the use of a theoretical concept. Similarly, he uses sketches to support his arguments about Stravinsky's anti-symphonic intentions:

> [Stravinsky] was getting rid of cultured 'padding' *sans regret*. From now on he would travel in the *drobnost* that, according to Musorgsky, came naturally to a Russian composer, and he would turn it into a high esthetic principle. Guided by this principle, he made determined efforts - efforts that may be traced in the *Rite* sketchbook in engrossing detail - to scotch the symphonic, the developmental, the transitional, wherever they might chance to raise their heads. Thus was born the famous 'Method', whose progress was traced by Edward Cone in his classic article of 1962 and whose origins, according to Cone, were to be found precisely in *The Rite*.[21]

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[20] Taruskin, in 'Reply to Brown and Dempster', *Journal of Music Theory*, 33/1 (1989), p.156.

[21] Richard Taruskin, *Stravinsky and the Russian Traditions: a Biography of the Works Through 'Mavra'* (Oxford: Oxford University Press, 1996), p.956. Taruskin also calls sketches to his aid when discussing the analytical concept of cells:

> The literalness of the analogy with tesserae (or 'cells', as they are customarily called now, after Messiaen and Boulez) is breathtakingly disclosed in the sketchbook, when Stravinsky suddenly takes to representing his fixed musical objects with letters, arranging and rearranging them at will.

This is shown in Fig.12.15, p.96.

It is significant to note the use of the word "engrossing" in relation to the sketches. As far as Taruskin is concerned the interest of sketch material, at least, is not in doubt. Perhaps recent movements within the academic community, recent trends in scholarship, have dictated that Taruskin should proclaim loudly the irrelevance of such material when allied to a purely analytical study. As we have seen, however, he is on shifting ground himself when he criticizes analysts' use of sketches.

Writing in 1982, Joseph Kerman usefully criticized the notion of 'compositional process', a term which he describes as "somewhat loaded" as it carries "the suggestion of a seamless development in time." Instead, he argues,

> What sketches and drafts reveal is more accurately described as a series of 'compositional stages', and tentative compositional stages, at that.[22]

This is fully born out by Birtwistle's sketching procedures which illustrate the section by section workings of pieces, but which generally leave out any indication of long-range, holistic planning. Sketches only tell part of the story. It is in this area that the value of sketch study to analysis is most challenged, since analysis is theoretically concerned with the relationships between events as much as the events in themselves. However, if analysis is responsive to the information provided in the manuscripts, it may be possible to make some informed suggestions about the aspects which appear to be missing from the sketches.

Regarding the issue of intention: I do not make any claims to reveal Birtwistle's intentions through my analyses of the published scores. However, this is not in order to avoid invoking the 'intentional fallacy'. This idea has been demonstrated to be more complex than popular usage of the term would seem to suggest, and it should be remembered that it was introduced by Wimsatt and Beardsley in defence of their own

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[22] Joseph Kerman, 'Sketch Studies', in *Musicology in the 1980s: Methods, Goals, Opportunities* (New York: Da Capo Press, 1982), p.58. This view reinscribes Gustav Nottebohm's claim that Beethoven's sketches, "can provide no conception of the idea that emerges only in the work of art itself; they reveal to us not the entire creative process, but only single isolated incidents from it. What we term the organic development of a work of art is far removed from the sketches", cited and translated by Douglas Johnson in 'Beethoven Scholars and Beethoven's Sketches', *Nineteenth Century Music*, 2 (1978-9), pp.3-17, originally from *Zweite Beethoveniana* (Leipzig, 1887), pp.viii-ix.

formalist position.[23] Many writers have recently discussed this issue (for example, Philip Gossett, Annabel Patterson, Alan Street, Ethan Haimo)[24] and these arguments demonstrate that there is no consensus regarding the use of sketch material to support claims regarding intention. However, there is a belief that such claims should not come from analysis of the score, unless tentatively suggested or supported by extra-musical evidence (such as the sketches). It is also believed that the analytical method may, and where possible should, be 'conditioned' by our knowledge of the composer's intentions, providing this information is used critically.[25] Within sketch studies, imputing intention to the composer is unavoidable, especially when faced with evidence of re-workings of ideas which clearly indicate a process of decision-making, or a systematic process of change. Like all interpretative acts, however, sketch study is a subjective practice and

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[23] Wimsatt and Beardsley were two chief practitioners of The New Criticism movement in literary criticism, which dates back to the late 1940s, in particular the essay 'The Intentional Fallacy', which was published in the *Swanee Review* in 1946. This article claimed that intention was an overprivileged category, and it rejected emphasis on authorial design, arguing that any text, once published, is publicly owned - released into the body of critics. The argument was that the author's subjectivity should be kept as far out of the picture as possible. R. W. Stallman wrote in his essay on 'Intention', for the *Princeton Encyclopedia of Poetry and Poetics* (1965): "Once the work is produced it possesses objective status - it exists independently of the author and of his declared intention .... No judgement of intention has relevancy unless corroborated by the work itself, in which case it is supererogatory."

[24] Annabel Patterson, 'Intention' in *Critical Terms for Literary Study*, eds Frank Letricchia and Thomas McLaughlin (London: University of Chicago Press, 1992), pp.135-146; Philip Gossett, 'Beethoven's Sixth Symphony: Sketches for the First Movement," *Journal of the American Musicological Society* 27 (1974), pp. 248-283 (see especially Gossett's discussion of 'demonstrable intention', on pages 260-261, which drew criticism from Douglas Johnson who could not see its relevance to analysis); Ethan Haimo, 'Atonality, Analysis, and the Intentional Fallacy, *Music Theory Spectrum* 18/2, Fall, 1996, pp.169-199 (Haimo makes a distinction between type 1 hypothetical statements which "must be subject to confirmation or refutation, not by analysis of the music, but by examining external, supportive evidence", and type 2 statements for which "we do not need to look beyond the boundaries of the score, and we do not need to invoke the composer's intentions to validate our observations," p.182); and Alan Street, '*Von heute auf morgen*: Schoenberg and the New Criticism', in *Analytical Strategies and Musical Interpretation*, eds Craig Ayrey and Mark Everist (Cambridge: Cambridge University Press, 1996), pp.242-270 (especially pages 244-245, where Street critiques Taruskin's "gloss on the anti-intentionalism of Wimsatt and Beardsley: specifically, a prohibition against attempting to settle questions by 'consulting the [compositional] oracle', which is a reference to Taruskin's article, 'The Pastness of the Present and the Presence of the Past', in Nicholas Kenyon, ed., *Authenticity and Early Music* (Oxford University Press, 1988), p.146.

[25] For a discussion of this see Ethan Haimo, 'Atonality, Analysis, and the Intentional Fallacy', *Music Theory Spectrum*, 18/2, Fall, 1996.

consequently the observations in this thesis represent a number of possible 'readings'. My own reading is determined by my interest in the relation of musical objects, or moments, within a work, matters of formal planning, and considerations of projected pitch associations. According to Kerman:

> Sketch studies focus our understanding of a work of art by alerting us to certain specific points about it, certain points about it that worried the composer. So long as we do not fall back into the trap of assuming they are the only points that worried or interested him, nothing but good can come from accepting such assistance as he unwittingly provided us in the task of coming to understand his music.[26]

Whilst I accept the thrust of this comment, the suggestion that sketches constitute a composer's "unwitting" assistance may be questioned, especially in the present context where composer's sketches fetch high sums on the market, and where composers must surely consider when sketching a work that their ideas will eventually be made available to scholars.[27]

The Nature of the Sketch Material

Birtwistle's sketch material is written on three kinds of paper: large format, A2 size sheets

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[26] *Op. Cit.*, (see footnote 20). Similarly, William Drabkin stated, in his response to Douglas Johnson, in 'Viewpoint: On Beethoven Scholars and Beethoven's Sketches', *Nineteenth Century Music* 2 (1978-9), pp.270-74, "one ought to credit the sketches with the insight they afford .... There is a continuum between genesis and structure, one which we may freely ignore or fruitfully investigate."

[27] An indication of the 'market' value of sketch material is indicated by the growth of the collection at the Paul Sacher Foundation in Basel, Switzerland. According to Paul Griffiths in a newspaper review of an exhibition of scores in New York:

> In his search for creative precision - a search, perhaps, inimitably Swiss - [Sacher] turned just as inevitably to Mr Boulez in the 60s as he had to Stravinsky and Bartók in the 30s. The explosion of his collecting habit came after 1973, when he set up his foundation. A key moment was his purchase of Stravinsky's musical estate ten years later, through the good offices of the antiquarian music dealer Albi Rosenthal. In 1984 came the comprehensive Moldenhauer collection of Webern manuscripts, and in succeeding years the Sacher Foundation signed agreements with a number of leading composers - Boulez, Elliott Carter, Luciano Berio, György Ligeti, Brian Ferneyhough and many more - securing all their working papers for Basel.

'What manuscripts may have to say about music', The New York Times, 31 May (1998).

with sixteen staffs (sometimes with sketching on both sides),[28] blank A4 sheets (often used in sequences that were taped together), and A4 music manuscript pads.[29] Some pages contain annotations made in coloured pen or pencil. In addition there is a collection of correspondence which includes letters, bills, receipts, family photographs, and other miscellanea. The manuscripts (excluding the correspondence) fall into seven basic categories, as follows:

1. Pre-compositional plans of two types: (a) complete for a significant section, or sections of a piece; and (b) details of smaller sections of works, usually written after (a), detailing a specific section of the larger plan.
2. Sketches which show *active* permutations of notes, rhythms, dynamics, and so on.
3. Tables which list the results of earlier permutations of pitches, rhythms, chords and contours.
4. Draft versions of isolated sections (for example a single moment).
5. Continuity drafts, usually indicated by the presence of a sequence of numbers at the top of the pages. Two types: (a) very sketchy, limited to one or two elements (for example, metre and rhythm, or tempo and instrumentation); and (b) fuller scoring, closely resembling the final version but still not part of the first complete draft.
6. First complete draft.
7. Fair copy, sometimes in a copyist's hand.

When transcribing the sketches I have attempted to reproduce the originals as closely as possible. In general, Birtwistle's notation is very clear and where clefs and other information are missing the context usually supplies an answer. The cataloguing which was carried out by Michael Taylor at the Paul Sacher Foundation in 1994 does not appear to require revision, although there may be a case for providing more detailed information regarding the contents of each folder. Manuscript sheets are held together in large folders which are labelled with the title of the work concerned and the type of material (either *Skizzen*, *Skizzen und Entwürfe*, or *Reinschrift*), although the inventory does not indicate the exact number of folders, or the size of the sheets. Within the folders the order of

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[28] The exact dimensions are: 42.7 by 60.5 cm. The sheets, therefore, are slightly larger than A2, by 7 and 9 mm respectively. For ease of reference, however, from now on I shall use the term A2 when referring to such pages. Equally, the dimensions of A4 sheets sometimes vary from those of standard A4 size by a few millimetres.

[29] From the evidence of marks on several pages, it seems that a large number of A4 sheets were originally taped together to form sequences. However, the Sacher Foundation has removed all adhesive, thereby separating sheets which once were joined together.

sheets is arranged to reflect the order of ideas as they appear in the score with unidentified pages usually placed at the front. Nearly every page is undated, and a substantial portion are unnumbered. Consequently, the present arrangement of pages within folders is not fixed and may be subjected to change at a later date, perhaps when the material is transferred on to microfilm. Because of this, I have generally avoided tabulating the contents of folders. Instead, where I make reference to a particular page I attempt to describe its appearance as fully as possible in order to aid identification by other scholars. Where I do list the contents of folders, other than in the manuscript pads which are fixed, the numbering I provide is entirely provisional and reflects the order of the pages when I looked at them.

Birtwistle's Working Methods and Analytical Issues: 'from the mechanical to the magical'

In my analysis of the autograph material I have adopted a number of different techniques. On occasion I have strictly separated discussion of the two, sometimes beginning with an analysis of the score,[30] sometimes with the sketch. At other times I have brought discussion of the two topics together, allowing ideas to feed from one to the other.

A distinction needs to be drawn between Beethoven's sketching practices, and therefore the relevance of his material to analysis, and those of Birtwistle and other twentieth century composers.[31] Unlike Beethoven, Birtwistle sometimes begins at a level

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[30] For example, in Chapter 4, the discussion of *Nomos* begins with an analysis of the score followed by a sketch study. One possible objection to this approach was posed by Nicholas Marston in response to Allen Forte's analysis of Beethoven's Op.109 in *The Compositional Matrix* (New York, 1961; repr.1974). Marston believes this approach "is apt to engender a wholly negative view of the sketches. By being filtered through a preconceived analytical view of the work itself, the sketches tend to become relegated to the status of failures, wrong turnings *en route* to the final version." He would rather see the sketches as a set of possibilities from which the composer made choices, "The sketches, then, may deconstruct our notions of the finished work as *opus perfectum et absolutum.* They remind us that the work 'as it is' is not the work 'as it had to be'." *Beethoven's Piano Sonata in E, Op.109* (Oxford: Oxford University Press, 1995), pp.13-14.

[31] For instance, Volker Scherlein, remarked on Stravinsky's *Concerto in D*, "Stravinsky does not develop [his material] right from the beginning, and does not allow the form of the work to grow organically, but ... he mechanically strings his building blocks as set pieces." Cited in Susannah Tucker, 'Stravinsky and his Sketches: Compositional Concerns, 1953-7', DPhil, University of Oxford, 1992, p.88.

which is so far removed from the published score, detailing tables of pitches and rhythmic permutations for instance, that in certain cases the sketches might be better understood as artworks or objects in their own right, separate from the finished score.[32] Michael Hall has provided some useful indications of Birtwistle's attitude towards the role and value of sketches, including the following observation:

> As an example of an artist who produces miracles, Birtwistle cites Paul Klee ... Birtwistle is intrigued by the chart after chart of numbers Klee produced when preparing a picture; by the patterns, the tables, the diagrams he made. Many are reproduced in Klee's notebooks where the editor places the working drawings and the finished picture side by side, so that, says Birtwistle, 'the transformation from the mechanical to the magical is there in front of you.'[33]

The implication of Hall's remarks is that the sketches will show the mechanical side and the score will contain the magic. But, contrary to what Birtwistle states, the transformation is not always "in front of you". The two objects are sometimes clearly very different, but the process of transformation, what might be called the compositional process, is often missing. The space between sketch and score is a defining presence during the study of Birtwistle's sketches. However, it is sometimes possible, by moving from sketch to score and back again, to locate traces of the missing transformational process.

It is not until 1968, with the composition of *Nomos* and *Linoi,* both written when Birtwistle was studying in America, that the Sacher Foundation's collection of sketches really begins. However, an indication that Birtwistle may have used number schemes from his first published work onwards is contained in his comments to Michael Hall that:

> At first I generated my own [random numbers], but ever since *Chorales for Orchestra*, I think, I've used the computer-generated numbers my old school-friend Peter Lee gave me. I certainly used them in *Verses* for clarinet and piano [composed in 1965]. That's why you couldn't trace back to source the adjacencies

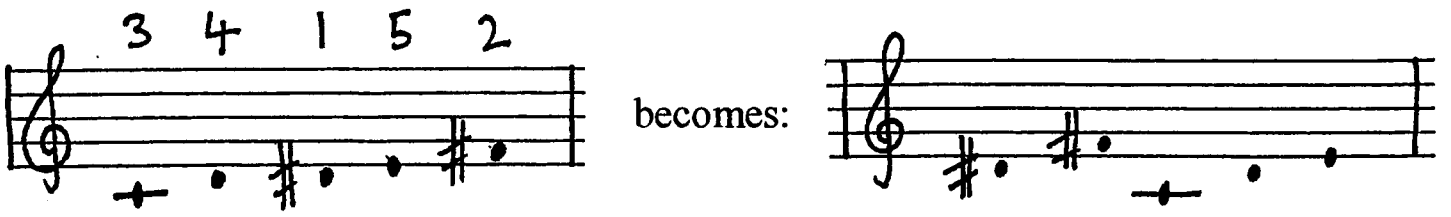
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[32] This accords with a challenge laid down by Richard Kramer: "It is rare that a sketch, however imperfect, is admired and pondered as expression itself, with its own claims to eloquence and comprehensibility," review article in *Journal of the American Musicological Society*, 40 (1987), p.361.

[33] Hall (1984), pp.95-6.

in verse four.[34]

The earliest indication I have seen of Birtwistle using numbers in his sketches is in the surviving draft of *Chorales for Orchestra* (1960-63). The numbers appear in the margins as simple successions and reorderings of 1 to 5. It is not precisely clear what they refer to, but the probability, based on the sketch practice for later works, is that they refer to notes. The resulting permutations are a simple way of proliferating a basic idea in many ways, whilst retaining the integrity of the original. In the case of pitch, this often means that a fixed set of pitches, within a set boundary interval (usually a form of fourth or fifth), are rotated according to a series of numbers. This is illustrated in **Example 1**:



This constitutes the most fundamental principle behind all of Birtwistle's sketching techniques and is applied in numerous, varied contexts. For instance, the same principle was applied towards the end of the 1960s when Birtwistle began to experiment with permitting performers a degree of choice in what they played. The elements that were fixed ensured that the ideas would sound similar however many times they were interpreted. Consequently, even in these so-called 'chance' methods, the essential character of the material is never lost.[35]

There is more evidence of permutational methods in the drafts for *Tragoedia*

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[34] *Ibid.*, p.150. This remark contradicts Hall's assertion during his analysis of *Verses* (in Chapter 3) that "The sketches have been lost and Birtwistle can no longer remember how he arrived at some of the details, but the work was composed before his use of random numbers, so that most of the procedures can be traced back to source", *Ibid.*, p.33.

[35] An example of this is the brass and woodwind mobiles in *Verses for Ensembles* (1969), although an even more complex form was attempted in *Signals* (1970), composed and then withdrawn the year after *Verses*. Eventually, around 1984, the practice of allowing the performer choice was abandoned, but the principle of randomness in the form of numeric permutation is present throughout Birtwistle's composing practice from at least the time of *Chorales* to his most recent compositions.

(Spring 1965) but, due to the absence of sketches, the first extensive evidence does not appear until *Nomos* (composed Winter 1967-8). When analysing works for which no sketch material is available, it is essential to bear in mind the basic principle of permutational technique and to consider (in hindsight) the kinds of devices used in the sketches for later works. Therefore, any attempt at applying statistical analyses, such as contour analysis, risks glossing over Birtwistle's practice of interlock, illustrated by Hall.[36] Analysis should concentrate particularly on the most salient features of the score. Nearly all contour details in Birtwistle's music are the result of random procedures, but there is evidence in the later sketches of selection and emphasis at a higher level. For this reason, a contour analysis would, the sketches suggest, be best applied to general and highly salient patterns as they are the most likely to have arisen as a result of the composer's own choice, rather than as a result of a set of irretrievable, randomly generated actions. Contour analysis of the details of Birtwistle's scores is akin to looking for logic and pattern within the splashes of a drip painting by Jackson Pollock. The wider impression - the position and densities of splashes in particular regions of the picture - was under the control of the artist, but the specific details of any one splash, besides its density and colour, are the result of pure chance.

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[36] Hall (1984), pp.55-56. For detailed discussions of contour analysis, see Robert D. Morris 'New directions in the theory and analysis of musical contour,' *Music Theory Spectrum* 15/2, Fall (1993), pp.205-228; and his book, *Composition with Pitch Classes: A Theory of Compositional Design* (New Haven and London: Yale University Press, 1987); and the following by Elizabeth West Marvin: 'A Generalised Theory of Musical Contour: Its Application to Melodic and Rhythmic Analysis of Non-Tonal Music and its Perceptual and Pedagogical Implications' (PhD dissertation: University of Rochester, 1988); 'The perception of rhythm in non-tonal music: rhythmic contours in the music of Edgard Varèse,' *Music Theory Spectrum* 13/1, Spring (1991). See also: Elizabeth West Marvin and Paul A. Laprade, 'Relating musical contours: Extensions of a theory for contour,' *Journal of Music Theory* 31 (1987), pp.225-267; and W. Jay Dowling and Dane L. Harwood, *Music Cognition* (New York: Academic Press, 1986).

Chapter 1

First Thoughts: Birtwistle in the 1950s

Background

From his very first published works it is clear that Birtwistle subscribed to the avant-garde rejection of much that characterizes tonal music in a purely technical sense, such as regular, predictable rhythm, octave doubling, and melodic repetition. The first published works also represent a clear blueprint for Birtwistle's subsequent pieces (albeit taken to greater extremes in the mid- to late-1960s). The elements contained in his first works are drawn from the body of post-tonal practice which surrounded Birtwistle in the 1950s, stemming from Stravinsky, Varèse, Messiaen, Boulez and Stockhausen, as well as the music of his colleagues at the Royal Manchester College of Music. Birtwistle had access to contemporary music through his friends at college and afterwards at concerts in London which he attended during his period in National Service and as a student again from 1956-7 at the Royal Academy of Music.

The impression given by Alexander Goehr, in his book *Finding the Key*,[37] is that the modern musical culture in Manchester during the 1950s was angled towards the English Pastoral school, Britten and Tippett. London, however, offered significant opportunities to hear avant-garde and modern music. There was a new music group at the Royal Academy of Music, which on 5 April 1956 presented Boulez's *Structures* performed by Richard Rodney Bennett and Cornelius Cardew. Outside the Academy there were opportunities to hear music by composers such as Varèse, and there were concerts given by performers from the continent. In 1956, when Birtwistle was in National Service stationed at Oswestry but able to travel to London, Yvonne Loriod performed Messiaen piano works in January, in April the Sudwestfunk Orchestra performed *Kontrapunkte* and *Le Marteau sans maître* in the Royal Festival Hall, and in December Pierre Boulez gave an illustrated talk entitled 'New Orientations' at the ICA Concert Room in London, and

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[37] *Finding the Key: Selected Writings of Alexander Goehr* (London: Faber and Faber, 1998).

Robert Craft conducted Stravinsky's *Symphonies of Wind Instruments*, *Mass*, and *Canticum Sacrum* (performed twice), at St Martin-in-the-Fields.

As a performer himself, Birtwistle was in an excellent position to acquire valuable knowledge of contemporary scores. From 1953 until its culmination at a public concert given in London on 9 January 1956 at the Arts Council Drawing Room, St James's Square, the New Music Manchester Group, formed at the RMCM by Birtwistle, Davies, Goehr and fellow students, regularly performed together music of their own and of the continental avant-garde in the City Art Gallery and the Whitworth Gallery. Alexander Goehr has recalled that performances included Berg's Four Pieces for Clarinet and Piano Op.5, which he and Birtwistle learned together, and Boulez's 2nd Piano Sonata, performed from sight by John Ogdon. Their London concert (repeated in York in May 1957) included a performance by Birtwistle and Ogdon of Goehr's *Fantasias* Op.3, dedicated to the two performers, as well as Webern's *Variations* Op.27, played by John Ogdon, and Davies's Sonata for Trumpet and Piano Op.1.

An explanation of why Birtwistle's and Davies's earliest pieces were often scored for wind instruments is partly provided by an appreciation of the quantity and quality of wind music concerts during the period. One reviewer in the December 1958 edition of *The Musical Times* noted that, "Fine wind ensembles seem to abound these days". London based groups included the Morley College, Portia (who premiered *Refrains and Choruses*) and Dennis Brain Wind Ensembles, and concerts by these and other continental groups were organized by The Wind Music Society. One such concert which Birtwistle claims to have taken part in was a performance of Stravinsky's *Symphonies of Wind Instruments* in St James's Church, Piccadilly, on 9 December 1957.[38] Birtwistle has also said that he performed in the first London performance of Messiaen's *Quatuor pour la Fin du Temps* and Berg's Four Pieces.[39]

Birtwistle has described his most memorable experience as being his attendance

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[38] This may have been an attempt to mark the one year anniversary of the Robert Craft performance of this piece.

[39] According to an interview with Jessica Morgan transcribed in her Master's thesis 'Harrison Birtwistle's Music for the Clarinet', City University, 1996.

at Walter Goehr's performance of Messiaen's *Turangalîla* symphony, in 1954. He has, however, not been so forward about mentioning that he also attended the 1956 Darmstadt Summer School of Music.[40] He was there for only five days - long enough to hear Goehr's *Fantasia* Op.4 - but nonetheless there were many events he was able to attend. One such concert, on the last evening of his stay (15 July), contained Schoenberg's *Wind Quintet* which may have suggested the scoring for *Refrains and Choruses*. Earlier that same day there was to have been a performance of Stockhausen's *Zeitmasse* which also employs the same scoring as *Refrains and Choruses*, but this was withdrawn at the last moment. In any case, Birtwistle heard *Zeitmasse* in London the following year on 6 May 1957, at the ICA (also broadcast on radio) along with Boulez's *Le Marteau sans maître*, in a performance conducted by Boulez.

At this time, the pages of *The Musical Times*, *The Score*, *The Composer* and *The Listener* were often filled with articles and translated essays which reported the most recent avant-garde activities. One of the topics which most often appeared (prompted by debate on the continent reflected in *Die Reihe* and *La Revue musicale*) was that of serialism, in particular the investigation of Webern's use of the technique as opposed to Schoenberg's.[41] Serialism was taught in Richard Hall's composition classes at the RMCM,[42] which Birtwistle attended as a secondary subject to his clarinet studies. He has, however, said that he drew nothing of significance from these classes and that his experiments with serialism did not yield satisfactory results. Of Hall's classes Birtwistle has remarked:

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[40] This information was provided to me my the composer (during a conversation we had together at King's College London one day in February 1998) and, to the best of my knowledge, has not been documented elsewhere.

[41] Such articles include: Pierre Boulez, 'Schoenberg is Dead', *The Score*, February 1952; Robert Craft, 'Anton Webern', *The Score* January 1955; Peter Stadlen, 'Serialism reconsidered', *The Musical Times*, February 1958 and 'Webern Symposium', *The Score*, June 1959; and George Perle, 'Theory and practice in 12-tone music (Stadlen reconsidered)', *The Score*, June 1959. The English edition of *Die Reihe* volume 2 (dedicated to Webern) was published in 1958, and in a *Musical Times* review of May 1958, reference is made to Walter Goehr (Alexander Goehr's father) discussing Webern on the radio.

[42] The Royal Manchester College of Music, later renamed the Royal Northern College of Music.

> It never seemed to be relevant .... There were a lot of things that were *verboten*: looking at colour, not mixing it, taking the raw energy if you like, the voicing of chords. They were considered things you didn't deal with. It was completely boring.[43]

Unfortunately, none of his student exercises are publicly available and Birtwistle maintains that he did no real composing between the ages of eighteen (in 1952, when he entered college) and twenty two.[44] His first experiments, he maintains, were written between the ages of twelve and eighteen, but none of these have been released to the public either. According to his own account, these earliest attempts, principally modal in style, were written in response to the music he heard on the BBC's Third Programme (notably Vaughan Williams, Ives and Bartók). He also had access to a public music library in Burnley and particularly remembers discovering there *The Rite of Spring*.

Whether Birtwistle's own experiments at college with serialism were serious or not, those of his colleagues, Peter Maxwell Davies and Alexander Goehr, were wholehearted. The main sources of their interest, in this respect, were the works of Schoenberg, Messiaen and Boulez.[45] In 1955, Josef Rufer's *Composition with Twelve Tones*, translated by Humphrey Searle, was published, as well as a translation of Schoenberg's *Structural Functions of Harmony*. Whether Birtwistle read these books

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[43] *Independent on Sunday*, 7 April (1996). Alexander Goehr, on the other hand, has been more complimentary: see (1998), pp.276-82.

[44] This, however, contradicts what Goehr has said: "In the [Richard] Hall class was Harrison Birtwistle .... He, in fact, had been at the other Manchester College, the Northern School [of Music], and had had a compositional career there; but by the time he came to the Royal Manchester College he had almost completely stopped composing. In all the years in Manchester he was a clarinettist, trying to write pieces but never finishing anything. He wasn't interested in academic technique, or any of the other things that were on offer at the College." Goehr (1998), pp.35-6.

[45] A fascination with technical matters is reflected in Goehr's observation that, "Today, with much more available on tape and disc, the young composer will receive his inspirations from the physical sound of the music and perhaps then try to discover how it is created. But I had access only to scores and articles about them (apart from some occasional success in picking up a broadcast from Germany). Consequently I was primarily excited by technical ideas, with a most inexact picture of what their applications sounded like. To this day I can invoke the effect of the score of Boulez's Second Piano Sonata (1948) or of the examples in his article 'Eventuellement' (1952) had upon me ... a glimpse of a single page of score could suffice to set off a susceptible young composer into a whole new development." (1998), footnote 14, p.25.

himself or not, Goehr apparently did and his ideas travelled directly to Birtwistle. Rufer's book contains an appendix with accounts by contemporary composers of their experiences of working with serial technique. This includes Dallapiccola, Henze, Gerhard, and Mâtyâs Seiber whose works were performed by Manchester students at this time. Davies, in particular, seems to have worked with serialism in his earliest pieces quite methodically, if not exactly conventionally. Richard E. McGregor and Peter Owens have discussed the sectional approach Davies adopted in his *Ave Redemptoris Mater* for wind sextet (1957),[46] and Paul Griffiths has pointed to the influence of Boulez's Op.1 *Sonatine* on the Sonata for Trumpet and Piano composed in 1955 for Elgar Howarth.[47]

Birtwistle was able to hear Boulez's *Sonatine* whilst at Darmstadt, in a performance with David Tudor at the piano. Subsequently, this piece was also the subject of a workshop for young musicians at the Dartington Summer School in August 1957, at which Boulez and Carter gave lessons in advanced analysis. Here, too, Davies's *Alma Redemptoris Mater* (his first instrumental work, scored for wind sextet) received its first performance, and works by Goehr were programmed at the Summer School as well. Although Birtwistle was not present at the performance of Davies's work, it is difficult to believe, when comparing the score to his own *Refrains and Choruses*, that he did not benefit from an exchange of ideas, especially as both composers were on very friendly terms at this time.[48]

In his recent reminiscences about the 'Manchester Years', Alexander Goehr has

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[46] Richard E. McGregor, 'Peter Maxwell Davies: The Early Works', *Tempo* no.21 April (1995) and 'The Maxwell Davies Sketch Material in the British Library', *Tempo* no.29 July (1997), and Peter Owens, 'Revelation and Fallacy: Observations on Compositional Technique in the Music of Peter Maxwell Davies,' *Music Analysis* vol.13 no.2/3 October (1994), pp.161-201.

[47] Griffiths, *Peter Maxwell Davies*, (London: Robson Books, 1982), p.25: "There is even some kinship with the Boulez piece in matters of rhythmic style, texture and serial handling, perhaps because at this stage in their careers both composers were strongly influenced by Messiaen and Schoenberg."

[48] The second movement of Davies's work introduces instrumental pairings of thirds, both of which are important elements in Birtwistle's work. In Davies's third movement the clarinets are given phrases which offset and elaborate the surrounding serially-derived material. Similarly, Birtwistle's work ends by contrasting a varied and melodic solo clarinet line with a chord of fixed pitch content.

pointed out that, at that time:

> British modern musical culture was Vaughan Williams (by then an old man, appearing in Manchester once a year to conduct the St Matthew Passion with the Hallé), Bax, Walton, Bliss, Moeran, Finzi, Britten and Tippett. There were premieres of several symphonies in the years I was in Manchester, including the *Antartica* (1949-52) and Walton's Second (1959-60), as well as 'Cheltenham Symphonies' by Arnold, Rawsthorne, Berkeley and others. The more progressive side of this traditional English establishment, of which Richard Hall was a peripheral part, preferred Delius.[49]

From this list, the composers Birtwistle would have reacted against least of all were Tippett and Britten. Birtwistle has spoken favourably about Tippett, perhaps largely as a result of his presidency of the Warder Castle Summer Schools which Goehr, Davies and Birtwistle ran in the 1960s. Birtwistle's interest may first have been stimulated by the publication in 1959 of Tippett's collection of essays and poems *Moving Into Aquarius*. Birtwistle's feelings about Tippett are contained in an interview with Christopher Ford,[50] when he was asked which composers had influenced him most:

> There's a lot of Messiaen in my music, though not in the material I use. I think there's a lot of Varèse, but I'm not really sure: I've heard all his pieces but I don't know them. I haven't really *read* them .... I think I really identify with Tippett more than anyone. I'm not really conscious of having learned anything from anyone. This business of composing. I knew it grammatically when I started, if I can make the analogy. I think some people never find it. I think Tippett's never found it, and I think that's a good thing.[51]

Britten's style, like Tippett's, offered a link to Stravinsky. It also provided Birtwistle with models for solo horn writing - for instance, the *Serenade for Tenor Horn and Strings* written in 1942 for Dennis Brain, who was active until his death in 1958. Britten also provided examples of settings of texts from medieval mystery plays which may have

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[49] 'Manchester Years' (1990) in *Finding the Key* (*Op. Cit.)*, p.32.

[50] *The Guardian*, 9 May (1975).

[51] The sentence "I knew it grammatically when I started", implies that technical assurance is not Birtwistle's idea of composing. Perhaps also this reflects a desire to distance himself from Davies and Goehr, who have consistently made much use of the "grammar" of music when discussing their pieces.

inspired Birtwistle's choice of a fourteenth century carol in *Monody for Corpus Christ.* Similar works by Britten include *Noye's Fludde*, first performed at the Aldeburgh Festival in June 1958, and *Canticle II*, written in 1952. Furthermore, it was from Britten that Birtwistle sought (and gained) a reference for his application to study in Princeton in 1966.

It is widely accepted that the avant-garde, post-Webern posturing reported in the pages of British journals during the 1950s, which stemmed largely from the Summer School at Darmstadt, was by no means the product of a unified school of thought. Alexander Goehr, for one, was not convinced that the movement away from Schoenberg and the adoption of total serialism was the only possible, or desirable, solution. In January 1958, Goehr sounded a note of scepticism in a speech entitled 'Serial Composition' which he delivered, whilst deputising for Humphrey Searle, at the International Society of Musicians 6th Annual Conference in London. An indication of the strength of support that existed amongst younger composers at that time for a post-Webern style is contained in Ernest Bradbury's review of this event in the *Musical Times* in which he wrote that, "One sensed a smouldering hostility to Mr Goehr's views ...". Goehr's more critical views of the post-Webern, total-serial style were then more publicly proclaimed in his article 'Is There Only One Way?', which was broadcast on the BBC Third Programme in October 1959, and published in *The Score* in 1960.[52]

As Michael Hall has pointed out, what the young Manchester students were reluctant to give up was a sense of continuity, a musical line on which to hang ideas.[53] In one sense the experiments of Davies and Goehr represented a (typically English) compromise to the problem of coherence in post-tonal music. Davies's approach was to explore British medieval music in search of possible solutions, paying close attention to

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[52] This was in response to the remark made by Herbert Eimert, in his essay 'What is Electronic Music?', *Die Reihe* No.1, (1958) p.8, that "there can be only one way of defining the contemporary stage of musical composition, and that is: post-Webern - a situation resulting from the discovery of the single note."

[53] Hall (1984), p.8: "In a nutshell, what the British composer wanted was the ethos of the new music, its iconoclasm, its lack of referential associations, anecdotes or propaganda, while at the same time preserving a continuity which had a measure of discernible logic about it."

isorhythm and cantus firmus techniques.[54] All the talk, Hall says, "was of single lines". Similarly, Birtwistle was critical of orthodox and total serial procedures, and he had shown some interest in the medieval techniques favoured by Davies. Birtwistle has never forsaken line in his music, and, like Stravinsky, the oppositions and ambiguities of his surface textures are guided by associative pitch projection.[55] A closer consideration of his compositional preoccupations in the late 1950s will depend upon analytical evidence.

Introduction to the Analysis

The analysis which follows has been arranged thematically and will examine *Refrains and Choruses* (completed New Year's Eve 1957), *Monody for Corpus Christ* (1958-9?)[56] and *Three Sonatas for Nine Instruments* (completed 30 November 1958). This method has been preferred because a number of approaches seem pertinent to different aspects of these works, and it clarifies matters if they are dealt with separately. Before beginning the thematic analysis, however, a few detailed observations regarding *Refrains and Choruses*

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[54] This was a reflection of a growing academic interest around this time in British and Continental medieval and Renaissance music, as illustrated by the *Musica Britannica* series of Dunstable's works published in 1953 (in commemoration of the quincentenary of Dunstable's death) and the *Tudor Church Music* series. Other editions included Frank Ll. Harrison's *The Eton Choirbook: Vols. I and II* (1958-59), Leo Schrade's *Polyphonic Music of the 14th century* (1959) and Louise Cuyler's *Heinric Isaac: Five Polyphonic Masses* (1959). Academic books on these subjects included Gustave Reese's *Music in the Renaissance* (1954), Don Gregory Murray's *Gregorian rhythm in the Gregorian centuries: the literary evidence*, and *Accidental cadences in Gregorian chant* (1959), J.W.A. Vollaerts's *Rhythmic proportions in early medieval ecclesiastical chant* (1959), and Frank Ll. Harrison's *Music in Medieval Britain* (1959).

[55] I use this term in order to avoid suggesting that prolongation exists in the music, in the sense understood by Schenker. In keeping with the thoughts of Fred Lerdhal (see 'Atonal prolongational structure', *Contemporary Music Review* 4 (1989), pp.65-87) I have adopted the term 'associative' in order to stress the role of pitch projection at an aural, foreground level, rather than something which receives deeper, structural support.

[56] Hall states that this piece was composed in 1959: Hall (1984), p.154. If so, it was composed after the abandoned *Three Sonatas for Nine Instruments*, since the last page of the surviving final draft of this piece is dated 30 November 1958. But the dates of performances suggest that work on *Monody for Corpus Christi* may have preceded *Three Sonatas*. Lacking corroborative information, I have chosen to leave open the possiblity that *Monody*, at least in conception, predated *Three Sonatas*.

are necessary in order to demonstrate Birtwistle's development of the form of this work from his own particular processes. Like Varèse, Birtwistle's music often generates form through a series of gestures which react and respond to one another, as if finding their way towards broader structural sign-posts which may well have been decided beforehand. The only substantial analysis that exists for *Refrains and Choruses* is contained in a PhD thesis written by Jonathan Cross, which is partly reproduced in Anthony Pople's *Theory, Analysis and Meaning in Music*.[57] Michael Hall has also made some brief observations regarding this work in his book *Harrison Birtwistle*.[58] Cross's formal scheme for *Refrains and Choruses*, which is based on remarks by Hall and Birtwistle, is given in **Example 2**.

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[57] Jonathan Cross, 'Modernism, Analysis and New Music: Studies in the Music of Stravinsky and Birtwistle', King's College London, PhD 1994; and 'Music theory and the challenge of modern music: Birtwistle's *Refrains and Choruses*', in *Theory, Analysis and Meaning in Music*, ed. Anthony Pople (Cambridge: Cambridge University Press, 1994), pp.184-194.

[58] Hall (1984), pp.10-15.

Example 2 Form Schemes for *Refrains and Choruses*,

reproduced from Fig 5-1, in Chapter 6 of Jonathan Cross's PhD (1994), p.217

Bars	Section		Characterising textural features
	Birt	Hall	
1-20	I	I	Intervallic expansion from initial pitch C; 2-voice symmetry
21-34	II	II	'Melody' in upper voices (fl/ob/cl) & 'bass' line in lower voices (hn/bsn); introduces trichord 'x' [B,D,Eb] (3-3)
35-44		III	Single line passed between voices, decorated or with interjections
45-55	III	IV	Trichord 'x' ; trills; a more even contrapuntal texture
56-72		V	More homophonic (using 'x'); trills; moving towards a single pitch D
73-121	IV	VI	Horn melody within context of sustained symmetrical chord leading to 'wedge' centred on E interrupted by pentachord 'z' [A,Bb,C#,D,Eb] (5-6)
122-154	V	VII	Widely-spaced chord 'z' connected by 3-voice motion. Eventually the chord contracts, separated by clearly melodic motion

Cross's analysis focuses on the two parts of the work where the compositional processes are more readily discernible and where the musical surface is characterized by two clearly contrasted elements: a constant element (chorus) and a repeated element (refrain).[59] In the

[59] This accords with Birtwistle's own account of the work, cited in Hall (1984), p.173: "It's compositional scheme is simple, having five sections, each section consisting of two elements: a constant one called 'chorus', and a recurring one called 'refrain'."

closing bars (122-154) the constant element is a single line which moves from widely-spaced three-part heterophony, through two parts, and finally to a clarinet solo confined to the octave below middle C. This line is interrupted by a pentachord, repeated thirteen times, which moves registrally from its widest to its smallest possible form. In the section between bars 73-121, which contains a horn solo, Cross identifies the sustained chords that proceed from the literally-symmetrical chord around D in bar 75 as the constant element, and the horn solo as the refrain (although this distinction is more clouded, he admits, than the example at the end of the piece). What emerges from this discussion is the difficulty of choosing which label to place on which process. What is possible is to make a distinction between two essentially contrasted processes which interact to greater and lesser degrees throughout the piece. These two processes, however, operate within the context of continual reinterpretation.

One of the aspects that I believe needs closer attention is Birtwistle's manipulation of events through time. On the largest scale this involves the magnification of contrasting ideas which are then reordered and redistributed; and on the smallest scale it amounts to the continual reinterpretation of short lines and figures. Within this scheme the importance of context and association with surrounding ideas is paramount. When I discussed Stravinsky's *Agon* with Birtwistle, he expressed particular interest in the anticipatory arrival in the horns of the trumpets' opening fanfare idea in bar 15 of the final *Four Trios* movement, nine bars ahead of the actual recapitulation in bar 24. He described the horns arrival here, "as if from underneath the texture - a tremendous return."[60] That such play with surface signs delights Birtwistle should come as no surprise when one considers the elements of surface play that characterize his own music.

Bars 1 to 20 of *Refrains and Choruses* (**App 1: 1-2**) are instrumental in setting up a listening grammar, or set of expectations, for the first part of the piece. The fierce rhythmic and chordal interruption in bar 9 of the line in the flute and clarinet associates these two features. Subsequently, in bar 14 a second interruption reproduces the falling

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[60] This comment was made during a conversation I had with the composer in the Jacqueline Du Pré Music Building, St Hilda's College, Oxford, on 25 October 1997.

figure in the oboe (now G#5 to B4 in triplet semiquavers) and also provides a mirror movement in the bassoon (C flat2 to D flat4). Contrary motion then becomes the rule for the subsequent five bars, with reinterpretations of the oboe and bassoon figure forming the basis of bars 16-17. The culmination of this process is reached with the flute figure in bar 20, which exaggerates the oboe/bassoon contrary motion contour (A4-C#6 / A flat6-C5) and places it symmetrically around B5.

Consequently, when the oboe introduces a descending line in bar 20 and the clarinet only mirrors that in the following bar, the pattern of simultaneous contrary motion is put under strain. Bars 22-27 then proceed to frustrate such expectations further when a pattern of ascent (in response to the A3-D4 rising fourth in the clarinet in bar 22) is initiated: the clarinet line is the most exaggerated of all, rising from A3 - D4 - D5 - G5 - D flat6 - E flat6. Whilst the registral and structural purpose of this section is to prepare the trichord (B5 - D6 - E flat6) (Cross's trichord 'x') and its unison shadow (A flat2) in the horn at bar 28, it is also instrumental in raising tension to a significant degree and therefore of creating an ideal anticipatory environment for the arrival of a new and important harmonic and rhythmic idea (at bar 28). Release, unsurprisingly, comes in the form of a sharp drop on to the bassoon's trilling C2, in bar 32, which initiates a new section and an altogether contrasting texture. This process of contrary motion subsequently applies to much of the activity in the rest of the piece.

One other feature of the opening bar which is also exploited is the frequent insertion of a repeated pitch combined with a flexible rhythm reminiscent of the horn's opening figure on C. Birtwistle inserts this idea in order to arrest motion, therefore it represents yet another device aimed at frustrating expectations but somehow in a more tangential manner - as if suggesting a moment of doubt or hesitation. This can be seen in bars 38-40 where the upper woodwinds dwell repetitively on F5.

At its most extreme, this device characterizes almost the entire section built on an expanding wedge around E (bars 89-121). On a very basic level, the structural purpose of this section is twofold: it introduces, from bar 100, a pentachord (Cross's chord 'z') which ends the whole work; and it expands registrally until a culmination at figure G (bar 122) which signals a retrograde motion that returns to the middle register (from bar 144)

(see **App 1: 5-6**). Viewed in a broader sense, however, this section represents a huge expansion of the contrary motion figure of bars 16-17, combined with reworkings of the horn's opening rhythmic idea.

Bars 89-121 are based largely on the controlled opposition of literal symmetry (the wedge) and asymmetry (represented by the repeating pentachord). As Cross has noted, this illustrates a basic compositional premise of Birtwistle's (as alluded to in the work's title): the pitting of regular against irregular, predictable against unpredictable. Here, however, the regular seems rather too predictable and the effect of literal symmetry has lost all element of surprise - unlike bar 73, where the startling entry of a chord symmetrical around D4 signalled the start of something new and dramatic: the central horn solo (**App 1: 4**).

On a much smaller scale one can see Birtwistle's reshaping of time as the product of a continual yet flexible process of reinterpretation mixed with repetition and allusion. For example, the process of moving forward through immediate reinterpretation of the previous idea can be found in the rhythms on page one. The horn's opening line is freely interpreted by the flute and clarinet with the horn (marked 'forte') restating the final triplet figure, now in regular semiquavers. In bars 11-15 this cadential shorter-note figure is infused into the opening rhythm as a whole, elaborating each of the original pulses in turn.

One of the most striking features of this first published work is the maturity of its rhythmic writing in terms of its avoidance of regular schemes. It is worth noting what Birtwistle's composition teacher Richard Hall had to say about rhythm in his article, 'Some Reflections on the Teaching of Musical Composition', in *The Score* in 1957, for it gives some indication of Birtwistle's possible sources of influence:

> [rhythm] hardly gets more than a cursory mention in the books, and perhaps we have to go to Eastern music or to the study of Messiaen's or Blacher's scores as well as those of Stravinsky, to get near the underlying principles .... I have felt for a long time that the proportional or rhythmic dimension of contemporary music-style is the one which has been the most forgotten .... Matters of this kind can be very fruitfully discussed in the composition seminar and every student should be led to become aware of these problems and to come to terms with them on his

own account.[61]

One can perhaps add to Hall's list of sources Boulez's discussion of rhythm in his essays 'Eventuellement...', and 'Stravinsky demeure', published in 1952 and 1953 respectively, which resulted from Boulez's classes with Messiaen; and also the rhythmic practices of Varèse. Birtwistle incorporated principles similar to each of these but applied them in his own capricious manner. One can see evidence of Messiaen-like, Greek-derived rhythms in the section for horn solo (**App 1: 4**). This consists of four basic cells ( ) which are reordered and sometimes tied to each other. This displays a flexible treatment of regular cells. At other times Birtwistle presents a rhythmic head motif, like the horn's opening rhythm on page 1 of *Refrains and Choruses*, which is constantly reinterpreted and occasionally restated close to its original form. A more literal example of this would be Varèse's treatment of the opening figure of *Density 21.5*. What emerges is a flexible approach to rhythm but one which is clearly driven by the desire to avoid patterns which establish a regular pulse for more than one or two bars.

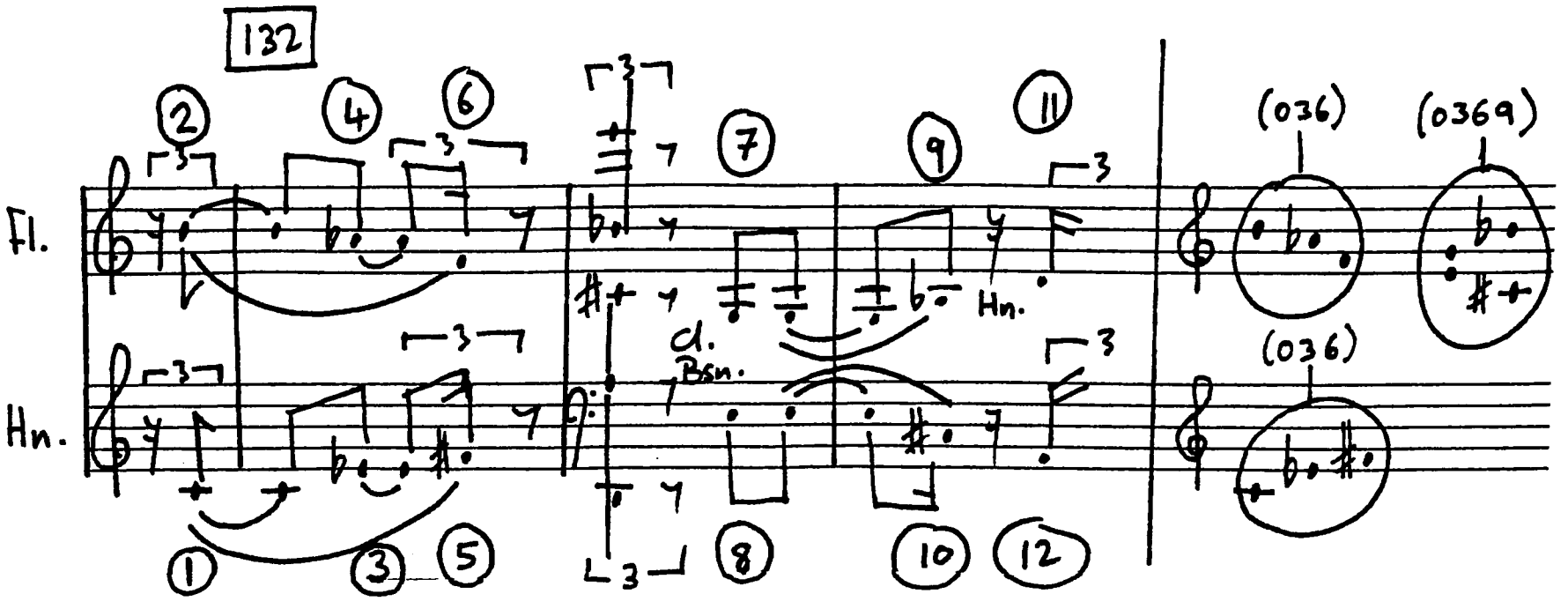
Analytic Background: The Tone Row

Perhaps the most interesting insight that emerges from Cross's analysis of *Refrains and Choruses* is that a twelve-tone row is stated in the closing bars of the piece. It is presented symmetrically (six pitches arranged either-side of an interrupting chord) and in registral contrary motion. This is shown below:

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[61] Alexander Goehr (1998), p.42, says that in Richard Hall's composition classes "we had studied (and tried to imitate) the ideas contained in [Messiaen's] *Technique de mon langage musical*". The first comprehensive study of Messiaen published in English was David Drew's, 'Messiaen - a provisional study', *The Score*, December (1954), and September and December (1955).

Example 3 *Refrains and Choruses* Tone Row, bars 131-4



As Cross observes, Birtwistle characteristically adds, deliberately or otherwise, 'wrong' notes, and generally clear forward and retrograde statements are obscured by irregular reorderings. What Cross does not do, however, is work back through the piece to see if this particular twelve-note collection underlies the piece as a whole.

Let us examine the closing bars in more detail. Cross notes that:

> There is no necessary connection between refrain [the pentachord] and chorus [the clarinet solo] here. Though both, in one sense, have 'static' pitch material which is being processed ... that material always remains quite clearly distinct: one restricted to five unchanging vertical pitch classes, the other employing the entire chromatic horizontally.[62]

One other connection between these two elements is the fact that the pentachord consists of pitch classes 8 to 12 of the prime form of the row. There are two things to note here: firstly, the association of the work's concluding chord with five of the last six pitch-classes from the underlying tone row; and secondly, the presence of a diminished (0,3,6) triad (B

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[62] 'Music theory and the challenge of modern music: Birtwistle's *Refrains and Choruses*', in *Theory, Analysis and Meaning in Music*, ed. Anthony Pople (1994), p.192. He goes on to observe, however, that the solo generally operates within the registral confines of the pentachord.

flat, C#, E) within the pentachord.

The presence of note 8 (E) relates the pentachord to the wedge around E during the section in which it was first introduced. In addition to this, an examination of the properties of the row reveals the presence of two contrary motion (0,3,6) triads in the first half, and a (0,3,6,9) tetrad in the second half, as shown in **Example 3**. The pentachord, within the context of the expanding wedge section, has to be non-symmetrical. Birtwistle achieves this by choosing a segment of the row that includes notes 11 and 12 since these do not fit into the otherwise regular pattern of interval 3 relations. Not only does this guarantee asymmetry, but it provides a tangible association between a characteristic of the row and the end of the piece.

In my discussions with the composer,[63] Birtwistle described how he had experimented with serialism during the 1950s but that he felt it was a struggle to produce from this system the sounds that were in his head. He likened serialism, as an historical phenomenon, to a wedge shape the end point of which was reached with Boulez's *Structures* (1951-2). However, he stressed that it was something a young composer at the time could not deny or ignore but one which had to be dealt with. The only 'way out' was to retreat from the end point of the wedge and composers differed according to the degree to which they retreated from that position.

What also emerged from our discussion was a demonstration of some of the ideas Birtwistle had drawn from serialism during his time at music college and in National Service. During this time he discovered that he could control more aspects of a work, and also analyse intuitive material and use the findings to construct and shape a composition. To illustrate this point he played several chords at the piano, each time altering the sound slightly until he was satisfied with the result. Having decided upon a chord he proceeded to analyse its properties, extracting fourths and seconds. He also talked about what he called the 'figurations of serialism'. He described how *Tragoedia*, for instance, drew on surface figurations from Stravinsky's *Agon* and how in *Le Marteau sans maître* there is a need for the analyst and listener to distinguish the events which occupy the foreground of the piece from events in the background. He did not develop this idea any further,

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[63] On 25 October 1997.

however.

One may wish to argue over the degree to which one can describe Birtwistle's practice during these early works as serial. However, Birtwistle paid more than just lip service to serial principles. Like Stravinsky at this time, he was approaching them on his own, less conventional terms. If, though, one agrees with George Perle and Paul Lansky's observations about Schoenberg's technique the matter should settle in favour of describing Birtwistle's work during these years as serially-conditioned:

> Perhaps the most important influence of Schoenberg's method is not the twelve-note idea in itself, but along with it the individual concepts of permutation, inversional symmetry and complementation, invariance under transformation, aggregate construction, closed systems, properties of adjacency as compositional determinants, transformations of musical surfaces through predefined operations, and so on ....[64]

Taking up this theme, I would like to introduce another possible model which Birtwistle has not acknowledged, namely Davies's *Alma Redemptoris Mater* for wind sextet, first performed in 1957. Analysis of Davies's early experiments with serialism have revealed that he tended to work with small collections of five, six or seven notes, which he transposed into contrasting registers and instrumental regions.[65] Birtwistle's serial handling, on the other hand, tends, on the whole, not to involve transpositions of rows or rotational operations. However, the middle movement of *Monody for Corpus Christ*, for flute, violin and horn (which excludes the voice) does exhibit the manipulation of small collections of pitches. **Example 4** (see page 35) is a graphic reduction of bars 111-138. (See also **App 2: 1-2**). Numbering these pitches and arranging them into a prime form row is difficult, although the full chromatic appears in bar 120 where a fairly definitive prime form ordering is established. The analysis in **Example 4** illustrates an association of two and three-note collections which by bars 134-138 have all been displaced from

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[64] George Perle and Paul Lansky: 'Twelve-note composition' and 'Atonality' in the *New Grove Dictionary of Music and Musicians*, ed. Stanley Sadie (London: Macmillan, 1980).

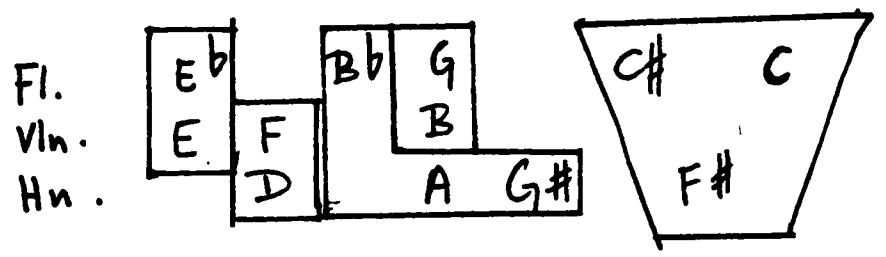
[65] This aspect of Davies's technique is explicitly suggested by his polemical article in *The Listener* magazine of 9 October 1959, where he wrote: "If one's material is properly organized, no incongruous tonal hierarchy will suggest itself insidiously, and the judicious use of a few notes transposed into contrasting regions provides interest and even drama."

their original positions. The product represents a form of gradual, selective permutation which replicates its initial ordering for the first four sections then gradually shifts its contents into a form which in bars 134-138 is almost the retrograde of bars 111-115.

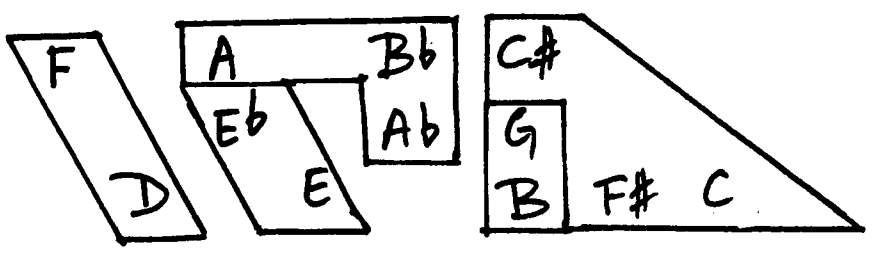
An examination of the chords throughout this movement reveals some interesting three-note relations, in which (0,1,4), (0,1,5) and (0,1,6) are prevalent. One characteristic of Davies's serial manipulations during his opuses 2 to 5 (the *Five Pieces for Piano*, *Alma Redemptoris Mater*, *St Michael* and *Prolation*, written and performed between 1955 and 1959), is his relative freedom when reproducing collections, deliberately altering some pitches by a semitone or tone in order to vary and colour his repetitive schemes. One group of pitches which almost assumes cadential status in Birtwistle's movement is the (0,1,6) collection (C, C#, F#). In bar 132, the horn reinterprets this as (G, C, C#) and from bar 138 (G, B, C) begins to emerge linearly until its first vertical statement in bar 150. This is restated in bars 159-61, 174 and 183. Other referents to emerge are a (0,1,2,6) chord in bar 171 and (0,1,2,7) in bar 178 which, respectively, relate to (E flat-E-D-A flat) and (E flat-E-F-B flat) at the opening of the twelve-note collection. The very last sounding pitch in the movement is C#, associated with the end of Birtwistle's twelve-note scheme. The final chord contains E flat and E, which refers back to the very opening. The violin and flute taken alone here produce a (0,1,5) collection and when the horn is included the set class is (0,2,3,7), which relates back to bars 171 and 178.

Example 4 *Monody for Corpus Christi*

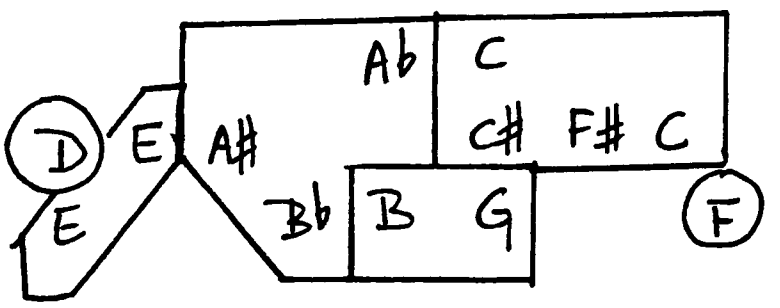
Bars 111-115



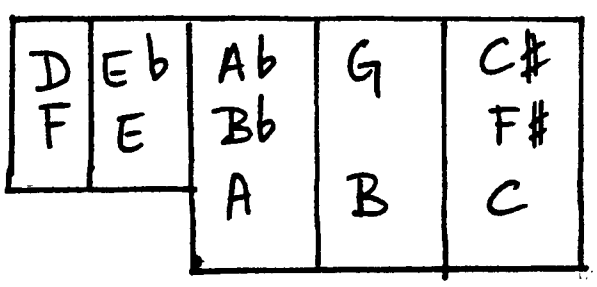
Bars 116-118



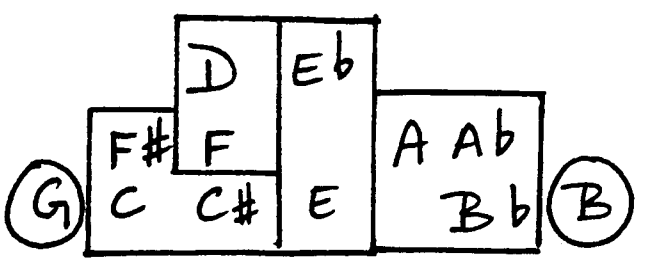
Bars 123-8



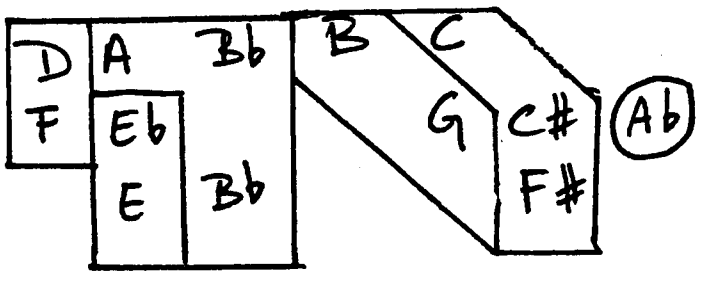
Bar 120



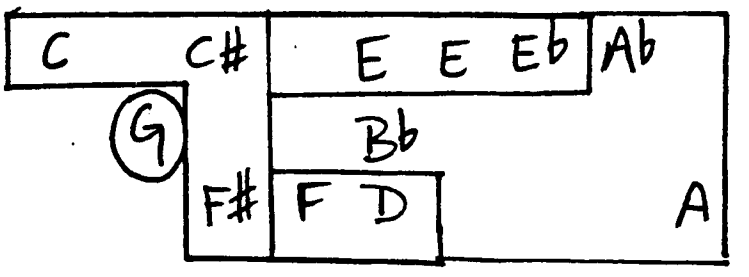
Bars 132-4



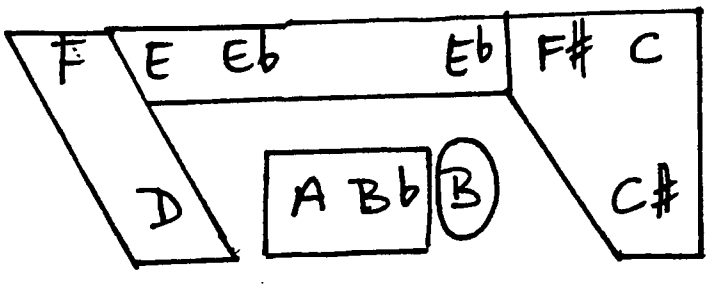
Bars 121-2



Bars 134-8



Bars 122-3



In the first movement this pitch scheme is submerged until the very last stages when, from bar 95, the soprano begins to introduce the 'row' beginning with its latter pitches F# and C. This is followed, from bar 99 - at the start of the last line, "And by that bedside there standeth a stone" - by the opening ordering (notes 1-8): E flat, D, E, F, A, B flat, B and G. (See **App 3**). This climaxes on C-F#-C# (the final (0,1,6) tetrad) on "Corpus Chri-". The B flat on "-sti, written there on" returns us to the middle of the twelve-note 'row'. The third movement also ends on C#-F#-C in the soprano, and this is immediately transposed and inverted as the final chord, A-B flat-E.

According to my discussion with the composer, Birtwistle favoured the procedures of chance and variation which John Cage brought to Darmstadt in 1958, and believed they represented the best way out from the *impasse* of total serialism. Birtwistle described Stockhausen's scores with charts and the juxtaposition of ideas in Boulez's *Structures II* as a positive response to John Cage and a "good thing". These answers to compositional problems, however, did not reach Birtwistle until after he had composed *Three Sonatas for Nine Instruments* in 1958. His positive reaction to the work of John Cage may go some way towards explaining why Birtwistle was so dissatisfied with *Three Sonatas*, which he withdrew before its scheduled first performance, and which he describes now as a "forgery".[66]

Birtwistle's *Three Sonatas for Nine Instruments* was, according to Hall,[67] believed to have been lost since its withdrawal immediately after its first rehearsal at the Aldeburgh Festival in June 1960 under the New Music Ensemble conducted by John Carewe. However, a final draft, in Birtwistle's hand, exists in the collection of Birtwistle's manuscripts held at the Paul Sacher Foundation in Basel, where I was able to transcribe it in full.

A substantial work, its three movements last 178, 80 and 196 bars respectively. Bars 1 and 2 of the first page clearly reveal a possible tone row, although the twelfth pitch

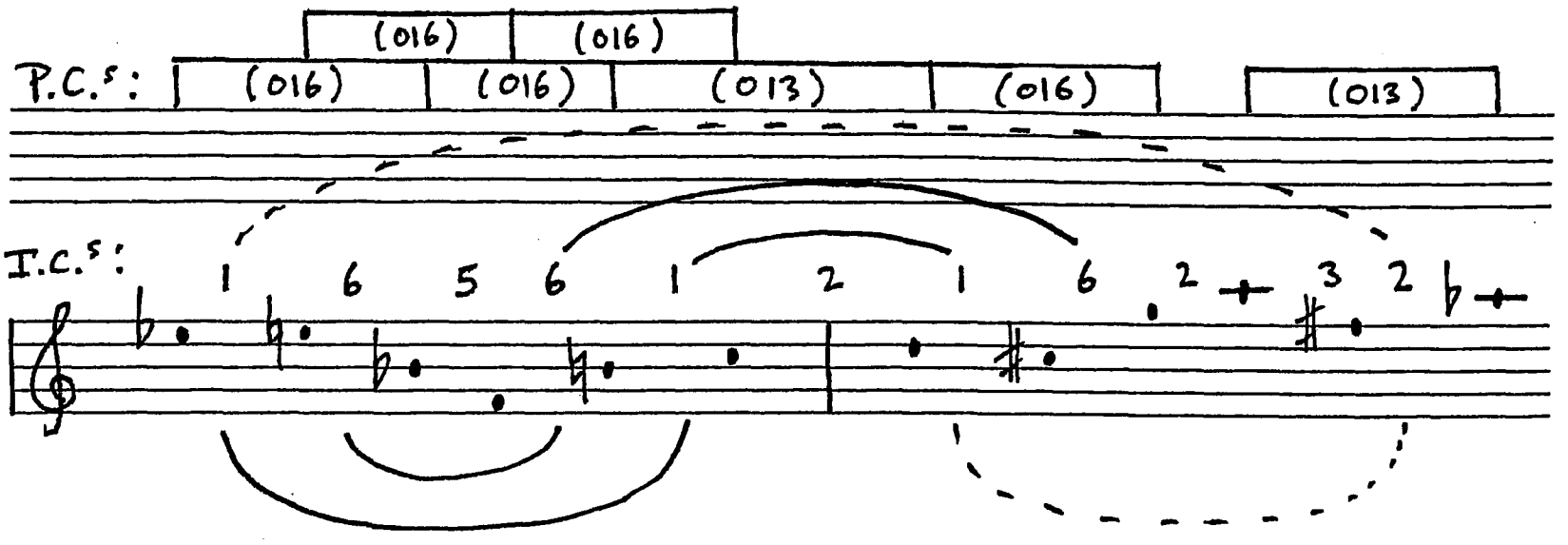
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[66] For an account of Birtwistle's withdrawl of *Three Sonatas* at the occassion of its first rehearsal, see Andrew Ford, 'The reticence of intuition', in *Composer to Composer* (London: Quartet Books, 1993), p.52.

[67] (1984), p.21.

is withheld until bar 4; the piece begins with a sustained E flat and subsequent developments in the work suggest that the second pitch in bar 1 - E natural - is a strong contender for note 1 of the row. On balance, however, I have based my analysis on a twelve-tone collection that begins on E flat, as shown in the following example:

Example 5 Three Sonatas for Nine Instruments: Tone Row



A possible model for the features of this row, as well as the overall conception of Birtwistle's work may be Webern's *Concerto* Op.24.[68] Besides their three movement structure and the implication of sonata form, the two works share near identical scoring with the exception of cello rather than piano in Birtwistle's piece. In the preface to the score for Webern's work (published in 1948), which one imagines Birtwistle must have seen, the various forms of the row are illustrated with emphasis given to its symmetrical and palindromic subdivision into units of (0,1,4) collections. A more satisfactorily symmetrical scheme could hardly be imagined, since, as the preface notes:

> Each of the three-tone groups has the same position four times in the total of 48 row-forms (with transpositions), in that it appears four times at the same pitch levels; thus the available material for the composition is reduced to 12 row-forms or 48 three-tone groups, pairs of which in turn have a closer relationship to each other. Each pair of row-forms can be compressed into a single row-form when the three-tone groups are arranged accordingly.

Birtwistle is said to have described *Three Sonatas* as an exercise in symmetries and

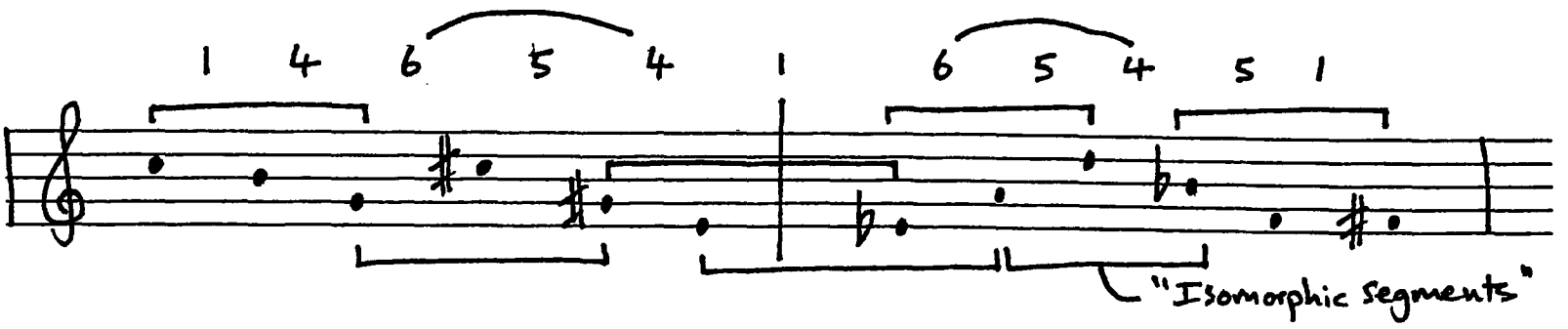
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[68] Birtwistle heard this work performed in conjunction with *Le Marteau sans maître* and *Zeitmasse* on 6 May 1957.

that his dissatisfaction with it stems from the fact that these symmetrical structures are somehow too literal and obvious.[69] The row (**Example 5**), like the one used in *Refrains*, shows signs of symmetrical planning with irregularities creeping in towards the end. The first three quarters of the row can be divided into three (0,1,6) sets, however the last quarter forms (0,1,3). Taken as a whole, it is initially palindromic around interval classes 2, 1 and 6, with a complete palindrome formed in the first half.

A useful comparison may be made between Birtwistle's row and Boulez's "partially symmetrical" row for his *Sonatine* Op.1, which is characterized by overlapping (0,1,6) and (0,1,5) collections:

Example 6 Boulez, *Sonatine* Op.1: Tone Row



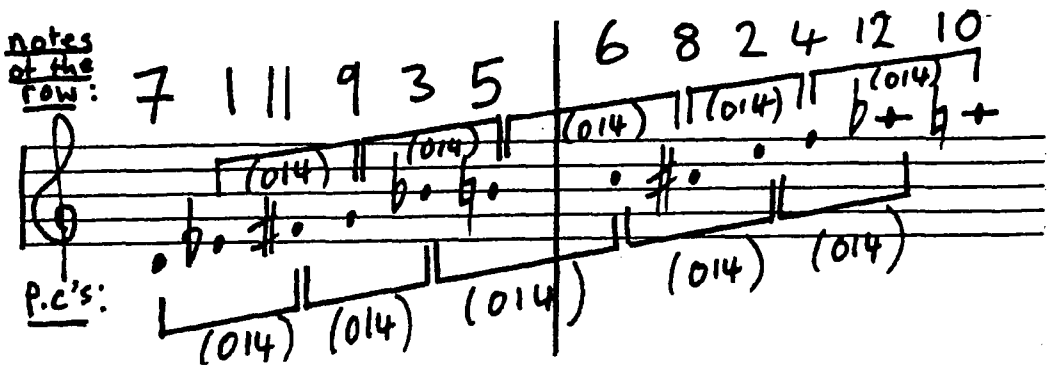
Carol C. Baron has drawn attention to Boulez's use of these "isomorphic segments" as recurring motivic features which define the form of the work.[70] To a certain extent this is true of Birtwistle's work, in particular the short central movement, as will be shown later. One other observation regarding the construction of the row. A possible method, which relates Birtwistle's row to Webern's, is suggested if the pitches are grouped according to even and odd numbers (something which Birtwistle often does in his sketches when applying number schemes to notes). This results in a whole series of (0,1,4) collections:

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[69] Hall (1984), p.21.

[70] Carol. C. Baron: 'An Analysis of the Pitch Organization in Boulez's "Sonatine" for Flute and Piano,' *Current Musicology* 20 (1975), pp.87-95.

Example 7 Possible model for construction of the *Three Sonatas* row



One of the most obvious features which emerges from an analysis of the score for *Three Sonatas* is the association of two types of texture, as indicated in the original title for the work given at the top of page one: *Sonata Cantus Choralis*. These would appear to be new names for refrains and choruses, just as in 1964 Birtwistle would use cantus and in 1984 cantus and continuum to the same effect.[71] The first movement can clearly be seen to consist of the alternation of eight cantus sections which represent a linear, lyrical refrain, and eight choralis sections which are predominantly chordal. The two sections are further distinguished by different tempi. Tempo 1 for the cantus sections is quaver = 150, and Tempo 2 for the choralis is variable, ranging from crotchet = 46 to 130.

In terms of the treatment of the row, the cantus and choralis are associated with two different processes, although each section is usually introduced by E or E flat (notes 1 and 2 of the row). The cantus favours reorderings and permutations of the basic row as well as the manipulation of smaller collections used in transposition. For instance, in bars 55-57, notes 6-9 of I-E flat followed by its retrograde (or notes 3-6 of RI-E flat) form a palindrome around E flat and D (I-E flat notes 1 and 2). This is shown in **App 4**. These

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[71] The use of the word 'sonata' has no obvious connection to the formal processes in the work. This may simply have been an indication of indebtedness to Maxwell Davies, whose first published work bears the title sonata (his Trumpet Sonata). The term 'choralis' may be a reference to Isaac's *Choralis Constantinus*. This work is contained in the *Denkmäler der Tonkunst in Österreich* which Birtwistle drew ideas from in 1961 when composing *The World is Discovered*. The *Choralis Constantinus* edition had been prepared by Anton Webern, and Webern's commentary was reprinted in an issue of *Die Reihe* which appeared as volume 2 of the English edition (London: Univeral Edition, 1958). During this article, Webern discussed how the chant melody "constantly winds its way through Ysaak's music" and how it is absorbed in such a way that "the chant appears in the ... music not as something foreign to its nature but welded into the highest unity", p.25. This may have suggested to Birtwistle the possiblity of "welding" his tone row into the chordal, 'choralis' sections of his own work.

operations can also be seen in the central second movement which is characterized by the cantus texture.

Throughout the second movement, which is scored for seven instruments (the cello and violin have been omitted), a viola solo spins a near-continuous set of permutations of the row's opening six pitches, with particular emphasis on notes 1 to 5. Note 6 is not introduced into the viola until bar 23. The movement is tripartite in design in the following manner (the openings of these sections are given on **App 5: 1-6**):

A	bars 1-34	(note 6 in the viola at bar 23 and stressed in bars 31-2)
A1	bars 35-69	(note 1 stressed in the viola in bars 66-68)
A2	bars 69-80	(note 12 in the viola at bar 74)

Occasionally, the row is taken up by one or more of the other six instruments, as in bars 11-13 and bars 52-56. Otherwise these stick mainly to the remaining six pitch-classes. At structurally important points, the surrounding instruments often place notes 9, 10, 11 and 12 in extreme or exposed registral positions, for example at or towards the ends of sections A and A1 (bars 25-30 and 67-68) and at the midpoints of these sections (bars 21 and 52-55). Notes 8 and 10 (D and C#) are used as pedal points throughout the movement, eventually dominating the texture during the closing bars.

Unusually for Birtwistle, this movement plays with the opening five notes of the row rather like a conventional motive, and it projects these notes through a series of rotations (see **App 6**). At the opening they are given in retrograde (5,4,3,2,1) (I-7); permuted to (5,1,4,3,2) in bars 13-15; (2,5,4,3) at bar 35; (5,1,3,4,2) at bars 42-44; (5,4,3,1,2) at bars 52-53 (passed from viola-trumpet-english horn-horn); (1,4,3,2,5) at bars 56-58; (4,5,2,3) (I-1) twice repeated in bars 70-72; and (4,3,5 ...) in bar 76. In bar 74 note 12 is introduced into the viola, where it ends the sequence 11,3,2,12 passed from clarinet-viola-trombone-viola. At the very end of the movement the viola alternates notes 1 and 7, whilst the woodwinds have 2 and 8. Here longer-range pitch considerations have taken over, coupled with Birtwistle's symmetrical designs which I shall discuss later. Another indication of this is the development of symmetrical combinations in the central section, such as (5,6,3,3,3,6,5) in bars 38-42.

Moving to the choralis texture, this is remarkable for its endless repetitions of

vertical formations which are frequently derived from linear segments of the row.[72] Every three to five bars, all twelve notes of the row are presented, continually reworked in different ways and generally remaining faithful to the original ordering. Frequently chords are derived from either the first or the last six notes of the row, with the latter consistently used to end sections. The first chords to use notes in sequence from the row appear in bar 6 (2,3,4,5), and bars 16-18 - notably (10,11,12) and (7,8,9,10) which, coming just before the return to 'Tempo 1' and the cantus texture, are cadential by association (see **App 7: 1-2, a**). A culminating moment in the process of forming chords from ordered segments of the row arrives midway through the movement in bar 97 (**App 8**). This bar contains the total chromatic shared between three chords:

(1,4,5,6) (7,8,9,10,11,12) (2,3,4)

The second of these presents the second half of the row in sequence from top to bottom in the score.

In bar 20, the horn introduces a sustained pedal on note 1 (E flat). This feature returns once more in bar 29 where a chord containing notes 9 to 12 is followed by a return to the cantus texture, and the subsequent move to choralis section 3 is marked by notes 11 and 12 held loudly, in a high register, by the flute and violin, against note 2 in the horn (see **App 7: 2, b**).

This encroachment of note 2 and its subsequent contest with note 1 is one of the main features of *Three Sonatas*. E flat holds out for some time, but around bars 70-86, E starts to appear more frequently and loudly. Eventually, led by F# (note 11), E natural takes over the role of row initiator in bar 86, at the start of cantus section 5. From bar 109, in the middle of choralis section 5, fragments of the linear cantus emerge, once again stressing E against E flat. At bar 127 (see **App 9**), a chord consisting of notes 1 to 5 brings choralis section 5 to an end, and, from the centre of the chord, E3 emerges to

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[72] As only one row is used, the process falls into the category Kathryn Bailey calls 'block topography'. (See Bailey's *The Twelve-Note Music of Anton Webern* (Cambridge: Cambridge University Press, 1991), p.31, and 'Work in Progress': Analysing Nono's *Il Canto Sospeso*', *Music Analysis* 11/2-3 (1992), p.289).

initiate cantus section 6. This time, a literal symmetry is established as note 12 (A flat4) is introduced above note 2 (now 1?) forming an interval of sixteen semitones, the symmetrical centre of which is note 6 (C4). In the abstract, this chord constitutes a (0,4,8) collection. C4 appears in bar 130 in the trumpet, and is anticipated an octave higher in the clarinet (with its own symmetrically related constellation) in bar 129. To complete the symmetrical plan, the choralis texture is resumed with the complement of its last chord (notes 7 to 12), linked to the previous section by the central horn C (note 6).

As can be seen, Birtwistle very clearly used the properties of his row, in particular its symmetrical properties, to structure his work both on a surface, motivic level and at a deeper, formal level. However, these operations are not always present and the appearance of the row, although very obvious in the first two movements, is more heavily obscured by other procedures in the third movement.

The E/E flat contest in the first movement is eventually 'resolved' in favour of E flat, which returns to head the row statements in bar 168 (in the clarinet) following a crescendo on E natural (also clarinet). This signals a transfer of texture to the woodwinds followed by a final choralis section which is dominated by repeated E flats, including a sustained crescendo in the trumpet. The final flourish, however, ends on notes 10, 8 and 11. In the second movement, E natural is eliminated altogether from the closing bars and the last bar contains C#, D and E flat (notes 8, 7 and 1). This ending is largely determined by symmetrical schemes imposed upon the row, and their continuation in movement three. The continued competition between the competing interests of E and E flat forms a very important part of the third movement, as does the manipulation of symmetrical properties of the row. However, these processes only emerge towards the centre of the movement where they take their place alongside other equally, if not more important, compositional determinants. For this reason, I shall defer treatment of the final movement of *Three Sonatas* until later when the row can be discussed in relation to other features.

Following these observations, it is now possible to return to *Refrains and Choruses* and to ask: are there signs of Jonathan Cross's row operating upon the structure of the work before the final section? Looking once again at bars 134-47, which leads on from the clearest statement of the row (see **App 1: 5**), appreciation of note associations

and permutations reveals that a new pattern of vertical pairing is established and reproduced, with occasional 'wrong' notes, three times in total. The scheme is as follows:

order:	1	2	3	4	5	6
pitches:	B/E flat	A flat/F#	E/F	B flat/G	A/C#	C/D
row nos:	2/3	4/6	7/5	9/8	12/10	1/11

The only alterations to this scheme are the interpolation of row numbers 4/3-3/4, with voice-exchange, in bars 137-38, and 2/3-1-3/2 in bars 144-47.

Moving backwards, the three voice section from bars 122-131 (**App 1: 6**) can, in fact, be seen to be based on Cross's row. This is shown in **App 10**, which illustrates this most clearly in bars 125 and 127. By contrast, with the exception of the interrupting pentachord, the section based on an expanding wedge around E is apparently not guided by the order of the row. From the very opening, however, as far as the horn solo section which precedes the wedge around E, it is possible to discern the row as a skeletal, guiding presence.

The opening introduces note 1 (C) and 2 (B, in bar 4) then 10 (D flat). The space between 2 and 10 is gradually filled throughout bars 5-8, until 11 (D) is introduced at the interruption in bar 9, and 12 (A) is withheld until bar 14, prior to the second interruption. The only other pitch-class is F (note 5) which is withheld until bar 16. Across the page, from bars 19-22, the rationale appears to be the selection of even numbered pitches only: 2,4,6,10,12, with 8 (G) withheld until bar 21 where the oboe initiates a new section which prepares the arrival of the chord in bar 28. This chord, which relates ultimately to the pentachord that ends the work, consists of notes 2,3 and 11 with 4 provided by the horn (A flat, which forms a (0,3,6) collection with B and D). On a purely abstract basis, this combination of pitches functions in a similar manner to an augmented sixth chord, since notes 2 and 11 imply a move on to 1 and 12. Bar 35 then introduces note 1 (C) at the start of a new, trilling, sustained-note texture, which passes on to note 2 (B flat in the clarinet, bar 36), then E (instead of E flat - note 3), note 4 (A flat, bassoon, bar 38), and 5 (F,

many times repeated in bars 38-40). Notes 6,7 and 8 are presented in bar 41, B (instead of B flat - note 9) and 10 (C#) in bar 41, and finally 12 (A) in the oboe, bars 42-44. The missing note 11 is then provided by the return of the three-note chord (2,3,11) in bar 45.

There are many further explicit references to the row, for example the suggestion of another sequence led by the high, trilling flute on note 12 (A) in bar 46, leading to 2 (B) in the oboe via note 1 (C) at the end of the flute's flourish in bar 48. However, I will leave a discussion of these events until later when they can be discussed in relation to associative pitch projections.

As Cross observes, a different, eleven-note row is introduced for the horn solo section, and this is retrograded after two prime form statements. Once again, however, the row is reflected in the interrupting chords (bar 82 - **App 1: 4**) which consist of notes 5 to 8 of the horn's row. Furthermore, I believe that the high degree of intervallic coherence that Cross observes during his pitch-set analysis of the accompanying parts in this section stems from Birtwistle's method of permutating three- and four-note groups derived from the row in the same manner as that described for the central movement of *Monody*.

Linear and Vertical Space

Clearly relevant to Birtwistle's procedural concerns in *Refrains and Choruses* and *Three Sonatas* were projected pitch issues and the use of register as a form-defining property. Two competing processes need to be considered: the pre-determined order of pitches dictated by the row; and the conscious manipulation of those notes according to long and short-range schemes of symmetry and pitch projection. When using the term pitch projection I do not attach to this any degree of tonal implication. However, a feature which strongly characterizes Birtwistle's music, from these first works onwards, is the presence of pitch centres which are either sustained, repeated, or emphasized through timbre or register. These centres change throughout the course of a piece, but, as was seen with the conflict between E and E flat discussed above, competing centres of interest are integral to the dynamics of the music. This even functions on the broadest level, as

indicated by Cross's observation that the opening C4 of *Refrains and Choruses* is framed, and therefore implied, by the B flat3 and D4 which conclude the work.

This example reveals the importance of symmetry and registral placing within Birtwistle's scheme of associative pitch projection. Hall has drawn attention to the presence of a literally symmetrical chord centred on D4 in bar 74.[73] This is not the only literally symmetrical chord, however. The section based on an expanding wedge around E, for example, is literally symmetrical as well. Analysing this aspect of *Refrains* is aided considerably, I believe, by the adoption of Jonathan Bernard's graphic form of mapping the literal registral positions of notes in order to perceive symmetrical or near-symmetrical vertical spaces as they evolve through time.[74] Bernard's theory is not designed to identify musical objects, nor to stress the importance of particular pitch-classes. Its value resides in its ability to illustrate the composer's spatial conception and the mechanics of form as process. It is also appropriate that Bernard's method was developed to analyse the music of Varèse, whose ideas about form as process often coincide with those of Birtwistle.

A graphic representation of the opening bars of *Refrains and Choruses* (bars 1-20) is shown in **App 11: 1**. Bar numbers are indicated along the horizontal axis, and registral positions are indicated along the vertical axis. The most obvious feature of this graph is the avoidance of the octave (which would be shown as [12]). The principal process is a long-range projection of [11], from an [11] formed by the clarinet's low E flat3 and the horn's 'forte' D4 in bar 9, to the [11] between C5 in the flute and the sustained oboe B5 in bar 20. It is worth noting that the flute's figure here, in bar 20, is linked motivically to the interruption in bar 9 (as an elaboration of the oboe's falling sixth figure).

The opening nine bars present a central space of [16] from D4 to G flat5, symmetrically divided by the oboe's B flat contained in the interruption in bar 9. Furthermore, this central space is flanked above and below by [10], which relates the central oboe B flat to the upper and lower extremes of register: the flute's E6 in bar 5, and the clarinet's E flat3 in bars 7-11 (which are [18] above and below B flat4 respectively).

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[73] Hall (1984), p.25, and (1998), pp.15-16.

[74] Jonathan Bernard, *The Music of Edgard Varèse* (New Haven and London: Yale University Press, 1987).

One other important feature is the upper register motion from E6 (bar 5) to E flat5 (bar 16) to A flat6 (bar 20), which forms a projection of [28] with the opening C4 to B2 (bar 16) to E4 (bar 18). This draws attention to bars 16-18 which are central to the motivic analysis - owing to their concentration on contrary motion derived from the second interruption in bar 13.

A similar graph for the following section (bars 21-34) is shown in **App 11: 2**. Structurally this section is important because it is concerned with the formation of the trichord, introduced in bar 28, which projects on to the pentachord of bar 100 which, in turn, brings the work to its close. What are the processes that lead from the opening to the trichord in bar 28?

The graph indicates several processes associated with the [22] vertical space between A3 and G5 in bar 21. The first thing to notice is that the [11] projection discussed earlier has now been increased to [22]. One process this new space is subjected to is described by Bernard as 'expansion', which requires an expansion of the outer boundaries by the same interval. Thus, G5 rises to A flat5, and A3 falls to G#3, in bar 24, thereby producing [24]. Integral to this is A4, in the flute, which divides the expanded space asymmetrically into [13] and [11]. In bar 25, the neighbour of A4, B4 is introduced which together with C#3 (in the horn) reintroduces [22]. [11] above B4, B flat5 increases this space to [33] (three times the original [11]). Finally, the operation of expansion is applied once again, resulting in B flat5 rising to E flat6, and C#3 falling to A flat2 (in the horn), which together form the outer limits of the trichord and associated horn figure.

Another possible reading relates to the creation of a [23] vertical between B flat2 in the horn in bar 25 (anticipated in the bassoon the bar before) and the flute A4 (also established the bar before). This is expanded into [27] formed by B4 in the oboe (bars 25 and 27) and A flat2 in the horn. The A flat goes on to underpin the bar 28 trichord, and the B is transposed up an octave to provide the bottom note of the trichord. The horn A flat can also be accounted for as a result of the projection of [5] formed in bar 25 by B flat2 in the horn and F2 in the bassoon (the lowest pitch in the piece so far) on to [5] in the horn, bars 26-7, between C#3 (the 'root' of [33]) and A flat2. Finally, the D6-B5 [3] component of the trichord can be seen to be a projected rotation of the E flat6-F#6 [3]

vertical established by the flute and clarinet in bars 25-26, which is repeated *fortissimo*, staccato, and in an exposed registral position.

One feature of the graphs is that they exclude important textural information, such as dynamic markings and rhythm. As a result, the patterns depicted have still to be explained and accounted for. They are, in fact, being determined by specific associated pitch projections. These can only be extracted by determining which pitches are given importance and salience from a listener's perspective. Analysing the opening in these terms reveals that the bar 28 trichord (B-D-E flat) has been prepared aurally from the start. The *forte* horn D in bar 9, during the first interruption, is the most strongly emphasized pitch-class up to that point. In bar 16, at the base of another interrupting gesture, the bassoon emphasizes B, played mezzo-forte. This is reintroduced three octaves higher by the clarinet in bar 18 (along with E and F# which anticipate E flat and F of the trichord) and is sustained audibly through to bar 21. In bars 22-23 pitch-classes D and B are both emphasized leading to the E flat-F# dyad mentioned above. Also, in bars 26-28, the clarinet's crescendo on B flat5 leans into the B5 of the trichord.

This logic can be continued throughout the piece and one could account for different sections in terms of their pitch-centricity. The wedge section around E is one such example. Here the introduction of the pentachord (C#-D-E-Bflat-A) needs to be accounted for. This can be done in part by pointing out that C# was a focal pitch of the preceding horn solo section, and D of the section before that.

D is the only note throughout the work which receives a unison statement. This occurs on D4 in all the parts, in bars 68-71 (**App 1: 3**). This moment is a long-range associative projection of the horn D4 in bar 9. It is further prepared by the sustained, trilling D2 in bars 63-4 and the subsequent bassoon figure F4-B1, which forms a space of [30] with D3 as its absent centre. D4, therefore, completes a process of rising octave Ds.

The importance of D relates to the continued projection of the bar 28 trichord, and D is joined by E flat during the solos in bar 72 where it is stressed by the oboe. This is followed by the literally symmetrical chord around D. During the subsequent section the solo horn stresses C# (with, in bars 77-9, C#7 in the flute and D2 in the bassoon: a vertical of [60]), which leads to the flute's D/E flat trill idea in bars 83-6, and finally to E in the

flute in bar 87 and the start of the wedge section based on E from bar 88.

A feature of this wedge section is that it first introduces the pentachord within the context of a literally symmetrical C#4-E4-G4 (0,3,6) triad. The important role of (0,3,6) triads within Birtwistle's piece resonates with a contemporary view of Varèse's *Density 21.5* illustrated by Marc Wilkinson's analysis of this work which appeared in *The Score* in 1957 (the year *Refrains* was composed).[75] During his analysis, Wilkinson draws attention to minor third relations and their various registral placings as well as the importance of expanding wedges, principally around E. These features are common to other works by Varèse, notably *Integrales* and *Octandre* which are also discussed during the article. Wilkinson talks of "zones of attraction", "harmonic zones", of filling-out sound spaces, "interval" and "pattern polarity", and even of pitches being "felt as absolutely pre-ordained by the context", all of which, in the light of the analysis detailed above, suggest that Birtwistle may have been one of a number of composers at this time who based their own works upon such ideas.

The importance of symmetrical triads composed of minor thirds, and even augmented triads, allied to associative pitch projection, is most clearly demonstrated in *Three Sonatas for Nine Instruments*. Here the role of literal and non-literal (i.e. abstract) symmetry is more evident than in any other subsequent work, and what the composer said of the piece in this respect is born out by the score.

The opening of the last movement (**App 12**) begins with C which completes a symmetry that was implied by the last four bars of the previous movement: B flat-B-[C], C#-D-E flat. When C is introduced it is immediately followed by A and E flat one octave below in the trumpet, which creates a (0,3,6) collection that is symmetrical in the abstract, and which recapitulates previous uses of this set. The B and F which follow in the clarinet suggest an inexact literal symmetry around the trumpet's E flat. At moments like this, symmetrical considerations override the tone row as a structural determinant, although the row does not disappear altogether, and notes from either end of the row (such as E,

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[75] Marc Wilkinson, 'An Introduction to the Music of Edgar Varèse.' *The Score and I.M.A. Magazine* 19 (1957), pp.5-18. Wilkinson was a composer whose work was represented at Darmstadt when Birtwistle attended in 1956, and the two may well have met on that occasion.

E flat, A, F# and A flat) often link one section to the next.

From bar 76 a process begins which leads to the expansion of the (A,C,E flat) (0,3,6) triad into a (0,4,8) form centred on C. The culmination of this process arrives in bars 151-154 which present (A flat-C-E) as a literally symmetrical chord in the trombone, trumpet and clarinet respectively (shown in **App 13: 1**). This moment recapitulates several other structurally important presentations of these three pitches earlier in the work, such as bar 129 in the first movement and bar 60 in the second (**App 13: 2a**). Evidently, this process is linked to the row since these pitches are notes 2, 6 and 12, and one may now be tempted to regard E as note 1.

The transformation from (A-C-E flat) to (A flat-C-E) is first suggested by the *fortissimo* flute E in bar 76, the trumpet C in bar 78, and horn A flat in bar 81 (all sustained and audible). (**App 13: 2b**). E is firmly established across bars 87-100, as a result of frequent repetition and octave doublings between parts. Bars 104-116 represent a musical parenthesis which shifts the focus on to B flat, D and F# (another (0,4,8) collection) presented as a chord or through clusters centred on one or other of these three pitches. In bars 124-5 A flat, C and E appear as a chord, but not in literal symmetry (**App 13: 3a**). Bars 130-151 are layered according to instrumental textures (**App 13: 3b**). The brass layer is concerned with the task of bringing A flat, C and E together in a literally symmetrical form, but it never quite achieves this before the actual form is given in bar 151 with the help of the clarinet.

The penultimate chord of the whole piece, in bar 174, consists of two literally symmetrical triads: (C-E flat-F#) and (B flat-D-F#) which are (0,3,6) and (0,4,8) forms respectively (see **App 13: 4**). The D is sustained into the next chord (the last in the work) but the other voices move on to new pitches. This eight-note chord consists of all even-numbered notes from the tone row (from 2 to 12) with the exception of D which is note 7. These chords, therefore, bring the work's two main structural determinants (the tone row and symmetrical pitch formations) face to face, with neither triumphing outright due to the aberrant D in the clarinet. This relates back to *Refrains*, where the final clarinet D belongs to the pentachord and the work's long-range symmetrical structure but does not end the row and therefore leaves the two processes unreconciled. However, one should

note that the clarinet's last phrase (bars 151-3) employs this D as part of a symmetrical scheme: (0,1,3) (0,7) (0,1,3); and that the clarinet's pitches, excluding the first and last (E and D), comprise the complement of the final pentachord.

Surface Figures, Rhythm and Line

The key question as to how Birtwistle's earliest works actually cohere may be addressed with reference to *Refrains and Choruses*. On the subject of motives and surface objects, Cross has observed that:

> Birtwistle does not create collages (as, perhaps, an innocent reading of his own writings might suggest) but it is important to emphasize that any motivic connections one makes are purely referential and never functional in any directed structural (tonal) sense.[76]

In Birtwistle's earliest atonal contexts, tonally directed structures do not exist. However, might motives function in a directed (non-tonal) associative sense? Can this not be said of recurring motives which allude to or reinterpret earlier moments, and which assert or imply a return to an opening; or to moments of stability or instability; or movement towards closure? Motives can only direct a structure if they relate to each other in a cogent manner, with implications upon the shape and form of a work, otherwise they are random, disconnected and meaningless. I would suggest, however, that Birtwistle's motives do relate to one another and that they do have implications which direct and shape the form of his works.

Another problem is what is meant by motive. There is an apparent dearth of continuous melodic figures in these early works, of the type that could be used in a semiological analysis or analysed according to contour theory. What is necessary, therefore, is to adopt a more flexible attitude towards surface figures and embrace features other than those characterized by pitch and contour: there is a need to move beyond ideas of cells and pitch collections.

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[76] Cross, PhD, 1994, p.237.

The first task when analysing the surfaces of Birtwistle's pieces is to categorize a work's opening gestures. The second step is to locate repetitions and transformations of those gestures and to identify moments where an original order of events is retained. These events have a logic and purpose. They demarcate sections, generate new ideas and recapitulate old gestures. The real value of investigating these surface features is the window they open on to the form of Birtwistle's works. Each surface gesture is a response to, or reinterpretation of, something that has gone before. Birtwistle uses these 'responding' gestures as a means of signalling a way ahead and of directing the structure.

In *Monody for Corpus Christ* the surface is dominated by expanding wedge shapes and many varied motivic forms which are characterized by their specific contours. Contrary motion is also important, as well as sustained tones, sometimes used to build chords. *Three Sonatas for Nine Instruments* often has a very dense surface, with many layers of activity in the last movement especially. Consequently, the role of dynamics in singling out particular linear fragments is very important. In sections where continuous lines are absent, the music is characterized by the presentation of linear fragments which relate to the cantus sections, the central movement, and the flute line in the closing bars of the piece. The fragments are therefore broadly related but are characterized by contrasting rhythmical material. In *Refrains and Choruses* the form is outlined by two features: a two-note contrary motion idea, and the rhythmic figure stated in the horn on the first page.

Birtwistle's treatment of the horn's opening rhythmic figure in *Refrains* provides one of the best examples of the use of a surface figure to determine structure. The treatment of this figure bears comparison to that used in *Silbury Air* composed in 1977, the objects of which Birtwistle has said were, "subjected to a vigorous invented logic via modes of juxtaposition, modes of repetition, modes of change."[77] Although his approach in *Refrains* may not have been so systematic, this earlier work clearly contains the origins of such thinking.

App 14: 1-2 illustrates the recurrences of the horn's opening rhythmic gesture (see also **App 1: 1**). The example shows how the nine durations of the opening figure are

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[77] Cited in Hall (1984), p.177.

reworked every four or five bars in a quasi-serial manner. The durations are varied greatly, but the essential long/short patterns are retained in order, with repetitions and occasional retrograde motions. The key to this process is provided by the closing triplet semiquaver/quaver figure at the end of the horn's line. This is reworked as a repeating D in bars 9-10, and as a repeating A flat in bar 15. It is reinterpreted as a flute flourish in bar 20, and as the semiquaver E flat-F# dyad in the clarinet and flute in bars 25-26. The original figure returns in the horn in bars 27-34, at the same time as the woodwind, who introduce the trichord for the first time. Here the woodwind and horn fail to synchronize and the original rhythmic profile is distorted and unstable. Consequently, the structural importance of this moment cannot be explained entirely in terms of pitch and harmony.

From bar 34 the opening horn line is reinterpreted as a series of trills. The signposts to this are the short semiquaver or quaver, four- or five-note horn figures in bars 37, 39, 42-3 and 44, which undergo a development process of their own. Having allowed the figure to mutate, Birtwistle reintroduces the idea more prominently in bars 60-61 where it is reinterpreted in the flute, now on A flat6. This is a transposition of bars 12-15 through two octaves. Bars 67-73 represent a retrograde statement of the opening figure which leads to the beginning of the next section.

From bar 45 the trichord assumes independence from the opening rhythm, here serving to disrupt the continuity of the trilling lines. In fact, the trichord infects the musical surface in two ways: as a disruptive device (as in bar 56); and as a registral or pitch framework for other motives. This can be seen in bars 63-72 (**App 1: 3**). Bars 63-4 weave fast ornamental figures, derived from the grace-note flourish in bar 4, around pitches D and B, which prolong the trichord. In bars 65-7 the horn's 'closing' figure is passed from oboe to horn, on B and D respectively. The opening horn rhythm is reintroduced in bars 68-71, now on a unison D. Finally, the grace-note inspired flourishes return during the solos in bar 72, now based on the trichord pitches D and E flat.

The independent form of the horn's 'closing' figure generates all of the motivic material during the solo horn section, including the accompanying parts (**App 1: 4**). Here it has completely lost its function as a concluding gesture, one tied to the section by section reworkings of the opening. Instead, it is granted a free, creative expression of its

own. I imagine that this was not planned at a pre-compositional stage but worked out during the act of composition, and that it represents a typical habit of Birtwistle's: picking up an established idea and using it to create an entirely new, contrasting context.

The other structure-defining motivic idea is based on the two-part heterophony introduced in bar 5 and the associated falling triplet quaver figure in the oboe in bar 9 (see **App 1: 1**). One outcome of the two-part line is the contrary motion introduced by the triplet semiquavers in bar 14, carried through to bar 18, which brings the two-part line and the falling oboe figure together. This idea generates material throughout the piece, most notably from the expanding wedge section to the end. Occasionally, it is spliced into the texture as a disruptive device but it is also used to colour whole sections (see **App 15: 1**).

The wedge section, beginning in bar 89, represents a return to the horn's opening repeated note idea, but it is coloured throughout by the oboe's two-note figure. This can be seen in bars 102 and 105 where it is used imitatively. The associated contrary motion also generates the figurative material in bars 110, 114 (**App 15: 1**), and 119-121 (**App 15: 2**). The remainder of the work is devoted entirely to a recapitulation and reworking of the two-part contrary motion lines and gestures of bars 14-18, with a feeling of retrograde motion since it moves from three parts to one (**App 1: 5-6**). In fact, the clarinet's final C to D may be heard as a consequent motion to the oboe's G flat to B flat gesture in bar 9.

Possibly as a conscious extension of these ideas, *Monody for Corpus Christ* is characterized by a concern with varied contours, as demonstrated by the motive on "Corpus Christ", prefigured by the flute in bar 69, and by the Varèse-like association of expanding wedge shapes with the start of phrases (see **Examples 8a** and **b**, over the page). Birtwistle also develops a form of contour cadence, which involves an ascending motive placed in contrary motion to a descending motive, resulting in a wide intervallic span at the end of lines and phrases (**Example 8c**).[78] The central movement is especially concerned with this idea, culminating in bars 123-6. Analyses of Birtwistle's later works will benefit from close attention to contour and the evidence of the sketches for such pieces suggests that Birtwistle did indeed think in such terms.

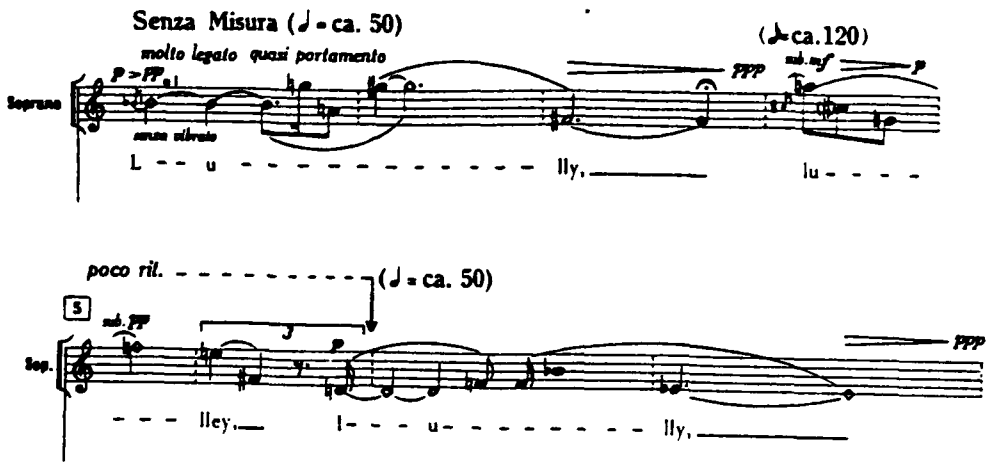
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[78] This device may have been inspired by the text in bars 19-30 of the opening movement, "He bare him up, he bare him down, He bare him into an orchard brown."

Example 8a *Monody for Corpus Christi*

Mvt 1,

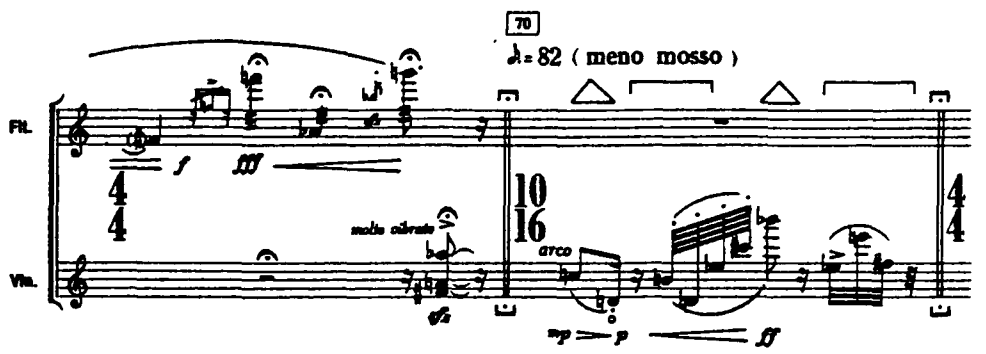
bb.1-7



Ex. 8b

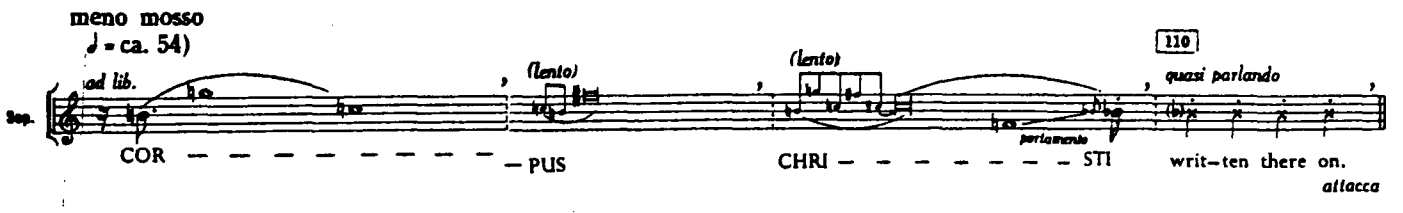
Mvt 1,

bb.69-70



Mvt 1

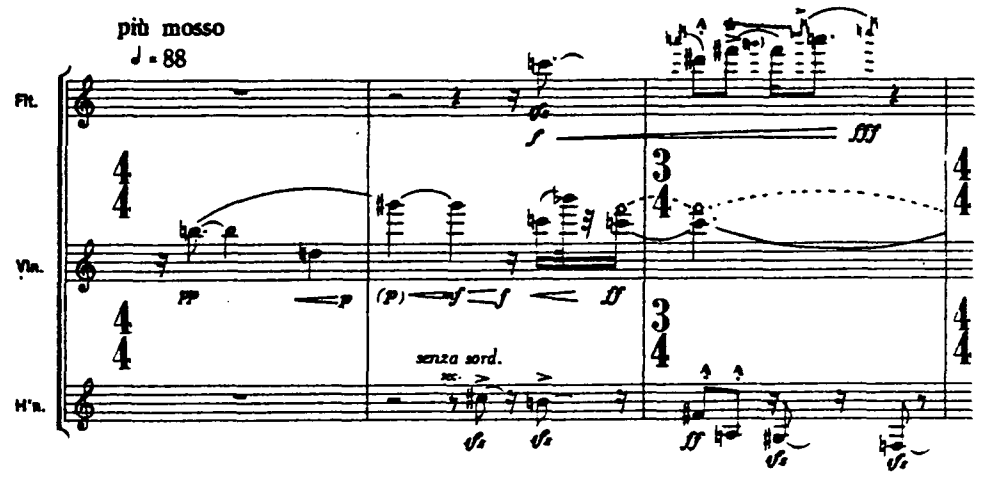
bb.107-110



Ex. 8c

Mvt 1,

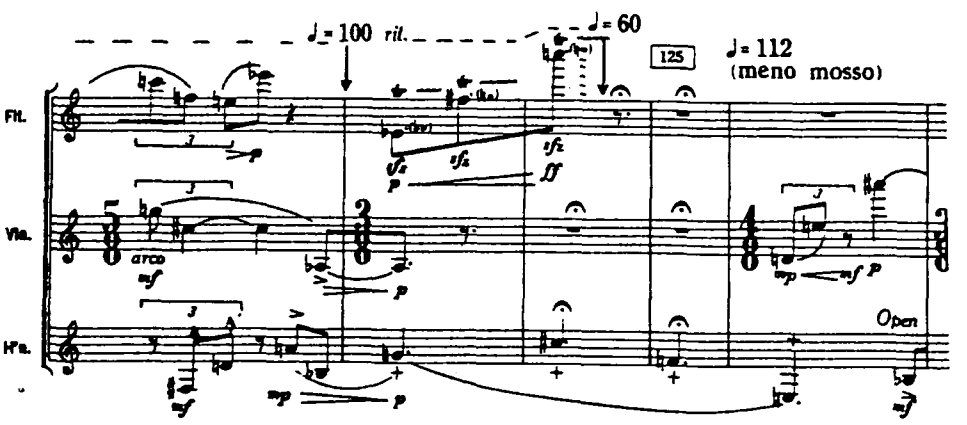
bb.71-3



Mvt 2,bb.116-118



bb.122-126



Monody also represents an early response by Birtwistle to the idea of alternating text settings with purely instrumental passages which was such an important feature of Boulez's *Le Marteau sans maître*, and this is a particular preoccupation of the next phase in Birtwistle's output, particularly of *Entr'actes and Sappho Fragments* (1964). In *Monody*, Birtwistle's two texts imply a transformation from death (the death of a knight in the image of Christ) at the end of the first movement, to rebirth (of the baby Jesus) in the third movement. This idea of transformation is an important one and will be developed in the next chapter. Although Birtwistle does not appear to have created a musical metaphor for this in *Monody* - perhaps this would have been too literal? - it provides an appropriate metaphor for Birtwistle's approach to surface material, and the coherence of his processes in general.

Summary

Birtwistle used tone rows as a basic means of generating pitch material. These were sometimes treated according to conventional serial practice, but generally Birtwistle adopted his own particular means of permutating the row, moving towards and away from the order of the prime form. He did, however, exploit characteristics of the row and used these to shape motivic and structural ideas. Consideration of pitch centredness has revealed associative schemes, and registral symmetries. The surfaces of these works have demonstrated a large degree of coherence. The disposition and treatment of motives are closely linked to the tone row, but they also shape and determine the structure of each work on their own terms.

Chapter 2

1960-65: New Directions

The period roughly from 1960-65 was possibly one of the most active in terms of Birtwistle's attempts to assimilate new ideas and concepts on the way to defining his own creative voice. In the evolution of his thought Birtwistle drew upon a wide range of sources, apparently searching for examples which paralleled his own musical concerns. Seeking out other artists' expressions of ideas with which he was in sympathy not only suggested new ways ahead, but reaffirmed and legitimated Birtwistle's own musical style. In addition, they provided a set of metaphors that he has used to describe the processes in his music ever since.

The development of new directions in Birtwistle's music during the early 1960s was, to a large extent, a result of his interest in contemporary compositions by Stravinsky, Boulez and Stockhausen. In the late 1950s, according to Michael Hall, Birtwistle analysed the scores of *Agon* and *Le Marteau sans maître,* both published in 1957,[79] and Birtwistle has claimed that *Tragoedia* was modelled on *Agon.*[80] Useful parallels may even be drawn between the increased concentration on more clearly defined moments which are present in Birtwistle's music at this time, and the ideas which gave rise to Stockhausen's *Momente* (1962-73). At the very least, Stockhausen's scores made Birtwistle more conscious of the visual layout of his own musical ideas.

During the 1960s there are increasing signs that Birtwistle was beginning to concentrate more on non-pitch based aspects when determining the structure and character of his music. The most obvious result of his dissatisfaction with *Three Sonatas for Nine Instruments* was a less rigid use of tone rows as the basis for pitch schemes and formal processes, although they remain a central determinant of the projection of pitch centres. What emerges is a compositional practice which, literally, generates material moment by moment. There is now a greater sense of disjunction between musical objects

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[79] During his introductory commentary for a Radio 3 broadcast of *Monody for Corpus Christi*, on 4 June 1983, the composer Hugh Wood recalled a time in the early 1960s when Birtwistle was "engrossed with the score of *Le Marteau sans maître.*"

[80] Birtwistle made this claim during a seminar at King's College London, when Stephen Pruslin talked about *Punch and Judy*, on Tuesday 18 November 1997.

which are placed in sudden and unexpected juxtaposition to one another, rather than allowing ideas to evolve gradually as in the earliest pieces. More clearly defined sectional boundaries and the fact that each gesture is now framed within its own space also suggest that higher-level decisions are being made at a pre-compositional stage. The available sketch material for these works, however, is scant and provides no evidence of working methods beyond some very minor and specific manipulations of pitch in *Chorales for Orchestra* and *Tragoedia.*

During the period from 1960-65, besides his purely musical concerns, Birtwistle also developed a fascination with the writings and sketches of Paul Klee, as well as scientific descriptions of organic form and growth by the zoologist D'Arcy Wentworth Thompson. Birtwistle's literary sources during this period were also formative, notably Christopher Logue and Sappho. The question is, to what extent did these interests hinder or promote the kinds of formal strategies previously discussed?

Paul Klee and other interests

The primary relevance of Klee to this study is his concern for the act of creation and the relationship between sketch and final artwork, something which cannot be fully discussed until later in the thesis when Birtwistle's sketches are introduced. However, much has been written regarding the apparent relevance of Klee's ideas to the analysis of Birtwistle's music and so it seems desirable to examine those ideas here and, if possible, use them to develop analysis a little further.[81]

It is not always possible, or necessarily desirable, to find a suitable analogy in one art form for the ideas expressed in another. In the case of Klee and Birtwistle it seems relevant to look for analogies because of the extent of Birtwistle's interest in the artist. However, the application of Klee's ideas to the analysis of Birtwistle's music is

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[81] Studies which deal in some detail with the relevance of Klee's ideas to Birtwistle's music include Jonathan Cross, 'Modernism, Analysis and New Music: Studies in the Music of Stravinsky and Birtwistle', PhD, King's College London, 1994; Alison Deadman, 'Mechanical Arcady: the Development of an Aesthetic in Birtwistle's Orchestral Works Written for the London Sinfonietta Between 1977 and 1984', M.Phil thesis, University of Leeds, 1990; and Ross Lorraine, 'Territorial Rites 1 and 2', *The Musical Times*, October and November (1997), pp.4-8 and 12-16, respectively.

problematic, not least because Klee's own ideas are open to question. Whilst Klee's writings offer penetrating insights into his own work, the extent to which they have aided other painters, let alone musicians, is unclear. Furthermore, the notion that Klee influenced Birtwistle is far from straightforward since it is not certain when Birtwistle first encountered the artist's work. Hall suggests that his interest dates from the early 1960s:[82]

> It was Klee who reminded him, after the debacle of *Three Sonatas for Nine Instruments*, that non-symmetrical balance, the equalization of unequal but equivalent parts, is more useful than exact bilateral conformity.[83]

In the absence of corroboration from the composer,[84] Hall's suggestion seems tenable, particularly as all works from *Précis* (1960) to *Tragoedia* (1965) use bilateral formal schemes which are counter-balanced, or off-set, by opposing teleological processes.[85] Birtwistle may have been introduced to Klee either as a result of Pierre Boulez's interest in the artist (as demonstrated by his essay of 1956, 'On the Edge of Fertile Land (Paul Klee)'),[86] or via Maxwell Davies, who in 1960 composed *Five Klee Pictures*.[87]

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[82] If we assume that Birtwistle discovered Klee's writings in the early 1960s, then Klee cannot have provided Birtwistle with his conceptions of linear and circular processes since these are present in *Refrains and Choruses*, and the same applies to his use of shifting viewpoints of a single idea, seen in the treatment of rhythm in *Refrains and Choruses*. It might be argued that Birtwistle discovered in Klee's writings an explanation and more detailed analysis of the ideas already present in his own creative thoughts. Two Klee publications seem to have occupied Birtwistle at this time: the *Pedagogical Sketchbook* (first published in German in 1925 and English in 1953); and *Notebooks* Volume 1 (first published in German in 1956 and English, by Lund Humphries, in 1961). Volume 2, *The Nature of Nature*, did not appear in English translation until 1973.

[83] Hall (1984), p. 26.

[84] Birtwistle was unable to confirm to me exactly when it was that he first discovered Klee's writings.

[85] This looks like the origin of the principle Birtwistle later described, in relation to *Yan Tan Tethera* (1983), of having "a strophic substructure as foreground and an organic substructure as background which are independent, or largely independent, of each other." (Cited in Hall (1984), p.145). This idea is also discussed by Arnold Whittall in 'Modernist aesthetics, modernist music: some analytical perspectives', in *Music Theory in Concept and Practice*, (eds) James Baker *et al* (Rochester: University of Rochester Press, 1997), see pp.168-177.

[86] *Stocktakings of an Apprenticeship*, (Oxford: Oxford University Press, 1991) trans. Stephen Walsh, pp.158-172.

[87] Davies had recently been appointed Director of Music at Cirencester Grammar School. *Five Klee Pictures* consists of five instrumental pieces for schoolchildren to perform, each movement bearing the title of a painting by Klee.

The relevance of Klee's work to Birtwistle is suggested through an essay on the painter by Clement Greenberg. In particular, Greenberg draws attention to the way the viewer's eye is guided through generally small yet intricately designed pictorial landscapes with the aid of a line:

> Because it is small, the picture demands close scrutiny, confining visual attention to a compass within which the eye can travel with least effort through intricate complications of detail. Yet the eye does not make an instantaneous synthesis; with Klee design is, as it were, temporal or musical. We are conscious of elements that are to be felt in terms of succession as well as simultaneity. The all-important factor is line. Klee's line seems rarely to enclose a shape or mark a contour with definiteness; nor, as a rule, does it vary in width or colour value along a single trajectory. That is, it has little plastic feel, so that it is hard to say whether it is heavy or wiry, cursive or stiff, sinuous or angular; it is all these things and none. At most it is scratchy. At times it is feathery. Adjectives do not fit the case as well as verbs. Klee's line indicates, directs, relates, connects. Unity is realized by relations and harmonies that play across neutral areas whose presence is more like an assumption than a fact.[88]

Although the presence of line is integral to Birtwistle's works (its presence is 'felt'), its presentation is often ambiguous. The question then becomes one of authenticity: where is the original, or 'source' line? A simple example is provided by the opening of *Monody for Corpus Christi*. (See **App 16**). Here, although the voice carries the melodic element, it may be argued that the 'line' is in the horn; that this part carries the structurally important pitches, as the tenor would do in a *cantus firmus* Mass.[89] However, the presence of line in Birtwistle's music is not always so straightforward. For instance, as Hall has documented, the exchange of roles between piano and clarinet in *Verses* (1965) problematizes the relatively simplistic notion of principal and added voice.[90]

In his discussion of the relevance of Klee to Birtwistle, Jonathan Cross stresses the

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[88] 'An Essay on Paul Klee', in Clement Greenberg, *The Collected Essays and Criticism: Affirmations and Refusals, 1950-56,* Volume 3, ed. John O'Brian (Chicago: University of Chicago Press, 1993), p.7.

[89] Hall suggests an analogy with the medieval practice of melismatic organum, where "the horn functions as *vox principalis* (principal voice) and the soprano as *vox organalis* (the added voice)" (1984), pp.19-20.

[90] For a full discussion of this topic see Hall (1984), pp.33-48.

role of polar oppositions, such as the opposition of line and circle.[91] Klee considers circle a necessary corollary of line. However, both lines and circles move from A to B. Direction is not lost in a circle; on the contrary, it is made more certain, more predictable. In this sense, it is not clear how useful Klee's ideas are to an understanding of line in Birtwistle's music.[92]

The idea of line and circle may, instead, be more pertinent to a discussion of the opposition between symmetrical background schemes and more intuitive, developmental features. Circular processes imply regularity and might usefully be compared to the cyclic, or strophic forms in Birtwistle's scores. Moving across, or against this, are more intuitive processes (which Birtwistle calls 'organic': see footnote 85). These might be compared to the less predictable, more developmental (more capricious) lines which Klee describes in his writings.

What can be usefully added to this, I believe, is a consideration of Klee's thoughts on cause and effect, combined with Greenberg's notion that in Klee's pictures line "indicates, directs, relates, connects." Greenberg seems to feel that there is a logic to Klee's lines, that they are used to point to relations between ideas, and that they lead the viewer through the picture. In his discussion of lines in *The Pedagogical Sketchbook* (pp.16-20), Klee defines three types of line: active, medial and passive; and in every case he stresses the function of cause and effect. This is applied throughout his text, for example to bones and muscles: "The position of two bones toward each other **must** change if the muscle so decides .... One bends, the other stretches. One bone achieves nothing."[93] Can a similar analogy be used when describing the relationship and changing character of the foreground objects in Birtwistle's music? In *Refrains and Choruses* the progression from one idea to the next appeared to follow a logic of cause and effect. Klee's use of the terms cause and effect might perhaps be expanded to encompass the idea

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[91] 'Lines and circles: on Birtwistle's *Punch and Judy* and *Secret Theatre*', *Music Analysis* 13/2-3 (1994), pp.203-25.

[92] Arnold Whittall has noted that "even movement round the circumference of a circle is, in a sense, linear: the process obviously occupies more than an instant of time." 'Modernist aesthetics, modernist music: some analytical perspectives', in *Music Theory in Concept and Practice*, James Baker *et al* (eds) (Rochester: Rochester University Press, 1997), pp.169-70.

[93] Klee, *The Pedagogical Sketchbook*, p.28. (The marking in bold is Klee's).

of a network of relationships in which any movement (an event, such as the presence of a musical motive) has a corresponding reaction, or counter-movement. The question is, does this still apply when the music is highly fragmented, as in the works under discussion during this chapter? I believe it does.

Klee also notes that dynamic gestures can result in circular motion, which combines direction and directionlessness - for instance, regarding the movement of a pendulum.[94] He remarks that a full circle is the purest of mobile forms. In a circle, he argues, the necessity for back and forth motion from a fixed starting point has been removed. Similarly, section IV ('Symbols of form in motion') concludes with a spectral colour circle, "where all the arrows are superfluous. Because the question is no longer: 'to move there', but to be 'everywhere' and consequently also 'There'".[95] These ideas seem too problematic to apply to form or texture in Birtwistle's music, since music moves sequentially, through time. There can be no equivalent in music to a fixed circle which is simultaneously at its start and end. However, Klee's notion of circle as a pure mobile form may relate to Birtwistle's aesthetic search for a means of achieving variety within a circumscribed situation. He often begins by prescribing boundaries. The less consequential inner workings are then left to chance (possibly also in response to John Cage). In the sketching process this is determined by random numbers. Birtwistle's desire to be "everywhere" and consequently also "there" is, I believe, demonstrated through his strict demarcation of 'fields' of activity within which either notes are distributed during the act of composition, usually by number rotation, or performers are allowed a degree of freedom within fixed limits.[96]

Related to this issue is Klee's distinction between the productive (the artist's creative acts) and the receptive (the viewer's reception of those acts). This resonates with Birtwistle's concern that the composer's practice is limited and restricted by music's

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[94] *Ibid.*, pp.52-3.

[95] This particular diagram may present grounds on which to assert a one-to-one relationship between Klee and Birtwistle since it bears a striking resemblance to a graph of contour relations contained in two of Birtwistle's sketchbooks, dated April 1970. For a discussion of this see Chapter 4.

[96] The "there" is prescribed by the boundaries Birtwistle creates, for example a decision to rotate pitches within the space of a tritone; the "everywhere" is the desire to move around freely within the prescribed space, and to fill that space in as many different ways as possible.

reliance upon time. Klee states:

> Receptively it [the genesis of a painting] is limited by the limitations of the perceiving eye. The limitation of the eye is its inability to see even a small surface equally sharp at all points. The eye must "graze" over the surface, grasping sharply portion after portion, to convey them to the brain which collects and stores the impressions. **The eye travels along the paths cut out for it in the work.**[97]

Klee appears to be referring to the eye of the artist when beginning to paint a picture. However, the final sentence is ambiguous and may also have been intended to refer to the opportunity the artist has in determining the way someone views that picture. This is a perfect expression of a central concern for Birtwistle: navigating the listener through a piece of music. The question is: what is Birtwistle's strategy when 'directing' his listeners through a piece? Do ideas develop in relationship to one another? Is there a rationale behind the presence of ideas in particular places?

To answer these questions, analysis could explore the roles of allusion and reinterpretation, examining gestures which place ideas in new contexts, or which look forward to the arrival of new events. To describe this process, Birtwistle has often used the visual analogy of a route through a land- or city-scape, for instance in reference to the form of *An Imaginary Landscape*.[98] In such instances the idea is linked in Birtwistle's mind to the role of time (which became a particular concern of his in the 1970s). It was in these terms that he drew a similar analogy during an interview in 1997:

> It comes back to this question of how with a painting you see the entire picture in one go; whereas in music you don't hear the entire piece - you have to go through this process of time ....[99]

These remarks relate to another important part of Klee's writings - his ideas concerning

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[97] Klee, *The Pedagogical Sketchbook*, (London: Faber and Faber, 1953), p.33. (The bold markings are Klee's own).

[98] "The musical procedure has an analogy with the way one experiences, visually, physically, a natural (or man-made) landscape. One starts, stops, moves around, looks at the overall view, fixes ones attention on a particular feature, or on a detail of that feature, or on a fragment of that detail, or on the texture of that fragment." Quoted, from the original programme note, in Hall (1984), p.85. This analogy was used previously, and slightly differently, in the composer's programme note to *Chorales for Orchestra* (1963) which Birtwistle described as "a landscape in which the ear may focus attention on a number of different musical levels".

[99] 'Territorial Rites 1', Birtwistle in conversation with Ross Lorraine, *The Musical Times*, October (1997), p.6.

perspective:[100] the shifting impressions of a familiar object when viewed from different positions, turning something familiar into something unusual. According to Célestin Deliège, Pierre Boulez had developed a similar notion after reading Mallarmé's *Igitur* and *Le coups de dés* from which Boulez developed the idea of constructing a work which represents "the different facets of a single one ... of a central concept."[101] As Cross notes:

> The idea of the shifting or multiple viewpoint is not, of course, unique to Klee and Birtwistle ... such issues were very much part of the debate about modernism in the earlier years of the twentieth century. What is interesting here is the way artist and composer interpret this notion and the visual analogies made by Birtwistle can provide a useful framework within which the analyst can begin to examine the processes by which his musical material is manipulated.[102]

How would an anlaysis of the use of shifting perspective in Birtwistle's music proceed? What needs to be examined are the different ways in which a musical object in Birtwistle's music is presented, as well as the ramifications of change. Does a difference have a cause and an effect? As Cross points out, [103] Birtwistle did not compose simple collages. If this is true, then a loose network of association, and possibly also a tighter logic of causal pattern, may exist, underpinning the decisions made during the act of composition. The question is, how to reveal such strategies?

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[100] Klee, *The Pedagogical Sketchbook*, Chapter II, pp.35-45. Robert Piencikowski has observed this feature in Boulez's *Le Marteau sans maître*. In this work, Piencikowski comments, the journey mixes memory and anticipation, culminating in the percussive ending which returns us to familiar material but in a manner which supplies a new context to an earlier texture. Robert Piencikowski, 'Nature morte avec guitare', in *Pierre Boulez: Eine Festschrift zum 60. Geburtstag am 26 Märtz 1985* (Vienna: Universal Edition, 1985), pp.66-81. The idea of collecting impressions on a journey, resulting in a point of arrival, was touched upon by Ross Lorraine in one of his conversations with Birtwistle: **RL** " ... you seem very interested in the listener acquiring a knowledge of the piece." **HB** "... as it goes along, yes, that's right. But when you start making these things which are the same and yet different, they in themselves are creating a strange context." **RL** "Yes. The fact that you're not allowing it all to be perceived in one go also seems to result in a sense of revelation ...". In 'Territorial Rites 2', *The Musical Times*, November (1997), p.14.

[101] *Pierre Boulez: Conversations with Célestin Deliège* (London: Eulenburg, 1977), pp.50-2.

[102] Cross, PhD, 1994, p.200.

[103] *Ibid.*, p.237.

Entr'actes and Sappho Fragments: Analysis

Entr'actes and Sappho Fragments takes five instrumental movements composed in 1962 and places them in two new contexts: a song cycle, and a cycle of instrumental reworkings.[104] According to Michael Hall, Birtwistle added the reworkings and songs in response to his interest in the work of Klee whose writings had encouraged him to think of juxtaposing objects and placing them in different contexts.[105] The five movements which make up the original entr'actes were conceived as a companion piece to Debussy's Sonata for flute, viola and harp, and the two works were performed together in Autumn 1962 by members of the Bournemouth Symphony Orchestra at Cranborne Chase School, Wardour Castle, where Birtwistle was then a music teacher. When Birtwistle reworked the entr'actes two years later he composed additional instrumental sections between which he interspersed settings of five texts by Sappho (the Greek poetess from Lesbos). The songs appear under the title 'Cantus'. The added sections expand the total number to fifteen, and the original flute, viola and harp trio is increased by the addition of a soprano, violin, oboe and percussion.

Such an act strongly suggests a link to Boulez. It also suggests a link to certain developments in the music of Stravinsky. One relevant work by Stravinsky was *Movements*, which at the time of its English première at the Royal Festival Hall, on 22 March 1962 (before work on *Entr'actes* had begun), seemed to mark an extreme; a point of arrival in a development which may be traced back to the mid-1950s. According to a review of the concert by Colin Mason:

> Stravinsky's new piece was received with polite incomprehension ... [This was due to] the lack of recognizable recurring themes in all but the fourth movement, the nature of the 'movement' of the music, in which there is no regular pulse or sustained rhythmic motion of any one kind, and the effect of constant stopping and starting, resulting partly from this method of rhythmic organization, and partly from the extreme brevity of the formal subdivisions within the five tiny

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[104] The first five sections and final coda were originally intended as items for a 'song-book for instruments' which Birtwistle planned to include in a large-scale vocal piece about the seasons. The large-scale vocal piece did not materialize, although this idea was eventually realized in the opera *Gawain* (1991).

[105] Hall (1984), p.26.

movements.[106]

Of all Stravinsky's music, *Movements* in particular is characterized by the elusiveness of its ideas and in this sense most closely resembles *Entr'actes*. Other points of contact are conveniently summarized by Paul Griffiths:

> the light counterpoint; the deployment of the orchestra as a nesting set of ensembles [more relevant to *Tragoedia* perhaps]; the projection of music as abstract drama (a drama whose most spectacular event is how the piano disappears, only to reappear, like Petrushka, in ghost form, as the celesta, unheard since near the work's beginning).[107]

Background: Form and Line

Hall has noted of *Entr'actes and Sappho Fragments*:

> At one time he [Birtwistle] used to say that something strange happens to the entr'actes in the new context - 'A chemical reaction takes place.' Now he claims that the new versions are also commentaries on the songs. They offer a different perspective on what is being sung.[108]

The idea of music acting as a commentary on text was one developed in Boulez's music and writings during the 1950s and early '60s.[109] This highlights the importance of Boulez as a role model for Birtwistle when composing *Entr'actes and Sappho Fragments*.[110] This

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[106] *The Musical Times*, 'Opera and Concerts in London', May 1962, p.298.

[107] Paul Griffiths, *Modern Music and After* (Oxford: Oxford University Press, 1995), p.119. *Movements* was composed in 1958-9, following several points of contact between Stravinsky and the European avant-garde. In November 1956 Boulez, Stockhausen and Nono visited Stravinsky in hospital in Munich, and Boulez remained in regular communication with Stravinsky for a few years thereafter. Stravinsky was also present when Boulez conducted *Le Marteau sans maître* in Los Angeles in March 1957, and when Boulez, Stockhausen and Rosbaud rehearsed *Gruppen* in Baden-Baden in October 1958. Actual composition of *Movements* began very soon after Robert Craft recorded *Le Marteau sans maître* and *Zeitmasse* early in 1958.

[108] Hall (1998), p.136.

[109] See, for example, 'Sound and word', in *Stocktakings from an Apprenticeship* (Oxford: Clarendon Press, 1991), trans. Stephen Walsh, pp.39-43.

[110] As will be revealed in the forthcoming analyses, various themes discussed during Boulez's Darmstadt lectures, and subsequently published as *Penser la musique Aujourd'hui* (Paris: 1963)

is principally reflected by the form of the piece which is based on a series of cycles: the background level could be said to be based on a principle of cyclic repetition. In the case of Boulez's *Le Marteau sans maître*, the cycles are determined by the texts, and these in turn determine the distribution of instrumental groupings and other internal features. In Birtwistle's work, however, the text was added after the first musical items had been composed and the cyclic plan reflects the reworkings of the original entr'actes rather than Sappho's text. Boulez's formal vehicle for these ideas was the music/text cycle, as expressed in *Marteau*. The form of Boulez's piece is as follows:

Table 1

	L'Artisanat' Cycle	**'Bourreaux' Cycle**	**'Bel Edifice'Cycle**
1	Avant 'L'Artisanat'		
2		Commentaire I	
3	'L'Artisanat furieux'		
4		Commentaire II	
5			'Bel édifice'
6		'Bourreaux de solitude'	
7	Après 'L'Artisanat'		
8		Commentaire III	
9			'Bel édifice' double

The form of *Entr'actes and Sappho Fragments* can be summarized as follows:

(translated into English by S. Bradshaw and R. R. Bennett as *Boulez on Music Today* (London: Faber and Faber, 1971)), were either consciously or unconsciously developed in Birtwistle's work. For example: the concept of duration blocks and 'fields' of activity; a notion of elements which are either fixed or mobile and free (expressed, for instance, as a contrast between pulsed and amorphous time); timbral change expressed through ensembles of instruments (and ensembles of ensembles); the notion of musical objects; and a dialectic between material and structure. For discussions of these ideas in the context of Boulez's music, see S. Bradshaw, 'The instrumental and vocal music', in *Pierre Boulez. A Symposium*, ed. William Glock (London: Eulenberg Books, 1986), Peter F. Stacey, *Boulez and the Modern Concept* (Aldershot: Scholar Press, 1987), and Alistair Williams, *New Music and the Claims of Modernity* (Aldershot: Ashgate, 1997).

Table 2

1	I (+ coda)			
2		II		
3			III	
4	IV			
5				V
6	IV/2			
7		Cantus I		
8		II/2		
9	Cantus II			
10			III/2	
11	Cantus III			
12				V/2
13				Cantus IV
14	Cantus V (+ coda)			

This scheme can be reduced to three cycles, similar to the one outlined for Boulez's piece, since section V is based on elements contained in section I. In fact, the first three and a half bars of V amount to a summary of events in bars 1 to 8 of section I. (Section I is shown in **App 17: 1-2**, and the first page of V is presented in **App 17: 3**). In section V, the flute's two grace-notes and quavers rework the grace-note figures in bars 2 and 4 respectively, although now with different pitches. This is followed, again in the flute, by tremolos on E and A flat in the 5/8 bar of section V. These relate back to quavers D and G# in bar 5 of section I. The four semiquavers in rhythmic unison in bar 8 of section I are reworked beneath these tremolo notes in section V, now as four quavers and a dotted crotchet. Finally, the repeated As, *fff*, in the flute in bar 3 of V, are a development of the five-note figure on page 2, in bars 18 and 20, which evolves into one of the work's most easily recognisable features. This is stated in the flute at the end of section III (six repeated As with grace notes). In section V (bars 5 and 7) this five-note figure is further developed by the flute and viola.

There is a loose network of association in the piece, provided by the high degree of cross-reference between all of the sections. Every figure, throughout the work, relates back to section I, either directly or following a series of permutations. It is the nature of these relationships which I should like to explore further.

Before doing so, it should be noted that there is one other way of regarding the

form of *Entr'actes and Sappho Fragments*: that is, as a combination of the cyclic principle with a more teleological process, resulting in the expansion of earlier sections in the second half of the piece. Section II is enlarged into CI and II/2, III is reworked and enlarged in a 'spatial' sense through the addition of five cymbals and a violin which gives greater depth to the unfolding line, and V is enlarged into V/2 and CIV.[111] This can be summarized as follows:

Table 3
C = Cantus

Part one	**Part two**
1. I - IV - - -	IV/2 - CII - CIII - CV (cycle)
2. II	CI + II/2 (expansion)
3. III	III/2
4. V	V/2 + CIV (expansion)

Part one (the five entr'actes and coda) is symmetrical in design around section III. This is also reflected in part two where section III/2 falls in the centre. These movements are central by virtue of their texture also - they are both consistently improvisational and almost entirely linear which sets them apart from the surrounding movements. Part two contains twice the number of sections around the centre as part one and therefore represents an expansion of the symmetrical process. The ordering of the movements in the second half follows a regular pattern until the third Cantus is followed by V/2, not IV/2. IV/2 appears at the very start of part two, although Birtwistle chose not to acknowledge this (the section is untitled). This accounts for the order at the very end: V/2, CIV, CV; instead of: IV/2, CIV, V/2, CV.

Birtwistle appears to have had important reasons for choosing to rework IV at the start of the second part. (This section is shown in **App 18: 1-2**). IV/2 is a pivotal section which incorporates the strongest possible links with the music before and after, and these links are achieved at no expense to the section's own sense of independence, as a result of a skilful piece of reinterpretation. IV is the best choice for reinterpretation at this point

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[111] III/2 is a clear demonstration of how Birtwistle realized musically the idea of viewing an object from a different perspective. The new perspective is provided by the addition of violin, harp and five cymbals. The violin shares the flute's line and the viola repeats its material from section III. One effect of the added percussion is to place the familiar material from III in a more blurred context, making it sound more distant than before.

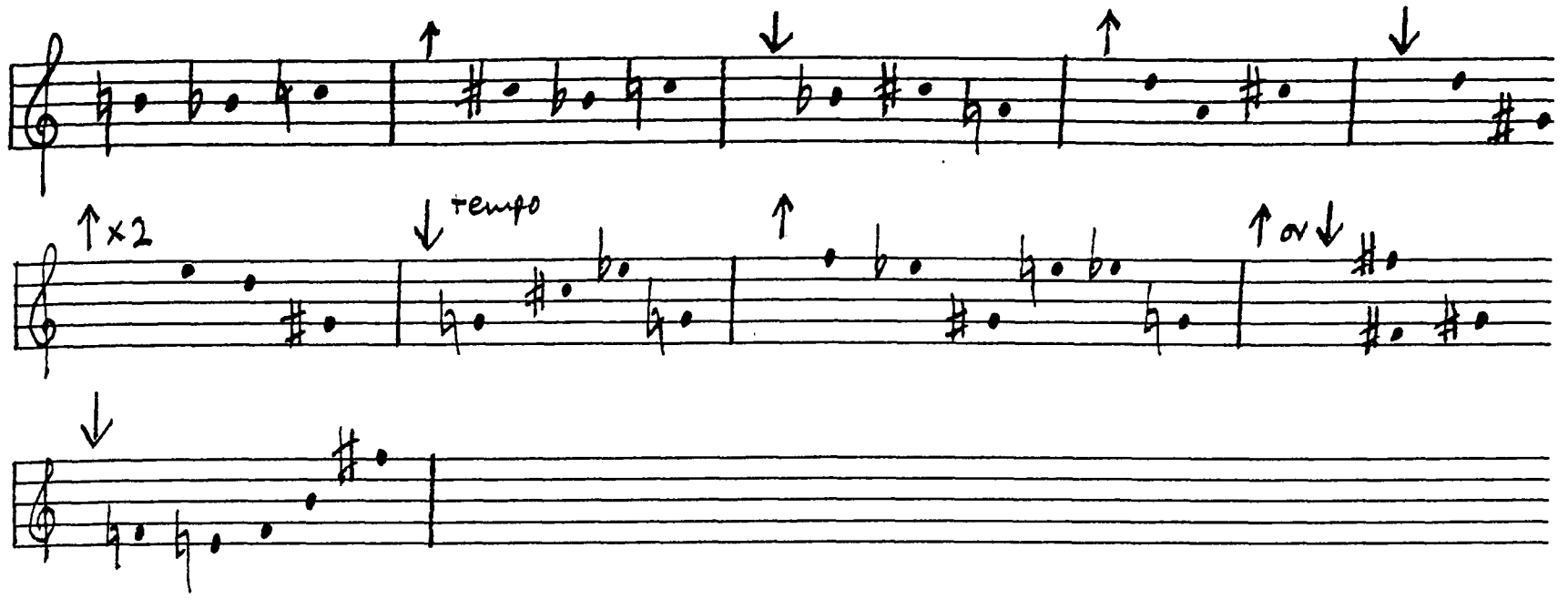
since it reworks I twice; therefore both IV and IV/2 represent double reworkings of I. IV/2 ends with a new coda-like episode (page 13 of the score) which provides a model that forms the basis of the next section.

The pattern of return which IV/2 extends, from I to IV to IV/2, is carried on through part two as a cycle that continues: CII - CIII - CV. The *Meno mosso* and S*cherzando più mosso* of IV/2 (pages 12-13 of the score) are reinterpreted in Cantus II. Canti II and III contribute to a sense of palindrome around III/2, since CIII is a reinterpretation of CII. As a result, features from IV/2 are fed into CIII, but by this stage the original form (IV) has been much altered. The next section in the cycle (CV) reinterprets elements of IV, such as the unison chords. Other aspects, however, suggest that it represents a 'transformation' of I. For instance, the distance between the chords alludes to that in section I, and the semiquaver rhythm in the voice and flute on "Which the passing feet of shepherds" transforms the 4/16 dividing bar in section I (compare **App 19** to **App 17: 1**). CV consists of one line contained in the flute which is doubled throughout. However, far from interrupting the flute's attempts at forming an unbroken line, as in section I, the verticals reaffirm the flute's intentions while the voice 'points out' various contours.

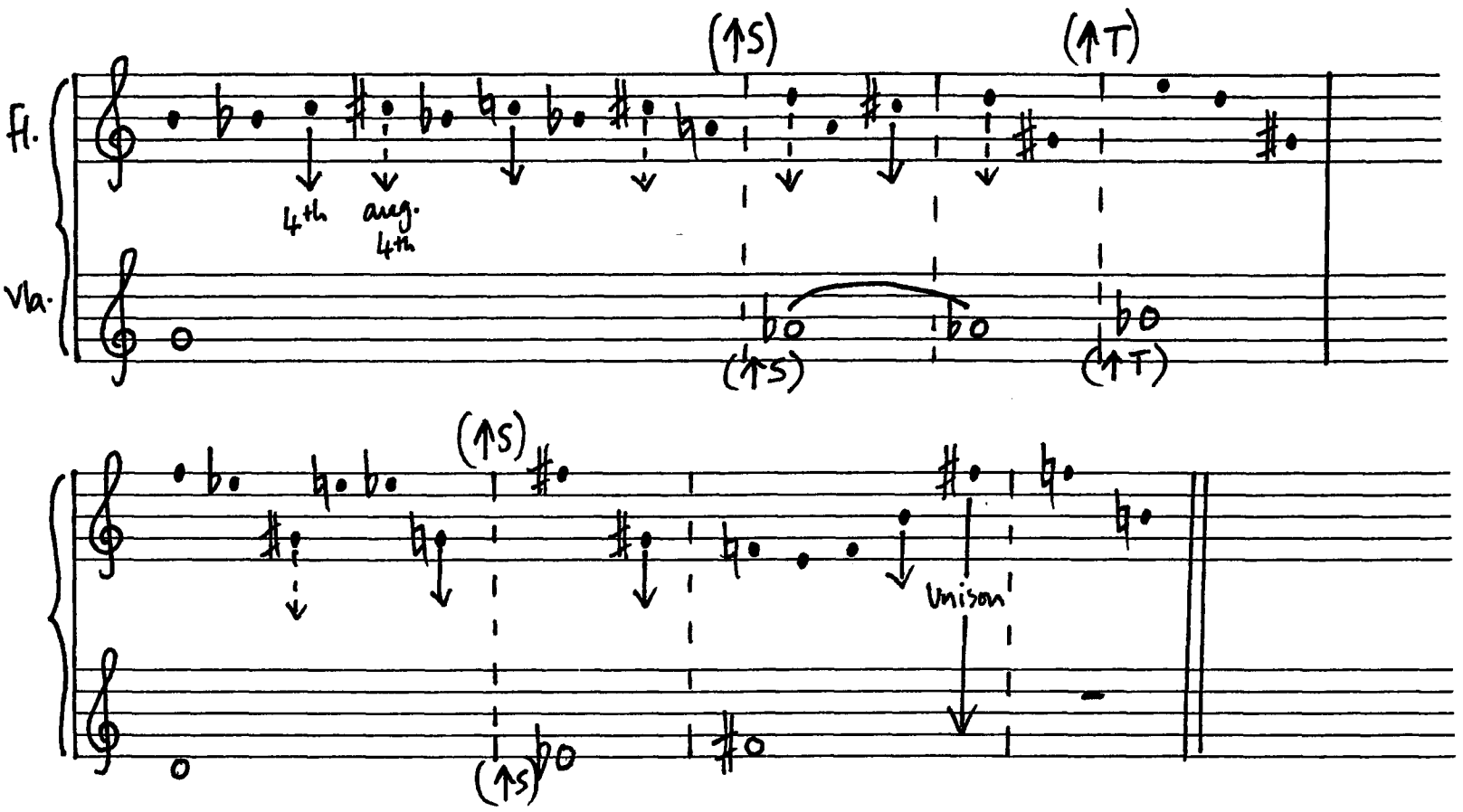
The strand which runs throughout this formal scheme is an unfolding line. This and other features are familiar from Birtwistle's earlier works, but they appear alongside several new developments in technique. The flute's single line above sustained, pedal-like notes in the viola is immediately familiar, as well as the fact that the flute's line is an expanding wedge, this time around B, which expands alternately by a rising then a falling semitone, shown in **Example 9a**. **Example 9b** illustrates how the flute line could be interpreted as a decorated line moving in parallel and augmented fourths with the viola scale, and **Example 9c** reveals symmetry in the opening wedge in the flute as it extends from B out to E and F#, which lie a perfect fifth either side of B. This is inexactly summarized by the flute's F to B demisemiquavers that lead into the bar of 4/4 and the bass E in the harp (all marked '*ff*').

Example 9a *Entr'actes and Sappho Fragments* Flute line (excluding chordal interruptions)

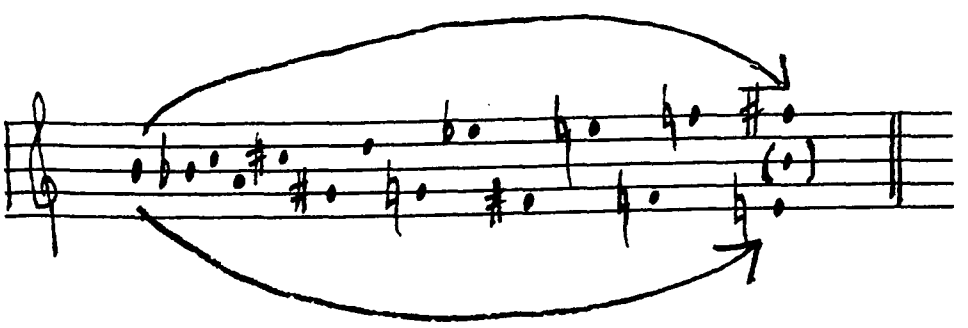
Page 1, Section I ↑ S = rises by a semitone ↑ T = rises by a tone



Ex. 9b Flute and viola, page 1, section I



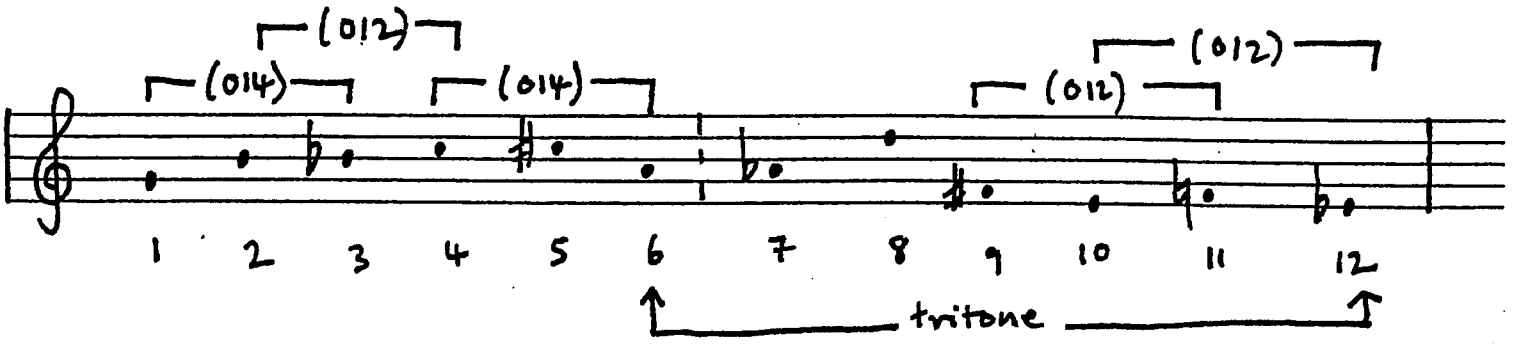
Ex. 9c Flute, page 1



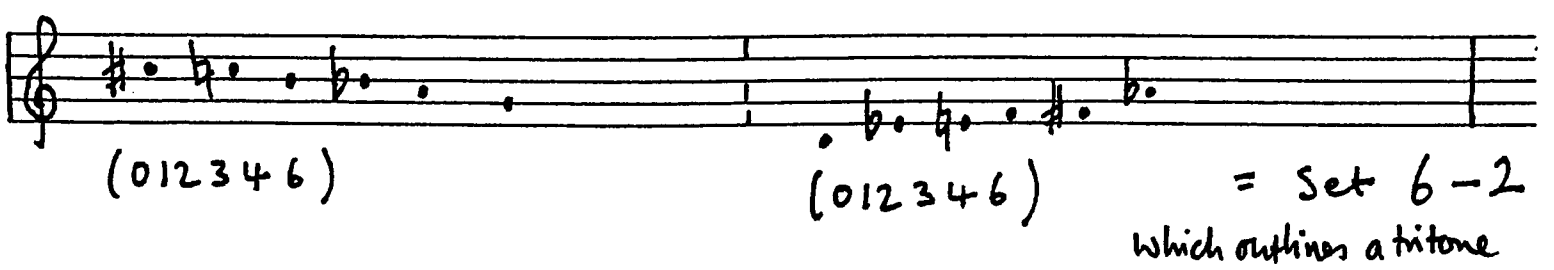
What is more pronounced and seemingly further developed about this music is the effect disruption has on the flute's identity. Familiar interjecting chords now result in a splintering within the line, which disintegrates into four contrasting strands of regular rhythmic pattern: crotchet, demisemiquaver, quaver and semiquaver. Not only does this add to the effect of disruption initiated by the interjecting chords, but it introduces a new technique of polyvalency within a single voice. In this work the principle of contrast and disruption within a single line has been raised to a practice of multiple identities within one voice.

The first page consists essentially of two halves (systems 1 and 2) divided by a bar of 4/16 and completed by a bar of 4/4. The first flute section, viola pitch and the first chord together reveal the first six pitches of the piece: G, B, B flat, C, C#, A. These form set 6-2 (0,1,2,3,4,6). The remaining six pitches, forming the comlementary 6-2 set: A flat, D, F#, E, F, E flat, are completed by the flute's E flat in bar 8. As one might expect from the discussion of earlier pieces, the order in which these notes appear has significance for associative pitch projection and structure in the work. The 'row' is given in the following example:

Example 10 *Entr'actes and Sappho Fragments* Tone Row



This reduces to:



With the aid of Birtwistle's row scheme it is possible to make better sense of his reinterpretation and permutation of ideas. This also provides a means of explaining the sequence of events in terms which are based on cause and effect, since a tone row is formed by a series of causal links. For example, the five-note figure first stated in bar 18 of section I (**App 17: 2**, 2nd bar) placed E flat, G and F# in the top register. These are notes 12, 1 and 9. When this figure is reworked in section V (**App 17: 3**, bars 5 and 7), E, F and E flat are emphasized, through repetition, in the flute. These are notes 10, 11 and 12. In this way, one can see how the tone row has acted to cast an existing idea in a new perspective.

Foreground: Moments/Objects

> It's not a question of having ideas, ideas are ten a penny .... That's not the problem. The problem is how to make use of ideas, how to proliferate them, and this needs more than intuition.[112]

How does analysis make sense of the seemingly fragmented surface of this work? How might a concept of line begin to account for the pattern of events? To answer these questions, this section will explore the foreground of the piece in terms of Stockhausen's theory of moment form. The essence of this theory is that loose associations may be grafted on to a series of pre-determined, highly contrasted musical moments. Whilst exploring these issues in relation to Birtwistle's music, the relevance of Klee's more deterministic theory of causality will also be considered.

Stockhausen began to develop his concept of moment form in 1960, as revealed in various articles[113] and through such works as *Carré* (1959/60), *Mikrophonie I* (1964) and *Mixtur* (1964). *Momente* itself was begun in 1962. A first version was performed in Cologne on 21 May 1962, a second on 16 October 1965 (recorded by Wergo), and a final, completed version was performed and recorded in 1972. The concept of moment form

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[112] Hall (1984), p.148.

[113] Since the world première of the first Moment-group in 1962, Stockhausen has published numerous texts about *Momente*, and about *Momentform* in his *Texte zur Musik*, Volumes 1-6 (Cologne, DuMont-Buchverlag). The most important publication about the structure of the composition is *Ein Schüssel für Momente* with multi-coloured sketches for the score. These sketches were printed and published by the Edition Boczkowski, Kassel, 1971.

was an enlargement and culmination of earlier works which used so called point and group forms, the most obvious examples being *Punkte* (1952) and *Gruppen* (1955-7). It represented a new approach towards composition, one in which the work's sketches closely resembled the resulting final score. Its starting point was the creation of three independent moments of clearly contrasted material. M, K and D (melodic, harmonic (*Klang*)[114] and durational) moments, as Stockhausen labelled them, represent the basic building blocks of *Momente* and are independent, self-contained musical processes which represent a full set of musical parameters for the work as a whole. The next step involved the derivation of many other moments which cross-bred characteristics from the three main blocks, resulting in such sections as M(d), K(m), K(d) and so on. Informal, indeterminate I moments were then added in order to act as transitions between the three main sections. The I moments were intended to be non-directional, and were supposedly designed to contrast significantly with the M, K and D sections. To this basic scheme further degrees of complexity were provided by 'self-reflecting' moments, which re-explore and reflect upon their own material. In Stockhausen's own words:

> M(m) is a moment with 'feed-back' self-reflection; so is D(d-m), but this time having a transition of the self-reflection into a reflection of M; at DK(d) and DK(k) the feed-back reinforces one component of the double reflection. Furthermore to each moment is added a different number of so-called inserts from neighbouring moments - depending on the context - to 'recall' what has gone before or to 'announce' what is to come. I moments ('informal', or possibly 'indeterminate') neutralize the three groups of moments.[115]

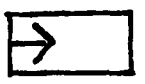
An insert involved taking a characteristic feature of a particular moment and, quite literally, inserting it into another. Roger Smalley explains how this was done:

> A small number of highly characterized sections from each Moment are reprinted on loose strips of paper. These strips have 'tongues' in the centre which can be inserted into vertical slits cut into the score. Each Moment has a sign governing the deployment of these inserts:

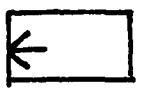
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[114] Stockhausen uses *Klang* in its widest sense. In the sleeve notes to the Stockhausen Verlag recording of the piece (published in 1991) he offers the following description of K-moments: "*KLANG* = timbre: verticality, **homophony**, regularity, *noises*, percussion, male voices."

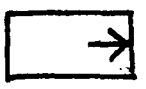
[115] 'Stockhausen's notes on the works', in Karl H. Wörner's *Stockhausen: Life and Work* (London: Faber and Faber, 1973) pp. 52-3.



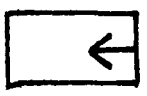
insert an *Einschub* from the previous Moment into the present one (Memory);



insert an *Einschub* from the present Moment into the previous one (where it functions as a premonition);



insert an *Einschub* from the present Moment into the next one (where it functions as a memory);



insert an *Einschub* from the following Moment into the present one (where it functions as a premonition);



the Moment is 'neutral'; it gives and receives no *Einschübe*.[116]

The resulting forms could be arranged in any order and it was this variational property and its sense of controlled randomness and mobility of form that appealed most to Stockhausen. **App 20** shows the form scheme for the Bonn version of *Momente*, performed on 8 December 1972. Within each line or row of this chart the conductor is free to decide on the order of the moments. However, overall the movement between pure moment and altered moment is fixed because the different levels separate pure M, D and K moments from those in various stages of deformation.

Entr'actes and Sappho Fragments does not function in the same way as *Momente*. Birtwistle's piece is a lighter work, scored for fewer instruments, and much shorter in length. Furthermore, the ideas in Birtwistle's piece are much shorter than Stockhausen's moments, which on the page in performance look and sound more continuous. The

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[116] Roger Smalley, '*Momente* - material for the listener and performer - 1', *The Musical Times* 115, January (1974), pp.23-8. This might usefully be compared to Peter Zinovieff's notes on the structure of *The Mask Of Orpheus*. These notes, contained in the work's published libretto, were written by Zinovieff in 1978, on the Island of Raasay. Whilst obviously representing part of a more general, Cubist-inspired approach to structuring form, Zinovieff's notes, written after consultation with the composer, may usefully be read as an articulation of Birtwistle's formal ideas first implemented in *Entr'actes and Sappho Fragments*:
Structural Separation:
Various devices and tricks are used in the words and scenario to emphasize separation.
Duality. More than one of the same character may appear on the stage at the same time.
Synchrony. More than one event may be shown at the same time.
Time Shift. Earlier events may be shown later in a distorted manner.
Echo. Words, actions and the music have echoes and pre-echoes throughout.
Metamorphoses. One form of character gradually is changed into another.
Silences. Freezes. Darkness. Pauses. Signals. These are mentioned to emphasize dramatic tensions.

impression given in the score of *Entr'actes* is that Birtwistle's compositional process was the opposite of Stockhausen's. Where Stockhausen constructed continuities, Birtwistle deconstructed a single line or sequence of events. The idea that Birtwistle began with a continuous pre-compositional idea is supported by his comment to Hall that the entr'actes composed in 1962 are "five different versions of the same object."[117]

What does connect the two pieces, however, is the sense in which the musical ideas are characterized by the presence or absence of rhythmic, melodic or harmonic properties, and that their distribution is controlled by an overall plan, or conscious decision-making process. Furthermore, Birtwistle's objects interrupt, interact and influence one another. It is at this level that Birtwistle's piece begins to resemble Stockhausen's. Another important contribution that an understanding of *Momente* can make is the provision of a vocabulary which may be adapted, in the absence of any other model, to an analysis of Birtwistle's music.

The six paradigmatic forms which represent the source material for future developments throughout the piece are summarized in **App 21: 1-2**. Although labelled according to Stockhausen's moment form terminology, these objects should be understood in the sense of a set of forms or basic shapes which will evolve through internal alterations, as well as being transformed by their new contexts.

The ideas in section I are all characterized by registral fixity. In this sense the coda can be seen as a culmination, an inevitable outcome and, in Klee's terms, the most ideal expression of what has gone before. In the second system of page 2, in the harp, a circling motion present at the very start of the piece is intensified. This harp figure is one of three items which form what I have termed a 'complex', specifically I(d) complex (i). Stockhausen defined I(d) moments as:

> Informal ... fairly vague, static, without direction ... the longest moments ... they serve to neutralize the three main categories ... the pure I-moment always comes at the very end and never changes position.[118]

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[117] Hall (1984), p.26.

[118] Stockhausen, 'Moment-forming and *Momente*', in *Stockhausen on Music* (London: Marion Boyars, 1991) compiled by Robin Maconie, p.68.

Birtwistle's I(d) moments stand apart from surrounding attempts at directed motion and combine circularity and registral fixity with a regular pulse. When I(d)-related items recur they generally mark points of closure and are analogous to a Greek chorus in the way that they punctuate regularly, but stand outside the action. The three items within I(d)(i) are labelled 1a, 3b and 3c in recognition of their derivation from previously stated ideas (see **App 22**). 3c, which is derived from the very opening, recurs at regular intervals throughout the piece, especially in part one. In total there are 24 versions of this idea, none of which are precisely identical. These are presented in **App 23: 1-2** (these are A3 size examples which pull out). Version 18, for example, restates version 4 but omits C, and when versions 5 to 8 reappear in section II (as versions 19-22) their rhythmic values are halved. Version 5 is the one I(d)3c form that does not have a regular rhythmic pulse. Similarities with version 4 are revealed if the pitches of the flute's phrase are brought into one octave. It can then be seen that version 5 contains 23 notes which span a minor sixth, from E to B flat, and version 4 contains 21 notes which outline a perfect fifth from F to C. Both versions repeat G flat/F# 5 times.

I(d)3c provides a means of decorating a single line or sustained pitch and of creating a sonority around a central point. Its sonorous properties are exploited in section IV. On page 6, at the end of the second system, for example, version 10 emphasizes D4. Similarly, version 13 emphasizes E flat4. The focus of version 11 fluctuates between G3 and G#3. Here the focal points, emphasized by the trills, serve as a gestural allusion back to the interjecting chords in the first system of section I.

Versions of I(d) also have an important role in the reworking of section III. One difference is the addition of a version of an I(d) complex at bar 20, on page 22. Birtwistle has even taken the trouble to place this in quotation marks. As in moment form, this acts like an insert, interrupting the original and delaying the *a tempo* flute and violin trill figure. Also, on page 21, semiquaver motion in the harp and cymbal four relates to the regular pulse of I(d) which again results in placing the flute line at the background of the texture.

There are three other moments on page 1 which represent early statements of ideas that are reinterpreted or alluded to throughout the work. One is the bar of 4/16 (see **App 17: 1** for the context, and **App 21: 1, bi**). This is labelled DM(k) since its primary elements are those of duration and melody with an element of the interjecting chords that

precede it. Later in the piece, DM(k)'s rhythmic aspect is distorted and the result, which recurs frequently, is labelled D4 (**App 21: 1, bii**). Section IV/2 consists of little else but versions of D4 arranged in blocks of varying dimensions and textures (see **App 18: 2**). From the start of the *Scherzando più mosso* section Birtwistle employs D4 in the flute and violin as a means of frustrating their attempts at forming continuous phrases, in contrast to the smoother harp and voice. This method continues into Cantus I where it results in a very disjointed vocal line which effectively reflects the mood of the text at this point:

> Mother I cannot mind my wheel
> my fingers ache
> my lips are dry
> Oh, oh, if you could feel the pain I feel
> but he who ever felt as I

Similarly, during Cantus II, D4 is used in the flute throughout, and the viola and oboe from bar 4 onwards, producing a series of stuttering effects which again reflect the text (see **App 24: 1-2**):

> Round about me hum the winds of Autumn
> cool between the apple boughs
> and slumber flowing from quivering leaves to earthward
> spreads as a river

As the movement progresses from *a tempo* the presence of D4 is reduced, conveying the transition from "hum"-ming winds to "slumber" and "spreads".

At the start of the second system of page 1 (**App 17: 1**) a process begins which culminates in the three quaver chords in bar 14, where the harp is marked *sur la table*. This three-note quaver figure, detached here from its surroundings by its incisiveness, is a figure of crucial importance to the Cantus sections, where the voice is introduced. It is labelled DM(k)1 (**App 21: 2, c**). When only its rhythm is used it is labelled D5. The three-note rhythm is especially important to the Cantus III section where it appears at the very opening.

During the first system of page 2 (bars 18 and 20) an idea is presented which is labelled MD, followed by a derivative form, labelled MD1 (**App 21: 2, e**). These two items are responsible for generating a host of ideas throughout the work, which are assembled in **App 25: 1-2**. The derivatives are extremely varied and fall into three

categories labelled A, B and C. The two principal characteristics are contour (see versions 2 and 3) and a framework of five-notes, usually in equal rhythmic values. The versions labelled B, which begin in section IV, develop over a longer time span, delayed almost beyond recognition as a result of a convergence with the unfolding background line.

In section V/2 categories A and C co-exist and represent two opposing tendencies. Form C is an inversion and rhythmic augmentation of A. C is non-developmental, whereas A expands from four notes, in version 19, to eight notes, in version 24. Versions 22 and 23 are augmentations of version 18 and contrast with the more dynamic A category. A and C remain distinct until version 24 where the contour of the last five triads alludes to version 18 by inversion, as well as recalling versions 2 and 3. An association is also made, in versions 26 and 29, between MD and I(d)3c. The almost regular quaver pulse and instruction *sempre, quasi moto perpetuo*, together with the registral spacing, allude to I(d)3c whilst conforming to the five-note contour of MD. The oboe line also demonstrates I(d)3c's tendency to pivot around certain pitches (for example F#, A flat and C#).

Another important idea is first heard at the end of section III, on page 5, and is labelled D3 (**App 21: 2, d**), of which there are six versions in the piece. D3 is derived from the I(d)1 flute rhythm in bar 17 of section I, which is also reinterpreted as I(d)1a. It arises from a combination of I(d)1 and the more dynamic flute figure which follows, marked *poco più mosso*, labelled MD (**App 21: 2, e**). The remaining rhythmic ideas are D1 and D2 which are introduced in section II, and a palindromic figure labelled D1 dev. MK (**App 21: 2, f**) introduced on page 3, bars 9-11.

The distribution of these figures is presented as a graph in **App 26: 1-5**. The labels are listed along the y-axis, and sections along the x-axis, so that events are charted in sequence, but not in exact time. Where more than one form appears a cross is used to indicate any or all of the principal figures in use.

The graph illustrates the closural function of I(d), in its various forms, in almost every section. I(d)3c, however, also appears within sections. The other prevalent features are the rhythmic figures D4 and D5 which are particularly important in sections III and IV and the opening of section V. In part two, the role of D4 and D5 is significant within sections IV/2 with I(d)3c remaining as the only link back to section I. D4 and D5 are especially prominent in Cantus III, V/2 and Cantus IV, thereby lending their weight to the

sense of culmination towards the end of the piece. This effect is also highlighted by the absence from these sections of I(d)3c. In fact, during part two, the regular recurrence of I(d)3c gives way to D1 dev. MK, beginning in Cantus I. Another point to note is the pattern of relation between D1 dev. MK and D4. This is initiated in Cantus I and continues into III/2.

As a whole, the frequency of I(d)-related objects in part two is approximately half that of their frequency in part one. In part two, they are particularly dominant in section III/2 which reinforces the symmetrical position of III within the context of the second half of the piece. During Cantus IV fragmented allusions to I(d)3b appear between six of the eight chords at the end of the section, propelling the music towards each chord. The association between I(d) and closure has been retained, but here expressed in a more dynamic way than before. Finally, D3, which appears in sections I, III, IV, IV/2, III/2, Cantus IV and Cantus V, is associated with the text when it occurs in bar 16 of Cantus V to the words "which the passing feet of shepherds." (see **App 19**). A possible implication of this partnership between object and text is that D3 is an allusion to Sappho's metrical scheme. The words are sung to a regular semiquaver pulse, supported by the flute, whilst D4 is percussively tapped out by the harp, *sur la table*.

Middleground: Model and Context

Awareness of the various objects and their distribution has revealed that the entr'actes represent a continual reinterpretation of the events in section I and this goes a long way towards explaining Birtwistle's comment that the entr'actes are "five different versions of the same object".[119] However, this aspect of the work is developed further in the second half of the piece and here the use of moment form labels is not sufficient to analyse the process at work.

In the early 1960s Birtwistle became fascinated with a text which contains a discussion that usefully supplements Klee's ideas about perspective. The book was D'Arcy Thompson's *On Growth and Form*, of which a newly-abridged version appeared in

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[119] Hall (1984), p.26.

1961.[120] The section of Thompson's book which relates to ideas of perspective is his discussion of "deformation" in Chapter 9, 'On the Theory of Transformations, or the Comparison of Related Forms'. This is concerned with the various deformations of basic generic forms in nature.[121] Thompson employs a graphic means of expressing these processes, translating various zoological forms into a table of coordinates.[122] Regarding this, he comments:

> But it is the next step in the employment of coordinates which is of special interest and use to the morphologist; and this step consists in the alteration, or deformation, of our system of co-ordinates, and in the study of the corresponding transformation of the curve or figure inscribed in the co-ordinate network.[123]

Two points emerge from this. Firstly, the importance of shape or figure and, secondly, the idea of transformation. Musically, this could be applied in terms of a pitch contour, or an even simpler pitchless notion of contour defined by a series of registral movements up and down. When Birtwistle travelled to America in 1967 he began to work more on this idea. However, at this stage he was simply interested in applying the notion of transformation and deformation to a set of musical objects. In this sense, Stockhausen's ideas about Moments and Thompson's theories complement one another, since Thompson only considers transformations of the same zoological type, "for it is a grave sophism, in natural history as in logic, to make a transition into another kind."[124] How, then, might deformation operate in Birtwistle's music?

A possible clue is offered by Thompson's reference to Aristotle's definition of

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[120] D'Arcy Thompson's text was first published in 1917, and this was followed by an enlarged second edition in 1942. Thompson was Professor of Zoology at the university of St Andrews. He lived from 1860-1948 and became well known following the publication of *On Growth and Form.* An indication of the effect this book had on Birtwistle was relayed to me by the music critic Robert Henderson, who remembers an unexpected knock at his front door, where Birtwistle stood, eager to share his thoughts about Thompson's book. Birtwistle was so engrossed in this discussion that he proceeded to consume the loaf of bread he had been sent to get by his wife.

[121] D'Arcy Wentworth Thompson *On Growth and Form* (abridged and ed.) John Tyler Bonner (Cambridge: Cambridge University Press, 1961, repr. 1997), p.271.

[122] *Ibid.*, p.271.

[123] *Ibid.*, p.272.

[124] *Ibid.*, p.273.

genus, in *Historia Animalium* (vol. I, page 1):

> Save only for a difference in the way of excess or defect, the parts are identical in the case of such animals as are of one and the same genus; and by 'genus' I mean, for instance, Bird or Fish .... Within the limits of the same genus, as a general rule, most of the parts exhibit differences ... in the way of multitude or fewness, magnitude or parvitude, in short, in the way of excess or defect. For 'the more' and 'the less' may be represented as 'excess' and 'defect'.[125]

There appears to be room for an interpretation of this passage based on concepts of addition and subtraction, which suggests something anti-organic rather than a natural process of growth. In musical terms, this is reminiscent of the artificial block forms of Stravinsky and Messiaen; it also calls to mind Boulez's analyses of Stravinsky's practice of abbreviating and lengthening musical phrases.[126]

> Thompson's book also includes discussions of cause and effect:
>
> [following Henri Poincaré] Every natural phenomenon, however simple, is really composite, and every visible action and effect is a summation of countless subordinate actions .... Growth and Form are throughout of this composite nature; therefore the laws of mathematics are bound to underlie them, and her methods to be peculiarly fitted to interpret them.[127]

Reference to the laws of mathematics underpinning "every visible action and effect", as well as the terms 'growth' and 'form' (derived from the title of the book) again permit an interpretation of this text based on the idea of regular, artificial processes working alongside more organic development.

With these things in mind, it may be possible to advance the analysis of *Entr'actes and Sappho Fragments* in terms of accumulation and subtraction, in order to account for events at a middleground level. At stake here is the degree to which the work's loosely associated foreground may be found to co-ordinate with the more tightly determined background level.

Whilst a continual process of reinterpreting section I continues throughout the piece as a whole, the second part introduces two other similar, but shorter-term,

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[125] *Ibid.*, cited on p.273.

[126] For an example of this see 'Stravinsky remains' in Pierre Boulez, trans. Stephen Walsh, *Stocktakings of An Apprenticeship* (Oxford: Clarendon Press, 1991), pp.55-110.

[127] Thompson (1997), p.270.

reworkings. One of these takes the opening, or head-motif idea, from section V. In V/2, the longest section in the piece, the head-motif is repeated note-for-note at the opening. The rest of the section is concerned with reinterpreting and ultimately reassembling this idea. The second process takes place across sections IV/2 and Cantus I and is based on a new idea, labelled model D (for 'deformation'). This is reworked in such a way that it interacts with various other objects and, through this interaction, is gradually transformed.

The opening head-motif of section V, the first three and a half bars, can be regarded as a self-contained block consisting of several basic units (see **App 17: 3**). Subsequently, Birtwistle treats these units freely, separating and rearranging them in order to break down and then rebuild the original form. He also occasionally retains the duration of a unit, but places a new idea within it, the relationship to the original being retained by the presence of one or two surviving gestures. The units are sometimes also placed in new contexts, or arranged simultaneously.

As previously noted, the head-motif is a summary of the events and gestures of the first system of page 1. Where those events were previously disjointed here they are brought together in one continuous moment. Sections I to IV all contribute, in various ways, to the eventual construction of this head-motif. Section II, in its first three and a half bars, sets out a first attempt at a symmetrical shape, but the viola and harp quaver movement (tremolos in the viola and '*sur la table*' in the harp), which relate to the five-note figure at the centre of the head-motif, do not form a continuous phrase. Section III introduces a five-note semiquaver figure, in the first system, and the first system of section IV represents an attempt at forming a more integrated, symmetrical design with a definite pulse at its centre, in the viola and harp (in the 7+5/8 bar).

The process of constructing the head-motif is reversed in section V/2 (**App 27: 1-5**). This begins with a re-statement of the head-motif with two additional features: an added violin line that reinforces the harp, and a concluding, two-note semiquaver figure in the viola and pizzicato violin (bar 4). This raises the number of components within the head-motif to eight:

1. Introductory rhythm in the harp and viola
2. Chord with tremolo (bar 2)
3. Grace-note ornamented quavers (bar 2)
4. Five accented quavers (bar 3)

5. Two syncopated quavers (separated by a quaver rest) in the violin (bar 3)
6. Two tremolo crotchets in the flute (bar 3)
7. Five accented semiquavers (bar 4)
8. Two-note semiquaver closing gesture

In the following section these ideas return at regular intervals in an altered or original form. The events are often re-ordered but the patterns of return suggest a way of segmenting the music. The viola and flute's closural gesture in bars 8-9, marked *'fff'*, and the rest in bar 17 suggest a division into two segments comprising bars 5-9 and 10-17. The three-note semiquaver figure - DM(k)1 - appears at the start of the bars 5-9 segment, but in the following segment it comes in bar 19 (altered to four notes) and in bar 15, in the violin. These two segments, therefore, can be regarded as reworkings of the head-motif, or model H-M as I shall now refer to it.

The three-note semiquaver figure from bars 5 and 15 (DM(k)1) is perhaps the single most important feature of the section. Not only does it generate new, dance-like ideas, but it also alludes to and results in a reinterpretation of the opening three chords from Cantus III - differently presented but the same set (6-Z36). In bar 29, for example, an association is made between the three-note DM(k)1 figure and the rising/falling contour of D1 dev. DM(k) from section II. This continues through bars 39-46, bars 74-77 and finally bars 92-94. The version in bars 39-46 is significant because the violin line reproduces the contour and cardinality of the viola figure that lies at the centre of H-M, in bar 3. Bars 39-46 therefore represent an augmentation of the central feature of H-M. In bars 29-36 the flute introduces short, three-note flourishes which ornament the notes of the viola line leading, in bars 37-8 and 49-50, to a fluttering interpretation of the three-chord opening figure from Cantus III. These chords are then more directly reinterpreted in bars 80-81. This gesture brings all four parts (flute, violin, viola and harp) together in a decisive moment. Subsequently, from bar 85 onwards the parts play as an ensemble and, from bar 103, restate the original H-M form which brings the movement to an end.

In section A1 (bars 5-27) H-M is reworked four times and by the end of the movement the model has received ten reworkings in all. This may be summarized as follows:

Form	Bars	Model
A	1-4	H-M
A1a	5-9	H-M1
	10-17	H-M2
A1b	18-22	H-M3
	23-27	H-M4
B	28-34	x
	35-38	y
B1	39-46	x1
	47-51	y1
A2	52-65	H-M5
	66-71	H-M6
	71-73	H-M7
	74-76	H-M8
	76-78	H-M9
	79-80	H-M10
	80-81	D5 (cf.CIII)
A3+B2	82-94	x
	95-102	x1
A4	103-107	H-M (extended)

This apparently fragmented design is actually underpinned by a cumulative process (the 'growth' that Thompson refers to) which generates energy and momentum towards the final bars. This is initiated by the dance-like, three-note semiquaver figure introduced in bar 5. Unlike H-M, which is symmetrical and self-contained, the dance idea embodies a will to expand resulting in a conflict which could be summarized as phrase versus fragment. The dance idea forms the basis of section B, although here the process of expansion is reversed into one of contraction. The first part contains five phrases of which the first, an augmented version of the basic semiquaver figure, is the longest and most expansive. This procedure is repeated on page 29 with the addition of double-stopping and the viola. The two sequences of durations (in quavers) are:

B: 12, 5, 5, 2, 2
B1: 12, 8, 5, 2, 2

The second phrase in B1 has been lengthened. This is perhaps because it uses the original semiquaver form and thereby retains a tendency towards expansion. The central phrases (5) are fragmented versions of the first (12), and the last two phrases (2,2) allude to the tremolo aspects of H-M. They also anticipate the trilling 6-Z36 chords in bars 80-

81.

A second series of H-M reworkings begins in bars 52-65 (H-M 5) with a version for violin, tambourine and cymbals in which the violin in bars 67-68 gives a version of the three-chord figure from Cantus III, which leads to the recapitulation of this idea in bars 80-81. One example of the fragmented nature of H-M versions during bars 69-81 is the disruption of E6 and A flat6 in the flute bars 73-75 (derived from bar 3) now separated by a bar's rest. As a whole, bars 66-81 consist of ever more truncated versions of the central three-note figure. When the music returns in bar 86, after three bars in which the clave plays alone, the effect is not unlike a piece of electronic music where momentarily a track has been silenced then reintroduced part-way through.

In bar 96, a bar of 5/16, the five semiquavers represent a diminished and inverted version of the central five-quaver figure from H-M. Once again, the sound is 'rubbed out' with one momentary intrusion in bar 101, before the original form of H-M is recapitulated in bar 103. This time, however, a bar's rest is inserted before the central five-note figure as if to emphasize that the whole movement has been specifically aimed at restoring this particular figure which by itself, and in the context of the model as a whole, is symmetrical in shape and rhythm. Stability has been re-established.

Within the second half of *Entr'actes and Sappho Fragments*, the process which constructed H-M in part one is mirrored by a similar process applied to model D. Model D is first stated by the oboe and harp in bars 34-41 at the very end of section IV/2, which is given in **App 28: 1**. It is chiefly characterized by the oboe line and symmetrical harmony. The oboe line is divided into two equal halves in which the consequent phrase mirrors the contour of the antecedent by inversion. The harmony centres around F#, C and F#. This is summarized in **App 29**. In the fourth chord of stage one, F#3 is placed between two sevenths (one minor, one major), and the final chord (in stage 3), places two (0,1) collections a major sixth either side of F#5. However, the symmetry is displaced by the tied B flat in the bass, and by the fact that the lower (0,1) collection is spaced across an octave.

Model D is derived from the second half of section V (**App 17: 3**). In the chordal section in bar 4 the harmony is not symmetrical or centred around a particular pitch, although F# is contained in nine of the thirteen chords. However, the flute contour

produced by the first eight notes matches that of model D (and three of the pitches in the first four-note contour are the same: E, G and A flat). The antecedent/consequent gesture which characterizes model D is also contained in section V, at bar 5. Here a five-note contour is followed by a consequent "echo", and the underlying harmony in the harp moves from F# (at the top of chord 1) to C (the last note).

The function of Model D, it seems, is to link the transitional IV/2 section to Cantus I. In section IV/2 the voice appears for the first time but it consists of humming rather than words (see **App 28: 1**). Model D is inserted, after the voice has sung, in bars 34-41. This is then reproduced, note-for-note, at the start of Cantus I as an accompaniment to the flute and voice (**App 28: 2**). Birtwistle marks this "echo", which reflects the "echo" at the end of section V. In this new context Model D acts as continuum to the flute and voice's 'cantus'. In the cantus the high number of pitch coincidences reveal a line which begins: B flat, E flat, F#, C, B, E, B flat. This is actually a reflection of Model D. For example, the flute and voice (on "-ther") have a tied minim on F# in the same bar as the F# in the continuum placed between two sevenths. In bar 4 the flute and voice only play C which reflects the continuum movement to chords centred around C, and in bar 6 the flute's grace-note F# doubles the harmonic movement back to F#. This is a clear example of a line which, in Greenberg's words, "indicates, directs, relates and connects".

At the start of the second system, at "wheel", a second reconstruction of model D begins. This retains three of the original eight chords: the eighth, sixth and seventh respectively. Chord eight includes B flat which forms the symmetrical subset (0,3,6) with G and E flat. This becomes the basis of Birtwistle's reinterpretation of chords 6 and 7, which both form (0,3,6) sets, the last of which is literally symmetrical (**App 29: 2, a**). The large gap between chords 8 and 6 is filled by a violin phrase in quotation marks, accented and marked '*ff* and 'full bows' which leaves no doubt that Birtwistle intended this item to be perceived and identified by the listener (**App 28: 2**, second system). The figure is MD derived from the flute's 3/4 bar on page 2, here though rests have been added between the notes to assist in its declamation. The most obvious reason for selecting it seems to be its contour which follows model D's oboe outline for the first four of its five notes. It also supplies A flat4 in the correct position.

The characteristic feature of the cantus during this reinterpretation is a

rearrangement of pitches from the oboe line, unlike the previous reworking where the cantus is related to the continuum's harmony. This is initiated by the G in the flute and voice in bar 7, note 1 of the model D oboe line. A flat is delayed until bar 10, in the flute, where it picks up the A flat from the quotation of MD. G to A flat is then stated again, this time in the voice, in bar 12. Note 3 is missing but 4 appears in bar 12 (flute) and note 5 in bar 13 (flute and voice), whilst 6 and 7 are given in the continuum.

In a third reinterpretation on page 15, bars 15-19 (**App 28: 3**), the oboe preserves the contour of the first half but none of the pitches (although B flat4 is close to A flat4) and it is truncated by the loss of the fourth note. The second half (bars 17-19) loses its first pitch but retains C#, E flat and D (the latter in the harp). The pattern of harmonic symmetry is continued as chord 1 reinterprets the previous (0,3,6) verticals, from page 14 (**App 29: 2, b**). The symmetry becomes more distorted, however (see chords 3 to 5). A process of transformation is then initiated by the introduction of a previously stated moment: the ascending second half of D1 dev. MK from section II (page 2) which is alluded to by the harp. This represents a process of disintegration which is reinforced by the insertion of short, fragmented semiquaver triplets in the harp (echoed by the flute and violin), which anticipate the words "Oh, oh."

The fourth version bears little resemblance to the original and the harp does its best to mask the upper line by projecting the disruptive semiquaver triplets *'fff'* above the oboe. The closest gesture to the original is the oboe's ascent to B flat5 (for B5) in bar 23. At this point the model breaks off and there is a unison statement of the D1 dev. MK moment with the flute and voice on B flat and C# to the word "pain". Underlying this is another process which directs the harmony towards the chord in bar 27 (**App 29: 2, c**). This moves from a tritone plus (0,1) cluster (E, B flat, B, C) to a chord that contains a fifth and a tritone and finally to three octaves (B flat2 to B flat5) plus a tritone. The chord in bar 27 on "pain" consists of a stack of tritones: providing a definitive, literally symmetrical chord formation.

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From this analysis it is possible to conclude that a sophisticated process of developing,

self-contained musical moments is a feature of *Entr'actes and Sappho Fragments*. However, this process exposes a disparity between the essentially dislocated tendencies of moment form, and the causal system outlined by Klee. Stockhausen's moment form labels have provided convenient tags with which to identify contrasting ideas in order to plot their distribution throughout the piece, although it should be stressed that the aural effect of Birtwistle's work is dissimilar to Stockhausen's. What has been useful, however, are the concepts of anticipation and recall of which Stockhausen has spoken. It has also been shown that, whilst some events appear to be inserted randomly, like Stockhausen's Einschübe, they are not always autonomous. In certain cases, inserts are closely matched to the music around them, and at other times their presence leads to a response in the surrounding context.

Music and Text: *Ring A Dumb Carillon*

Entr'actes and Sappho Fragments and *Ring a Dumb Carillon* (1965) were important contributions to the development of Birtwistle's vocal technique before the composition of his first full-scale music drama, *Punch and Judy* (1967). In general, Birtwistle's text-setting has not escaped criticism. He has been accused of ignoring the sentiment of his texts[128] and, at the other extreme, criticized for an over-use of localized word-painting. Such was the nature of Stephen Walsh's criticism when reviewing the first performance of *Ring A Dumb Carillon*:

> [Birtwistle] turns too often to word-by-word imagery, which can create an entirely deceptive complexity, and allows the reflective breadth of the poem to go unrealized.[129]

Regarding his approach to text setting in general, Birtwistle has spoken of a desire to

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[128] Concerning text setting in the 1994 opera *The Second Mrs Kong,* Robert Adlington has observed "one might wonder whether, for Birtwistle, the text *per se* is of any real concern or significance. Both text articulation and sensitivity to the libretto's focal moments appear to be low on his priority list. Words frequently get mangled in his contorted melody, and pivotal moments in the text are often curiously rushed through ... the words are treated as a convenient necessity, of use merely for bringing about the opportunities for musical drama that Birtwistle so obviously relishes", in 'Harrison Birtwistle's Recent Music', *Tempo* April (1996), pp. 2-8.

[129] Concert review in *The Musical Times*, May (1965), pp.362-3.

compose a form and sometimes a mood which is in direct contrast to, or in conflict with, the text, a musical logic which need not run parallel to the dramatic narrative. In an interview with Andrew Clements when discussing the composition of an opera based on the events of the Last Supper, Birtwistle summarized this view as follows:

> I'm struggling at the moment to make a relationship, or a non-relationship if you like, between the text and the music though at the same time it does have to relate to the story. I know where the formalism is in the text but there is another layer of formalism which has to do with the music, which is separate and doesn't necessarily line up with the drama.[130]

This idea dates back at least as far as *The Mask of Orpheus* (1973-84), of which Birtwistle had the following to say:

> Throughout the piece I've made a distinction between a series of closed forms which define the stage action, and a much more organic, through-composed structure belonging exclusively to the orchestra. As in the Noh plays of Japan, the orchestra, even though it responds to the events on the stage, has a life of its own.[131]

An examination of *Entr'actes and Sappho Fragments* also reveals a more through-composed, purely musical logic which at one level runs counter to the text, whilst at the same time there are gestures within the music which do support the text. In this work, of course, the music had been composed before a decision to include words was taken and therefore Sappho's verse does not exercise influence on the opening entr'actes. When the voice enters in section IV/2 it does so not to words but to the vowel sounds "a-o" followed by humming. The vowel sounds in bar 14 are sung in the form of I(d)3c which fits the context initiated by the flute's pedal on D, which refers back to I(d) complex (i) first heard at the start of page 2 (**App 30 a** and **b**). The voice is echoing the previous section where the flute played I(d)3c at the end of the coda. This gesture associates the voice with the flute as in *Monody for Corpus Christi* which followed the example of Boulez's *Le Marteau sans maître.* It also brings the role of the voice within the network of association established by the opening entr'actes. In this way musical design states its claim on the voice and consequently the text before a single word has been delivered.

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[130] *The Guardian*, Friday 21 August (1998) 'Friday Review' supplement, pp.2-3.

[131] 'Composer and producer speak', in *The Mask of Orpheus*, English National Opera Programme (London, ENO, 21 May 1986).

As discussed above, when the voice does embrace the text it elaborates an idea previously stated instrumentally at the end of section IV/2 (model D). Once again, the voice is made a subject of the musical design. The transformation of model D into MD(k) dev. 1, however, does provide a climax on the word "pain" and it would seem that at this point music and text have come together. This continues through Cantus II where the "humming winds of Autumn" are mirrored by trilling figures and "slumber flowing from quivering leaves to earthward spreads as a river" is matched with almost word-for-word responses in the music, including a rallentando on "spreads as a river." In Cantus III music and text have an equal status. A purely musical decision to set events in 'threes' determines the pitch sequence in the voice, whilst trills and tremolo figures accompany "wind" and "shakes".

During the final section with voice, Cantus V, the chords which tolled, bell-like, through the previous section continue pulsating through the text with pauses on the first two words "Like" and "the". However, the text and consequently Sappho's metric scheme does manage to bring the music under its control in bars 16 and 17, to the words "which the passing feet of shepherds for ever tear and wound". In hindsight, the bell-like disruption of the text at the start of the section could be interpreted as a metaphor for the textual reference to the shepherd's tearing feet and the blossom trodden underfoot. However, throughout the work the natural stress of syllables is not disregarded and the words' meanings are always preserved. Far from being simply commentaries on the songs, the music has its own logic and is, at the same time, in a two-way relationship with the voice and text.

When remarking on the success of a recent performance of *The Mask of Orpheus* in the Royal Festival Hall, Christopher Wintle commented that, "electronics apart, it seemed to mark a homecoming of the purely instrumental aspect of the music to the concert hall."[132] When examining the relationship between text and music in Birtwistle's operas Wintle suggests that the lyric-epic aspect of the Orpheus legend is highlighted

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[132] 'A fine and private place', *The Musical Times*, November (1996), p.6. Arnold Whittall has also endorsed the success of *The Mask of Orpheus* in purely musical terms, saying that "it was felt by a capacity audience to lose little or nothing through not being presented in an opera house". This quote is taken from the review-article 'Orpheus - and after', *The Musical Times*, Winter (1998), p.55.

more than the tragic-dramatic. He describes an incident during a seminar held before the Festival Hall performance in which Birtwistle discussed the 'seventeen arches of the aqueduct' that make up Act 2, 'carrying us from the living to the dead'. Within each arch is a poem. Birtwistle read aloud one of these poems which, he explained, "stand above the action" and "don't relate to the stage" in the normal way.

> The sympathy, warmth and intensity with which by demonstration Birtwistle read one of these poems revealed a secret lyric space - a private venue, that of (Debussyan) theatrically-orientated musician/poet - in which, to use Carl Dahlhaus's term, the thoughts of the 'lyric ego' are merely 'overheard by the audience'.[133]

This resonates with Clement Greenberg's remarks about Paul Klee made in an essay written in 1950 where he refers to "Klee's private lyricism".[134] "He works in small format, in the tradition of illumination. His pictures are for very private possession, to be hung on near and intimate walls".[135] The lyric essence of Birtwistle's stage-work in general is, in Wintle's opinion, "apparent already in the early piece of music theatre, *Down by the Greenwood Side*" (1968-9). I would propose that it is true of the purely instrumental music as well.

The World is Discovered, for example, composed in 1963 for woodwind, brass, harp and guitar, occupies its own private lyric space, not least because of the delicate instrumental textures. It also demonstrates a sensitivity to lyrical expression but one hampered by disrupting tendencies. This can be seen in the first section of the work, Verse 1 (**App 31: 1-2**). The antecedent gesture of bar 1, and its consequent in bar 2 are characterized by a pattern consisting of a grace-note or short note followed by a long note. The flute and guitar, both traditionally associated with song and dance forms, attempt to break free from the fragmenting tendencies of this rhythmic pattern into a more sweeping, sustained phrase. This is achieved by the flute in bars 12-16, here combining

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[133] *Ibid.*, p. 7. The Dahlhaus quotes are taken from *Nineteenth-Century Music*, trans. J. Bradford Robinson (Berkeley and Los Angeles: University of California Press, 1989), pp.104-5.

[134] 'An Essay on Paul Klee', in Clement Greenberg: *The Collected Essays Volume 3: Affirmations and Refusals, 1950-56* (Chicago: University of Chicago Press, 1993), p.34.

[135] *Ibid.*, p.7.

sustained notes with a wider gamut and distinctive contours. The guitar, however, persistently hammers out the short note, long note pattern underneath, although it yields a little from the middle of bar 14. Bar 17 brings these lyrical flights of fancy to an end, however, and the music is tethered both in pitch and register by the repeated Fs and A flats in the flute and the repeated Ds in the guitar (which form the familiar symmetrical (0,3,6) triad). The flute attempts to break away once more in bars 22-3, but the verse ends on *terra firma* - D, slightly unfocussed as a result of quarter-tones in the guitar.

Birtwistle's early instrumental works frequently embody the "secret lyric space" that Wintle has spoken of. They do so, however, against competing tendencies. The result is frequently something which seems anti-lyrical. Arnold Whittall has described with reference to *The Mask of Orpheus*, how "one of its most powerful effects is the sense it creates of song (with harp accompaniment) being deconstructed".[136] In a similar way one may describe Birtwistle's theatrical works and various instrumental pieces, like *An Imaginary Landscape* and *Silbury Air*, as pastoral being deconstructed (Clement Greenberg's term for this is 'avant-garde pastoral'[137]). However, these descriptions do not leave room for relationships between lyricism, or pastoral, and aspects which might be considered their opposites. There are complex interactions taking place which demand closer, more careful consideration.

Birtwistle's choice of song texts is relevant to this issue. The texts he uses reflect and elaborate upon his central artistic preoccupations to a remarkable degree. The anonymous medieval poem used in the first movement of *Monody for Corpus Christi*, for example, leads one on a Klee-like journey, inscribing a circle from the falcon's flight, bearing "my maker away", to the knight's death-bed and the adjacent tomb inscribed "*Corpus Christi.*" Here, Birtwistle's use of localized word-painting is sometimes put to a broader, structural purpose. For example, he works the visual image of the falcon flying up and down into the foreground figuration of his piece which has significance in the central instrumental movement, and the treatment of the words 'Corpus Christi' not only

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[136] 'Orpheus - and after', review-article in *The Musical Times*, Winter (1998), p.55.

[137] Resulting from Greenberg's championing of Cézanne, avant-garde pastoralism was the phrase Greenberg developed to describe Cézanne's, and later Jackson Pollock's, engagement in painting with the natural world.

captures the climactic sense of this moment but the use of longer note values holds up momentum, suggesting the suspension of time.[138]

Ring A Dumb Carillon is a setting of a poem by Christopher Logue[139] and is unusually scored for soprano, clarinet in B flat and unpitched percussion. The percussion consists of five suspended cymbals, four timbales, four wood blocks, four temple blocks, five cow bells, one maraca, a pair of claves and a pair of bongos. This use of extensive percussion alongside voice and clarinet relates back to and extends a feature in *Entr'actes and Sappho Fragments* where claves, maracas, five suspended cymbals and a tambourine were added in the second half, creating new contexts for the ideas from the original entr'actes. The retention of a single pitched instrument implies a continuation of the voice/flute partnership, now reinterpreted as voice/clarinet. This also implies that the percussion will form a rhythmic and timbral continuum to a pitched cantus.

The use of unpitched percussion also implies that pulse will be further explored in this work. The opening confirms this as the clarinet and voice pulsate between one another on D (**App 32: 1**). Another kind of pulsing is provided by the alternation in the voice between different forms of singing: '*sotto voce, senza vibrato*', 'closed lips', 'detached', 'without accents and very much smoother'. This calls to mind Boulez's words in his essay concerning poetry and music:

> the relationship between vocal writing and the use of the different vocal possibilities takes us from the 'presence' of the poem in the most real sense to its latent or virtual presence - when the form disappears as such but continues to control purely musical features by the continuations of its structure in the music.[140]

Boulez here is suggesting that the form of the text might exercise an influence over the music even when it is absent from the texture and this idea might usefully be explored in relation to Birtwistle's treatment of Logue's text in *Ring a Dumb Carillon.*

Logue's poem consists of five stanzas. Two lines in particular point to a symmetry

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[138] See the discussion about this at the end of Chapter 1.

[139] The poem's actual title is *A Matter of Prophecy*, which was originally published in the collection *Wand and Quadrant* (Paris: Collection Merlin, Olympia Press, 1953).

[140] Pierre Boulez, 'Poetry - Centre and Absence - Music', in *Orientations* (London: Faber and Faber, 1986), ed. Jean-Jaques Nattiez, trans. Martin Cooper, pp.183-198.

around the third stanza: "[the cromlech][141] sleeps again ... a radium in lead" at the end of stanza 2 and "Woman and dream have sung" at the beginning of stanza 4. These lines, combined with the references to "brain" and "dreamknife" in stanza 3, point to the third stanza's role as a central dream section. The appearance of "One slow turn" in both the second and fourth stanzas, as well as "Ringing" and "sung" in stanza 4 and "Chiming" and "levers his tongue" in stanza 2, reveal their function as a concentric layer around stanza 3, one which implies movement and sound. Finally, stanzas 1 and 5 begin and end the poem with a reference to sleep and stone. Stanza 1 introduces the infant Plato "jettisoned in Syracuse", whilst in stanza 5 Plato returns to Athens "His philosophy and his back in rags", and the "unanswered/ Buttercups are shrivelled back to seed." As can be seen, there is an important role in the text played by repetition and return with constant references to circles and cycles in nature: "tide cast stone", "One slow turn of the world" and "the twist of the world", for example. It is precisely this rhythmic, repetitive aspect of the poem which Birtwistle exploits in his song, especially in the use of pulse at the opening.

In Birtwistle's setting, the symmetry around the third stanza is most obviously represented by the fact that the central stanza is scored for voice alone. Either side of this, other musical gestures also support Logue's original design. The pulse between voice and clarinet from the opening bars, on "He sleeps" and later "Deep in", is reinterpreted at the end of the song to the lines "shrivelled back to seed" (**App 32: 2**). Another idea which links these outer sections is a melodic one. The soprano's opening line unfolds a simple melodic shape: D, E flat, C. This is reinterpreted at the end with "shadow as it Maims" sung to D, "And the unanswered" on E flat, and "cold as stone" on C (**App 32: 1**). Birtwistle also links the return of the phrase "One slow turn of the world" by reintroducing the same musical material at "A wind-honed prophecy", and then again, slightly altered, at "One slow turn of the world" in stanza 4 (**App 32: 3**).

There are further musical features which possess their own musical logic, yet complement the textual design in a way which indicates Birtwistle's understanding and sympathy with the meaning and sentiment of the text. For example, Birtwistle decides to emphasize the words "slag" and "ruled" in the fourth stanza, although in a way which

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[141] In Wales a cromlech is an ancient megalithic tomb, and in Brittany it refers to a stone circle. In the Welsh sense it means an arched, flat stone.

suggests that he is drawn to their sound as much as their meaning. He also sets an entire line and a half around these words to the pitch E: "slag, buttercup ruled, bound / In fore talking and the time of night. / Marooned in the". This reflects a transition in the text from predominantly active verbs in the previous lines (jettisoned, nudged, turn, whirled, ring, chiming, heaves, stir, scooped, flog) to more passive ones at the end of the poem (smelted, railed, maims, shrivelled, sleeping).[142] Following this there is an interval-3 unfolding from E to G, again familiar from the earliest works. This occurs when the words "As when and when" are set to G (**App 32: 4**). Each "when" is held for a breve whilst the clarinet plays 'wild' cadenza-like, trilling semiquavers, but there is nothing about these words in the context of the poem which suggests that they should be emphasized.

One suggestion Logue's text may have presented to Birtwistle was the possibility of fitting dumb show, in the form of theatrical choreography, into the music. On the day of the first performance, however, this brought the music to a sudden and crashing halt when the soloist dropped the cymbals that she was instructed to play, and her sheet music went scuttering to the floor. Perhaps the mistake served to point to the flaw in making apparent what should have remained purely implicit in the music.

> ... the buttercups
> Ring a dumb carillon of gold in his ear,
> Chiming against the twist of the world[143]

In these lines, and in Birtwistle's song title *Ring a Dumb Carillon*, sound is made implicit but action explicit. This is the opposite of a song's intention, but it makes a wonderful allegory for role-playing in music.

One other feature of Birtwistle's setting is the contrast within a line which often breaks up the flow of a sentence. Even within Logue's poem there is a hint of conflict at the words "Ring a dumb carillon of gold in his ear, /Chiming against the twist of the world", and Birtwistle actually anticipates the 'wild' clarinet figures on the syllable "-gainst", as if to emphasize this conflict of one movement against another. Disruption of

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[142] The role of E here can also be explained in purely musical terms since it reinscribes the E/E flat conflict which was so important in *Three Sonatas for Nine Instruments*, since in *Ring A Dumb Carillon* E flat played an integral part in the initial D-E flat-C melodic formula.

[143] Carillon, in this context, is a tune played on a set of bells. Its originates from the Old French *quarregnon*, meaning a peal of four bells.

this kind is engendered at the very opening by the simplest of means. Following the sustained, steadily pulsing setting of the words "He sleeps as sound as any tide cast stone", there is an abrupt shift to faster staccato singing on "and thinks the cromlech".

One effect of this is to emphasize the ambiguous nature of the text. It is never clear whether the subject "He" is a person, the cromlech, Plato, or all three, and the first line introduces the reader to all three subjects in succession. It becomes apparent that there is more than one narrative unfolding within the poem and that these are set against various contrasted pulsating schemes which mark the onset of time (such as the windblown buttercups, chiming bells, and the slow turn of the world and the moon). The image of the cromlech, the tide-cast stone, can be read as a metaphor both for Plato (jettisoned into Syracuse), and for pre-historic Man who cast the stone into this landscape, as Plato was cast into Syracuse. In this way, the poem functions on at least three levels, sometimes all at once. The vocal technique Birtwistle employed emphasizes internal changes in the dialogue through its shifts between smooth singing and staccato, whispering and humming, and this is a central feature of all of Birtwistle's later text settings. Hall has suggested that this reflects the shifting qualities of an internal dialogue, a musical 'stream of consciousness'. This effect is reflected in Birtwistle's desire to set texts which either dismantle an already familiar narrative, such as that of Orpheus or Punch, or those which attempt to piece together a lost, pre-existent *Ur*-narrative. Sappho's fragments are the remains of a pre-existent narrative which we now have no hope of recovering. Similarly, Logue's text denies the reader a simple, linear narrative. When one is glimpsed it is just as quickly removed from sight, or obscured by a change of subject.

The issue of the relationship between text and music within Birtwistle's works is clearly problematic to scholars and commentators. On this issue, and with regard to Boulez's notion about instrumental music's capacity to comment on the nature and form of a text, Hall has expressed some hesitancy in his most recent book when claiming a relationship between these two elements:

> In *Cantata* [1969], five instrumental refrains are interspersed among settings of tombstone inscriptions, other lines from Sappho and quotations from *The Greek Anthology*. In my first book I interpreted the fluctuating nature of these refrains as being commentaries on the fragmentary texts which have no obvious connection and resemble the discontinuities found in inner speech. But I admit that this was only my opinion. Given the nature of the piece, others will be bound to interpret

it differently.[144]

And in relation to *Pulse Shadows* (1996) Hall finds it necessary to distance his own views from those proclaimed by Birtwistle:

> He [Birtwistle] maintains that he never intended the quartets to have a direct bearing on the songs or the songs on the quartets, but perhaps, like me, he has now established connections between them, and convinced himself that the relationships are demonstrable.[145]

I believe that musical form is uppermost in Birtwistle's mind when setting a text, although he clearly can be very sensitive to the meaning and form of the texts which, after all, he takes great care to select. Whilst there is certainly a desire to work against the formal aspects of a given text this is done in conjunction with as many conciliatory gestures. Birtwistle has commented on the great difficulty he has in finding suitable texts.[146] The difficulty, I believe, stems from his desire to give precedence to the musical design whilst also wishing to make meaningful connections with words. At a fundamental level the text acts as a commentary on the music. However, at a more detailed, surface level there is a degree of interaction between the two. The text, however, is a vehicle for a musical argument which is inherently concerned with expressing a 'private lyricism' or secret lyric space. Equally, the musical language reflects a desire to deconstruct song and, as shall be seen in *Tragoedia*, dance.

Tragoedia

In his programme note for the first performance of the work[147] Birtwistle set out the basic formal principles for *Tragoedia*.[148] He explained that the piece is based on a bilateral

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[144] Hall (1998), p.137.

[145] *Ibid.*, p.141.

[146] *Ibid.*, p.36.

[147] Reproduced in Hall (1984), pp.173-5.

[148] *Tragoedia* received its first performance at the Wardour Castle Summer School on 20 August 1965.

symmetry with a gentle Stasimon[149] section in the centre surrounded concentrically by two Episodion sections, Parados and Exodos. The Episodions are themselves in three parts, but Episodion 2 rearranges the internal order of Episodion 1. Episodion 2 also relates back to the Parados. This not only makes Episodion 2 more complex but lends weight to the end of the piece. The Prologue, Birtwistle argues, lies outside this design as a means of introducing the main characters of the musical drama.

Tragoedia represented a crystallisation of the processes and ideas introduced in *Entr'actes and Sappho Fragments*. It begins where the earlier piece left off, with a set of continuous pulsating sounds moving at different rates (**App 33: 1**). Unlike the gentle effect of the I(d) complex at the end of *Entr'actes,* in which the parts gradually slow down and stop until there is only the slow pulse of the flute and two taps on the claves remaining, *Tragoedia* sets absolutely regular pulses in bold, defiant gestures. There are two types of pulse, one of seven quavers duration in the flute and cello, and another of five quavers duration in the horn and harp. The events are spread across four levels, with the cello beginning two quavers after the flute's second pulse, and the harp beginning five quavers after the horn's first pulse. Each part has five pulses in total except the cello which has four, having been silent in bar 1.

As in the *Entr'actes'* I(d) complex, the instrumentation is an integral part of this opening moment. In this case the instruments include the 3 most important members of the cast: horn, harp and cello. Overall, the harp is the 'odd one out' since it does not belong to the string or the wind groups. Similarly, within their respective instrumental groups, the cello and horn are odd ones out for physical reasons, although they are counterparts in terms of register. The presence of the flute in the Prologue extends the register upwards in order to set a counterpart to the horn, harp and cello which play the same pitch (E flat below middle C). The use of the flute as a high pedal point (C6) also relates to Stravinsky's practice, most noticeably in *Symphonies of Wind Instruments*.[150] Its unmistakable sound is most effectively placed at the start and when referred to later in the

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[149] Birtwistle derived the various terms for the movements of *Tragoedia* from Aristotle's writings on the form of Greek tragedy. This is further discussed in Chapter 3.

[150] This will be explored during Chapter 3. In particular, the opening oboe and flute unison D6s set a pattern of high pedal points which recur at regular moments throughout the work.

piece is easily identified as a sign of structural return.

This opening perfectly explains the effectiveness of the piece as a whole. It is through a paring down, a simplification of expression, that Birtwistle was able to make his most successful impression on the public since 1957. It also perfectly expresses Michael Hall's central organising principle, of something regular set against something unpredictable and irregular. The pulses are absolutely regular, but the coincidence of the parts sounds irregular. In bars 8-14 of *Tragoedia* the original pulses are replaced by a new one of eight quaver's duration in the horn and cello (the cello entering five quavers after the flute) whilst the harp has an irregular rhythm. The flute is removed from the texture and only replaced in the final nine bars, now playing twelve pulses of three quaver's duration. The same principle is applied in one of the movements of Stravinsky's *Agon,* although the tone of Stravinsky's work is very different. The *Bransle Gay*, shown in **App 34: 1**, contains a simple ostinato in the castanets over which flutes, harp and bassoons perform a dance which sets different rhythms against the ostinato.

Birtwistle's increased interest in instrumental variety and experimentation between 1960 and 1965 should be considered as a response to Stravinsky's *Agon.* Interestingly, in his review of the score of the ballet music, for *The Musical Times* in May 1958, Robin Hull had advised young contemporary musicians to take note of Stravinsky's scoring:

> The beautiful economy of the scoring, of which every point is superbly judged, provides a masterly demonstration which should receive early and intensive study from every musician who prizes superfine craftsmanship.[151]

Agon appears to have functioned as a form of template for *Tragoedia*, and provides a clue to the origin of the insistent, repeated-note idea which forms the basis for most of the allusion and reinterpretation in *Tragoedia* as a whole. On the first page (see **App 34: 2**) the trumpet sets out a repeated-note idea on C, underpinned by a chord based on the stack of fifths B-F-C. This links up to the first note of *Tragoedia* - C6 in the flute, repeated five times. The four-bar phrase for harp, mandolin, piano, cellos and double-bass is apparently reworked by Birtwistle from bar 10 of the Prologue in *Tragoedia* where the harp's D-F#-C#-B is a splintered version of Stravinsky's D-E-C#-B (see **App 33: 1**). The cello in Birtwistle's piece repeats D where the double-bass in Stravinsky's repeats G, and

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[151] *The Musical Times*, May (1958), p.261.

Birtwistle's horn repeated Ds reflect the D-G centredness of the harp and trumpet in bars 10-19 of *Agon.* This also accounts, in Birtwistle's version, for the horn's movement from D to G in bars 16-17. *Tragoedia* continues as an exploration of this opening idea, expressing it in a variety of different ways as well as placing some of its elements in new contexts.

Tragoedia is also related to *Agon* through its use of unpredictable and varied ensembles, although it does not employ instrumental cycles in the manner of Schoenberg's *Pierrot Lunaire* or Boulez's *Le Marteau sans maître*. *Agon* and *Tragoedia* share the formal feature of recurring fuller instrumental sections which act like ritornellos. In *Agon* this recurring section is first labelled 'Prelude', and on later modified appearances as 'Interlude'. In *Tragoedia* this role is performed by reworkings of the opening of the Prologue, which recurs as a moment rather than a movement or section (for example, the opening C-E flat dialogue between flute, horn, harp and cello is reworked at figure 5, during the Parados section, now based on B flat/B/C-F#, with the woodwind, strings and the horn and harp separated by different pulses - see **App 35**). In Birtwistle's work the opening idea is fragmented and inserted at unexpected moments but, as in the Stravinsky piece, it returns conclusively at the end.

Agon frequently uses small ensembles and lighter-sounding, middle-register timbres, which are qualities which characterize the central Stasimon as well as the first Strophe of Episodion I in *Tragoedia.* In *Agon* the alternation of full and reduced ensembles is a stylistic device which reflects the neo-classical tendencies of the work, indicated by the use of Baroque dance forms as the titles for each movement, and is an allusion to the alternating *concertino* and *ripieno* ensembles employed within Baroque concert music. In *Tragoedia* Birtwistle often divides the ensemble into a woodwind quartet and string quartet, with the harp and horn acting as arbiters or protagonists. At various moments the strings introduce a texture that resembles a 'written-out' mobile (as if Birtwistle had previously made a series of choices, based on chance procedures, and fixed the results in notation). The string quartet 'mobile' texture is first introduced at figure 6 (**App 35: 1**), during the Parados, and recurs at figures 11, 14 and 15 during Strophe I of the Episodion, and finally at figure 35 at the start of Antistrophe II. The role of symmetry within the instrumentation is made clear when the woodwind and string quartets

are brought face to face at figures 30 and 31, during Strophe II, with the harp acting as the registrally-centred arbiter, with all three elements coming together at figures 33-34. At figure 34 the harp joins the woodwind to form a quintet, which places the clarinet at its registral centre. As if to make this symmetry more explicit, Birtwistle assigns a cadenza-like flourish to the clarinet supported by sustained notes in the other four parts.

During my discussions with Birtwistle, he explained that he was particularly attracted by the figurative details of *Agon*, as well as the formal aspects of the piece, in particular the use of a returning Prelude. It emerged that the use of instrumentation to signal moments of formal recapitulation, such as the false entry of the horns at bars 553-560 during the *Four Trios* in anticipation of the return of the opening trumpet fanfare (bar 561), was of particular appeal to him at the time. In his later work *Signals* (1970) for clarinet and electronic sounds, Birtwistle further developed this interest with the aid of electronics, although the results did not satisfy him and he withdrew the work.

As mentioned in Chapter 1, Birtwistle is interested in what he described to me as the "figurations of serialism". Understanding what he means by this may be assisted by examining the serially composed sections of *Agon*, which are generally the more lightly scored sections, and comparing these to the non-serially derived passages. During the lightest instrumental moments (which in *Agon* were Stravinsky's first extended exercises in the use of serial composition) both Stravinsky and Birtwistle employ a form of *Klangfarbenmelodie* in a manner that is reminiscent of the central movement of Stravinsky's *Symphony in Three Movements* (1946), where the trombone and piano exchange the notes of a single line (G-F-G-F), playing on the ambiguity of their timbral equivalence at this register. This can be seen in **App 36, a**, which shows figures 171-174. Following the exchange between piano and trombone the harp joins the texture at figure 172 and there is a moment when the piano and harp timbres merge into one, contrasting with the previous section. In *Agon* a similar feature can be seen during the *Pas-de-Deux* in bars 53-61, where four horns and piano pass G# and F# (**App 36, b**). This anticipates the horn and cello dialogue at the very opening of *Tragoedia*, where the two instruments alternate between E flat and D. In both works, combinations of instruments of a similar timbre are used to produce new sounds, or to allude to others.

During the *Gailliarde* in *Agon* a mandolin is combined with the harp. The timbral

effect is reminiscent of the lute. However, the identity is ambiguous, reminding the listener that this is a twentieth century work rather than a sixteenth century one. Interestingly, it is a similar quality which appealed to Colin Mason when he reviewed the earlier piece *Entr'actes and Sappho Fragments*:

> [The] melodic and harmonic content is expressed in such distinctive instrumental terms, such as the mandoline-like sounds on the harp, that it is these that impress themselves most strongly on the memory.[152]

Another aspect which seems to receive greater consideration from *Tragoedia* onwards is the registral band-widths of particular instruments and their relation to one another. Once again, this can be seen as a reflection of Stravinsky's work. At the opening of the *Bransle Gay*, in *Agon*, Stravinsky combines flutes and bassoons, here symbolic of a pastoral dance, with castanets (**App 34: 1**). The effect is the removal of middle-register sounds which contrasts with the previous movement, the *Bransle Simple*, which had been dominated by middle-register trumpets.

The fact that Birtwistle initially found most success with the public when using smaller instrumental forces is highlighted by the endurance of *Tragoedia* and the relative failure of *Chorales for Orchestra* (1960-63), which was widely felt by critics to have been an unsuccessful work.[153] His return to smaller instrumental forces in *Tragoedia* suggests

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[152] *The Musical Times*, June (1966), p.740.

[153] It is worth noting that *Chorales for Orchestra* not only had a long gestation period (three years) but it did not receive its first performance until four years after its completion. Reviews of the first performance in 1967, by the New Philharmonia Orchestra under Edward Downes in the Festival Hall, were, on the whole, not complimentary. In *The Times* on 19 February 1967, Desmond Shawe-Taylor reported that "Shafts of light strike into the mass of material without precipitating, as it seems, the next turn of events; the emergence of the chorale in the final section hardly tells, and its final reduction to octaves proves less striking than we had been led to expect because the string octaves are obliged to contend with plenty of other matter. Like many a young man's work, this score sounds over-packed and over-elaborate; but the composer has something of his own to say, even if he has not quite clarified his way of saying it." Edward Greenfield, reviewing the same concert for *The Guardian*, on 15 February 1967, wrote that "The programme note proved to be a mumbo-jumbo description of the worst kind, and I can only hope that Birtwistle quickly turns his talents back towards more concentrated forms." And in *The Observer*, on 19 February 1967, Peter Heyworth commented "Only in brief passages ... where lines are pitted against one another, does the music get beyond striking dramatic gestures and achieve a real dramatic impulse", but concludes, "... throughout this clumsy and static score there are sudden shafts of light and movement that grip one's flagging attention and herald an individual aural imagination." For a more positive response, however, see Roger Smalley, 'Birtwistle's *Chorales*', *Tempo* 80 (1967), p.25ff.

a degree of anxiety and an attempt to find greater clarity of expression through smaller, more carefully marshalled forces.[154]

Despite the new clearer and more concise expression of ideas in *Tragoedia* there are many other elements which are familiar from previous works. In fact, the Prologue sets out in bold, strident gestures ('*senza espressione*') some of the main characteristic features of earlier pieces. The first of these is the minor third interval between the flute and horn. As in *Three Sonatas*, C and E flat are present. A, which would complete the *Three Sonatas* (0,3,6) A, C, E flat triad, is reserved until the end of the second system, in the harp, after all other eleven chromatic pitches have been sounded.

Serialism, of a sort, has not disappeared. The order in which pitches appear in the Prologue is as follows: C, E flat, D, E#, C#, B, A#, F# and G, E, G# and A. In confirmation of this sensitivity to pitch ordering, pitch 12, A, is played *fff* in the flute at the top of the opening chord in the next section, the Parados, logically preceded by G#, note 11, in the second violin and oboe. This is shown in **App 33: 3**. How does this relate to the ending of the Prologue? The prominent features of the ending of the Prologue are C, note 1, in the flute (repeated from the opening), F, note 4, in the horn, and C#, note 5, in the cello. This forms a (0,1,5) collection, drawn from the first half of the row. Therefore, the Parados section begins by complementing the ending of the Prologue, focusing on the pitches at the end of the row as opposed to those at the beginning and middle.

The presence of thirds, mostly minor, in the row is another characteristic feature. The D-F dyad which is frequently used in later works such as *Secret Theatre*, is introduced by the harp, three bars after figure 1. D (note 3) is established as a pedal note in all three instruments, from figure 1 up to the flute's high C in the penultimate system. Prior to the flute's C, F (note 4) is introduced in the horn and carried through to the final

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[154] Birtwistle's second attempt at orchestral writing also met with criticism in the musical press. Jeremy Noble, in his review of the first performance of Birtwistle's *Three Movements with Fanfares* (1964) performed on 8 July 1964, noted in *The Musical Times* that, "I could not help wondering whether Birtwistle was really happy writing for an orchestra of even this limited size, and whether it was not a sound instinct that had hitherto kept him almost exclusively to smaller instrumental ensembles, where the balance of timbres is more precisely calculable and the medium itself imposes a greater sense of continuity. On the other hand a number of passages in *Three Movements with Fanfares* showed a real feeling for instrumental colour and character, even if some of them seemed rather closely derived from recent Stravinsky."

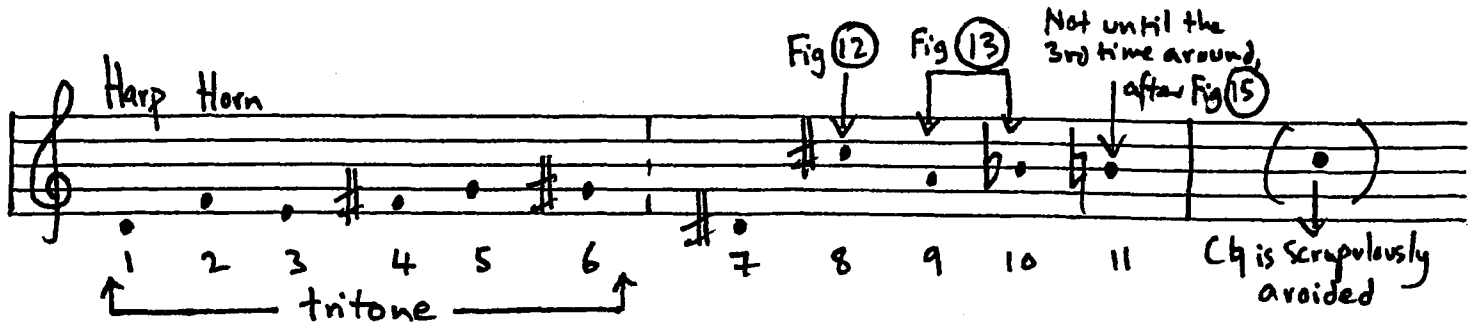
chord. Why is C# (note 5) present in the final chord? The first thing to note is that this chord (C, C#, F) is the three-note collection which Birtwistle used at the end of his serial statements during the central instrumental movement of *Monody for Corpus Christi*. Within the context of this piece, it follows a logic determined by the row. The opening four notes (C-E flat, D-F) were used as pedal points, and note 5 (C#) is the next in line. This unfolding of notes in the series through their appearance as important structural pedals, is continued in the Parados section when note 6 (B) is played *fortissimo* in the flute in bars 8-10 (**App 33: 3**). The chord also contains note 1 (C) in the bassoon, and note 4 (F) in the cello, thereby referring back to the Parados ending.

At this stage, one might expect the chords to begin to form perfectly symmetrical formations as they often do in *Three Sonatas*. On the next page, three bars after figure 3, there is a suggestion that this may be about to happen, when the wind ensemble play a chord which can be reduced to (0,2,3,5) (F, A flat, E flat, F#) and the strings play a complementary (0,2,3,5) collection (C, B, D, A) (see **App 37: 1**). Finally, at figure 4, the woodwinds and strings each hammer out their own literally symmetrical (0,3,6,9) chords based on E (E-G-B flat-C#). As in *Three Sonatas*, the use of literal symmetry is allied to interval 3 collections, as well as highlighting a chromatic contest between E flat (here note 2) and E (here note 10).

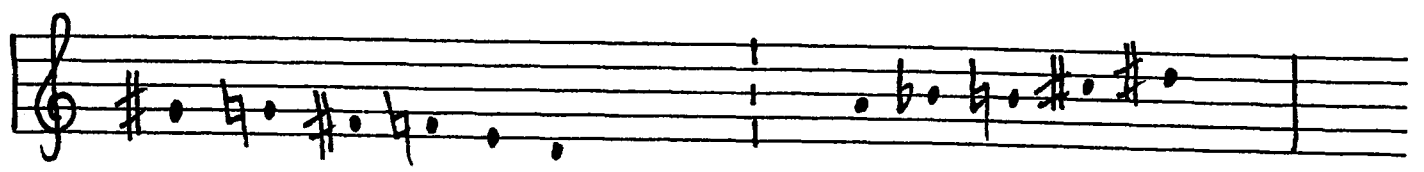
But the symmetry does not stop there. At figure 5 a series of chords, governed by doubled fifths and octaves, contains a literally symmetrical chord in the strings (B-C-F-F#), a (0,1,6,7) collection. The horn and harp, meanwhile, set up note 1 (C) in double octaves. This relates to note 6 (B) at the bass of the string chord. At figure 9, note 1 (C) reappears in the horn as the central pedal (recapitulating its role at the opening of the Prologue). Notes 7, 9, 10 and 12 (a numerically symmetrical slice of the row's second hexachord) is hammered out in the woodwind, *ffff*, six bars after figure 9. Note 1 (C) continues, unaffected by the surrounding outbursts, until the final closing gesture in the harp. The last two notes in the harp are A (note 12) and C (note 1).

With the beginning of the Episodion section, Strophe I, the horn introduces another row ordering:

Example 11 *Tragoedia* Page 8

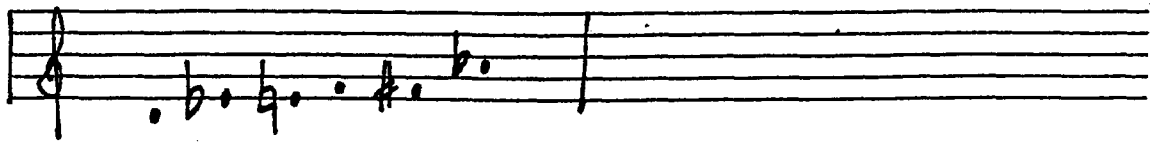


This can be reduced to:



Set 6-2: (0,1,2,3,4,6)

This is the inversion of the second hexachord of the original 'row' of *Entr'actes and Sappho Fragments*:



Subset of 6-2: (0,1,2,4,6)

Introducing a new row form in the horn is a feature which dates back to *Refrains and Choruses*. On this occasion the starting point is the D-F dyad, the harp supplying a persistent yet rhythmically varied pedal on D, whilst the horn opens out a chromatic wedge shape based on F, and the pulsating motion together with the pitch D is clearly based on the opening of *Ring a Dumb Carillon*. This simple gesture of one regular pitch against a less regular one is the purest expression of Birtwistle's style. It is also characteristic that the horn's row consists of only eleven pitches. Like its counterpart in *Refrains and Choruses*, the horn solo here omits note 1 of the original row, C natural.

A logical continuation from the horn's opening wedge-shape would be for the symmetrical (0,3,6) chords to open out into (0,4,8) collections, as was seen in *Three Sonatas for Nine Instruments*. This moment is denied, however, and instead the closest the music comes to this is a (0,3,8) chord when the horn, harp and cello repeat pitches D-

F#-A, in the lead up to the end of Strophe I (**App 37: 2**). This ending recalls the close of the Parados section - here pointed out by the harp's four-note 'cadence' figure. Not only does this figure bring us back to note 1 (C), but it does so via note 6 (B), which completes a symmetrical slice of the row: 3 (D), 6 (B), 9 (F#), 12 (A). It also signals the fact that the horn has gone full circle and on the last note of the cadence figure the horn starts its expanding wedge again on D.

One bar before figure 15, the horn solo comes full circle a second time (**App 37: 3**). On this occasion, however, it is accompanied by a woodwind figure derived from figure 12, which gesturally recalls the repeated note figure at the opening of the Prologue. Detached from its context at figure 12, this idea re-emphasizes the outer notes of the row, 1 and 12. The third pitch is D flat (note 5) which, at figure 12, was present in order to double enharmonically the horn's C# pedal. At figure 15, the D flat is redundant, suggesting that Birtwistle has merely grafted this repeated idea on to the horn line regardless of what the horn is playing.

However, the chord is reworked a few bars later, this time in the strings, as a (0,1,4,9) collection consisting of notes 1, 5, 10 and 11. Notes 10 and 11 (E and A flat) lead into a new section in which a single line is passed between the horn and the cello, whilst the harp plucks away at C and F#. The chord comprising notes 1,5,10 and 11 is brought back, however, at the opening of Antistrophe I, in a manner which recalls the opening of the Parados. Underpinning this chord the horn triumphantly reasserts note 1 (C). In this sense, the openings of the Prologue and the Parados have been brought face to face.

Just after figure 18, the cello announces itself with note 8 (G), contesting the horn's note 1. This is a new development, and soon even the woodwind respond, when the flute picks up G two bars before figure 19, while the cello starts double-stopping on G. The appearance of note 8 begins to make sense when, after a brief soloistic flourish away from G, the cello moves on to F# - note 9. At figure 20, the familiar chord now consisting of notes 1, 5, 8 and 11 reappears (which looks like a printing error where the flute's G should be E - note 10 instead of 8). This is repeated five times.[155] On this

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[155] In the last of these chords the flute has B at the top, which looks like a printing error and may have originally been G, if not E.

occasion, the cello ends the section with its own version of the harp's four-note cadential figure. As expected, it begins by supplying note 12, which is where the cello seemed to be heading from note 9 (note 11 - and 10 if there is a printing error - is provided by the woodwind chord). However, unlike previous occasions, the figure now ends on B, note 6, rather than C.

This is immediately explained by the opening of the Stasimon, where the flute and harp begin on C. In fact, the flute inscribes an opening wedge around C which mirrors the horn's earlier wedge around D. As a whole, the Stasimon creates a tension between the outer extremes of the row. It does this by emphasising notes 1 and 2 (in the flute and second violin), and notes 11 and 12 (in the bassoon and viola). Then note 6 (B) makes its entrance in the clarinet (on page 19). The viola leads on from this to note 7 (A#), but the flute concludes the movement by moving from note 6 to 1.

The Second Episodion, beginning with Strophe II, is the longest and most dense of the movements in *Tragoedia.* It is in this movement that one senses the coming together of competing tendencies in the work - the ensemble versus solo, linear versus vertical. More than this, however, the movement both reassesses previous figures and textures as well as amplifying them. In this sense it is reminiscent of the climactic V/2 movement in *Entr'actes and Sappho Fragments*, the structural climax where H-M was reassembled in conjunction with elements from Cantus III and section II, where the sparks began to fly and the music took on the form of a ritualistic dance. At the same time, a number of devices were employed which not only broke up the flow of the propulsive dance-idea and culminated in a recapitulation of the opening 'head-motif'.

From the outset of the second Episodion it is clear that ensemble action will dominate, but attempts are made early on, notably by the cello and horn, to break free into purely solo expression. However, these solos are not only rhythmically four-square, but they parody one another - either they are poor attempts at breaking away, or they are deliberately caustic gestures which make fun of themselves as well as the idea that communality is not the preferred option. When these gestures are 'brought into line' from figure 27, the effect is to slow down progress with a series of halting sustained chords. At figure 29 a dance-like idea breaks out in the flute and oboe - a new attempt at finding spontaneity, only this time one shared by others (see **App 37: 4, a**). The halting chord

interrupts again, this time accompanied by the harp's cadential four-note idea - signalling a new beginning.

At figure 30 the dance-like idea is taken up by all the woodwind and it seems that a satisfactory, shared experience has been found, with the harp joining at figure 31. Only the strings have yet to be included. The chords and harp cadence comes again, and from figure 33 the strings, harp and woodwind all share in the dance. There is something a little naïve about this, and one is reminded of scenes in *Punch and Judy* and *Down By the Greenwood Side* where choruses of dancers act out pageants and ceremonies that in turn call to mind the fairs and village greens of a mythical English folk community. At this moment we are situated in the middle of the *Tragoedia*, the 'goat dance', as Birtwistle has described it in his programme note.

As if holding back to let one person through a line of dancers, the clarinet is permitted to take up the dance alone whilst the others sustain chords, which leads into Antistrophe II. At this point the music reintroduces a texture first encountered at figure 11, during Strophe I. A characteristic feature of Antistrophe II is the ascending tendency of the phrases in the string quartet, culminating in the passage of three-note, ascending phrases, in rhythmic unison beginning nine bars before figure 36 (**App 37: 4, b**). At the same time, the bassoon and horn repeat G to C. This gesture reworks a feature of Antistrophe I: the note 8 (G) note 1 (C) contest between the cello and horn just after figure 18. The difference is that here the notes are not in conflict, but are conciliatory, working together in a manner which not only alludes to the bass line of a traditional perfect cadence, but which emphasizes note 1 of the row. This illustrates Birtwistle's serially-inspired pitch-centricity in one of its clearest manifestations.

Through its gradually thinning texture and pulsing claves, the ending of Antistrophe II recalls the close of the Stasimon section. However, an additional feature is the use of repeated pizzicato, col legno and arco notes in the strings. Although now somewhat transparent-sounding, this is a reinterpretation of the chiming, insistent ending of the Parados movement, and is supported by the same C# pedal in the cello. In summary, Antistrophe II assembles reworked ideas from three previous movements, but in such a way that the original components are completely reinterpreted, creating an entirely new context.

Coming full circle, the Exodos returns almost note-for-note to the Parados. However, rather like the processes of addition witnessed in *Entr'actes and Sappho Fragments*, the music contains a series of interpolations, some of which are based on simple readjustments, whilst others continue the music in a similar vein suggesting that the Prologue is actually an abbreviated form of the Exodos. The first interpolation, which sounds like a continuation, occurs in bars 6-10. Notably, it introduces two significant elements: a repeated C (note 1) in the bassoon; and a repeated B (note 6) in the flute. Following this, at figures 40 and 41, the material previously given to the strings at figure 6 and woodwind at figure 5 is exchanged. Subsequently, the sustained woodwind chord from figure 7 is reworked in the Exodos now with notes 12 (A) and 2 (E flat) at the top and bottom respectively (previously it was notes 3 and 8 at top and bottom). In addition, the horn is introduced, prominently playing note 6 (B). To round off these alterations the harp is added, with a short chord, *ffff*.

Figure 42 then picks up from figure 8, note-for-note, until another insertion which runs from 7 bars after figure 42 until figure 43 (**App 37: 5**). Whilst the woodwinds play rapid, fragmentary arpeggio figures, the strings play eight repeated unison Ds. This immediately calls to mind the central section of *Refrains and Choruses*, where ensemble unison D statements eventually resulted in the literally symmetrical chord around D which signalled the start of the horn solo. In this context, however, the repeated D (note 3) grafts the Prologue on to the Parados/Exodos, since it was in the Prologue that the horn announced its independence from the opening ensemble C-E flat repeated notes by breaking away on to D. Here, however, the horn is absent from the texture, and its solo call has been appropriated by the ensemble. The remaining alterations protract the musical flow and increase the sense of tension in the lead up to the end of the piece.[156]

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[156] The bar before figure 43 reworks the bar before figure 9 by placing C, note 1, in the flute instead of note 10, and the ensuing woodwind chords are delayed. The woodwind chord, 3 bars after figure 9, is now repeated three times in the build up to figure 44, where C (note 1) is emphasized by the horn and harp, with C# in the cello. In the Parados, these chords stopped abruptly two bars before figure 10. In the Exodos, the horn stutters on, repeating note 1, accompanied by notes 5 and 6 in the cello. The figure 10 chords are then completely reinterpreted on the final page of the score as a series of 18 quaver pulses. The Horn Cs are replaced by repeated A flats - note 11. Instead of one chord repeated three times in the harp, two new chords are repeated 18 times. The strings now have the pitches that were previously in the woodwind from figure 44, and the woodwind have now all taken up claves.

On the final page, the ensemble is reassembled into a unanimous expression of an idea first heard in the woodwind at figure 4, during the Parados (see **App 37: 6**, **a** and **b**). The chord at figure 4 was a literally symmetrical arrangement of a (0,3,6,9) collection. On the closing page, however, the pitches (taking the horn, harp and strings together) form an asymmetrical chord, but one drawn from a symmetrical slice of the row: notes 4,5,7,9,11,12. The horn's repeated A flat (note 11) is a signal that the harp's closing, cadential gesture (taken from the close of the Parados) is about to draw the work to a close with note 1, preceded by note 12.

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Despite obvious new developments during the early 1960s, Birtwistle evidently cleaved to aspects of pitch ordering which he had experimented with most deliberately in *Three Sonatas for Nine Instruments*. Here, however, the use of a tone row has been tempered by an increased range of instrumental textures, a greater distinction between solo and ensemble writing, and a more sophisticated deployment of highly characterized musical objects whose pattern of return not only clarifies the form of the piece, but demonstrates an increasing sensitivity to the implications of bringing back a familiar idea in a new context. The following chapter will discuss *Verses for Ensembles*, which is an even more refined expression of the ideas set out in *Tragoedia*. However, this is preceded by a radically different piece, *Nomos*, a single movement work generated from a single line. The second half of the 1960s, therefore, saw Birtwistle faced with an apparent dilemma: how to pursue line and object simultaneously.

Chapter 3

Lines, Circles and Objects: 1967 to 1969

So far the discussion has been concerned exclusively with works for which little or no sketch material is extant. Some of the analytical techniques and issues that have been raised will now be considered in the light of the sketches and drafts which exist for several important, mainly large-scale works, composed from 1967 to 1977. Whilst the sketch material raises its own set of problems and will require a degree of detailed explanation, my purpose in introducing these documents is to establish what value, if any, they hold for an analyst wishing to understand the composing process more clearly. Do the sketches tell us anything that the score does not that may be useful for analysis? Are the sketches able to validate analytical findings and the analytical techniques already applied to the earlier works? Or are there 'missing links' between sketch and score which might be better explained by analysis?

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During the years 1967 to1969, Birtwistle was occupied with the completion and staging of *Punch and Judy*, and the founding of the Pierrot Players,[157] as well as attending two Universities in America on a Harkness Fellowship. The pieces examined here were written or originally conceived whilst Birtwistle was in America. Two works will be analysed, *Nomos* (1967-8) and *Verses for Ensembles* (1968-9), for which extensive sketch and draft material is available at the Paul Sacher Foundation.

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[157] The Pierrot Players gave their first concert on 30 May 1967, at the newly opened Queen Elizabeth Hall. The group consisted of the same instrumentalists as the ensemble for which Schoenberg's *Pierrot Lunaire* was scored: flute (Judith Pearce), clarinet (Alan Hacker), violin (Duncan Druce), cello (Jennifer Ward Clarke), piano (Steve Pruslin) and female singer (Mary Thomas). A percussionist (Tristan Fry) was also added to this. According to Mike Seabrook (*Max: The Life and Music of Peter Maxwell Davies*, London: Victor Gollancz, 1994), "Max himself says that, as with the Wardour Castle Summer School, the first germ of the idea [to form the Pierrot Players] came from Birtwistle."(p.100). When Birtwistle left the group in 1970 the players renamed themselves The Fires of London under Maxwell Davies's direction, and a rift was formed between Davies and Birtwistle. This was partly a result of tension between Birtwistle and the group's manager, James Murdoch. For more details see the chapter 'Metamorphosis' in Seabrook, especially pp. 119-26.

Birtwistle was granted a Harkness Fellowship early in 1966 and he began in October of that year.[158] Amongst various pieces of correspondence held at Princeton University, a letter is preserved which Birtwistle addressed to Edward Cone, dated 15 December 1965 (see **App 38**). In this letter, Birtwistle explains that Maxwell Davies, who had attended Princeton on a Harkness Fellowship in 1964, had recommended the idea to him and that he wished to be considered for courses in analysis and electronics. The former was taught by Edward Cone, whilst electronics and a course on twentieth century music history, including a detailed study of the Second Viennese School, was run by Milton Babbitt. According to Paul Lansky, who was a Graduate studying at Princeton at the same time as Birtwistle, Earl Kim ran the composition seminar which consisted of practical work and discussion groups.

When Birtwistle arrived at Princeton in 1966 he was already an established composer in England. This is made clear by the comments of his referees, one of whom was Benjamin Britten, who wrote of Birtwistle:

> I regard him as possibly the most interesting of the English composers of his generation ... and I can think of no young composer of his age worthier to receive and make full use of a Harkness Fellowship .... He is a young representative of the best in present English musical creative life.[159]

Whilst in Princeton, Birtwistle completed his work on *Punch and Judy* and its companion piece, *Tragoedia*, was given its American première in Los Angeles on 3 April

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[158] The letter of acceptance from Princeton was sent on 8 March 1966.

[159] Birtwistle's letter to Britten requesting a reference is held by the Paul Sacher Foundation. The fact that Birtwistle approached Britten gives some insight into the musical politics of the time. Britten's reputation in America in the late 1960s obviously outweighed Tippett's, to whom Birtwistle was much closer as a result of the Wardour Castle Summer School of Music meetings in 1964 and 1965, organized by Birtwistle, at which Tippett was President, and where *Tragoedia* had been premièred to great acclaim. It also seems strange that Britten was approached given that, as I was informed by Robert Sherlaw Johnson, the tone of the Wardour Castle sessions was distinctly anti-Britten. However, the letter confirming Britten's willingness to act as a referee was sent at the time that Birtwistle had been commissioned to write an opera for the English Opera Group (*Punch and Judy)*, scheduled for a performance at the Aldeburgh Festival. Despite his evident support for Birtwistle at the time, events were to take a turn when, it is reputed, Britten walked out of the opera during its first performance on 8 June 1968.

1967.[160] In the same month Birtwistle completed work on *Monodrama*, a piece of music theatre composed for the newly founded Pierrot Players, and as a founding member of this group Birtwistle made several return trips to England throughout 1967 in order to assist with performances. *Three Lessons in a Frame* was also composed for a Pierrot concert, specifically for Stephen Pruslin who had written the libretto for *Punch and Judy* a few years before. This was a period of tension and transition for Birtwistle. The Pierrot Players required small, chamber-sized works, whereas Birtwistle's conceptions were becoming larger, as the opera testifies, and this would eventually result in his break with Maxwell Davies and the Pierrot Players in 1970, after which Birtwistle concentrated on larger-scale works such as *An Imaginary Landscape* (1970-71), *Meridian* (1971), and *The Triumph of Time* (1970-72).

Documents in Princeton reveal that Birtwistle had intended staying there for a second year and that he had been accepted to do so. However, a desire to study Schenkerian analysis, apparently prompted by Maxwell Davies, encouraged Birtwistle to move instead to the University of Boulder, in Colorado, from Winter 1967-68.[161] Around this time, Maxwell Davies wrote in his programme notes for *Versalii Icones*, composed in 1968, that part of the work was based upon a Schenkerian analysis.[162] In fact, Birtwistle was to use the same language to describe his orchestral work *Nomos*, composed whilst at Boulder. Given Birtwistle's interest in line, Schenker's emphasis on a linear, contrapuntal interpretation of the Classical repertoire must have been extremely attractive to him. Verbal jottings Birtwistle made for a much later orchestral work, *Secret Theatre* (1984), reveal that he had adopted the terms Background, Middleground and Foreground when discussing his music, but his use of these concepts seems purely metaphorical. Just

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[160] Birtwistle had requested a travel grant from Princeton University to attend, but this was turned down.

[161] I have not been able to ascertain who taught Schenkerian analysis at Boulder.

[162] "The raw material from *Ecce manus* is then bent to resemble a Schenkerian analysis, but instead of stripping off layers of music to expose ultimately a 'common' skeleton below, the 'skeleton' is heard first, and levels are then added; but when it would just about become clear to the ear that the analysis is of the Scherzo of Beethoven's Fifth Symphony, the flute twists the *Ecce manus* fragment into a resemblance of the Scherzo of the Ninth - it is a related but false image." Reproduced in the booklet to the Unicorn-Kanchana recording of the work, UKCD 2068, recorded October 1970 (The Fires of London, conducted by Maxwell Davies).

how significant Birtwistle's study of Schenkerian analysis was will be considered during this chapter. The significance of line during this period is also indicated by the titles of the works *Nomos* and *Linoi*, both composed whilst Birtwistle was in Boulder.[163]

Nomos and *Verses for Ensembles* are two ostensibly very different works. In part this is a reflection of the contrasting nature of their commissions: *Nomos* was composed for the BBC Symphony Orchestra, performed under Sir Colin Davis at the 1968 BBC Proms Concert, on 23 August; *Verses for Ensembles* was written for the newly formed London Sinfonietta, and performed under David Atherton in the Queen Elizabeth Hall, on 12 February 1969. In *Nomos*, scored for a large orchestra, an unprecedented degree of importance is given to line, or *cantus firmus*, which governs the overall form and internal development of the piece. In *Verses for Ensembles*, scored for wind and percussion, the juxtaposition of varied textures and instrumental groupings, as was seen in sections of *Tragoedia*, occupies central stage. Line, circle and musical object (as discussed in Chapter 2) have a special role within these two works, and an understanding of these elements will help challenge the assumption that the opposition of direction and circular, interrupting devices, is more prevalent in *Verses for Ensembles* than in *Nomos*.

Nomos: Formal Analysis

Birtwistle adopts a continuous line in *Nomos*, carried in the work by an amplified wind quartet. The fact that he consequently appears to have moved away from the more extreme dislocations and antiphonies contained in *Tragoedia*, and the exploration of object form in *Entr'actes and Sappho Fragments*, suggests that earlier works did not fully realize his ideal musical expression. *Nomos* picks up from *Chorales for Orchestra* in terms of its size and scale, but it also recalls the gradual evolutionary processes of *Refrains and Choruses*. In many ways it was the most seamless piece he had composed to date. In his analysis in *Tempo* magazine, following the first performance, Roger Smalley used words such as "evolutive", "generic" and "unified", stating that "It is the concentration on similarity rather than identity which gives the whole work great variety within its tightly

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[163] According to Birtwistle, *Linoi* represented 'the generation, the simultaneous flowering and destruction, and the prolonged death agony of a single melodic line.'

controlled unity."[164] This sentence reflects Smalley's overwhelming desire to categorize the work as 'organic'. However, his analysis does usefully point to figures on the first page which can be seen to generate ideas throughout the piece, and the work's soft, sustained opening on a unison G, gradually opening out chromatically, does strongly suggest the appropriateness of organicist metaphors. This may have been present in Birtwistle's mind as a result of his interest in D'Arcy Thompson's *On Growth and Form*. Smalley notes that *Nomos* contrasts hugely with the very sectionalized *Punch and Judy*, which was finished in the year that *Nomos* was begun. Whilst the opera was a realisation of ideas set out in *Tragoedia*,[165] *Nomos* looks forward to large-scale processionals like *An Imaginary Landscape*.

It will prove helpful here to use the distinction which Birtwistle himself adopted for *Secret Theatre* in 1984: between 'cantus' parts (here referring to the amplified wind quartet), and 'continuum' parts (the rest of the orchestra). The piece is written in the form of a continuous movement, with two obvious structural divides supplied by pauses in bars 36 and 94. Two writers have commented on the form of the work, Michael Hall and Roger Smalley, and both differ in their interpretations. By looking closely at their remarks on the piece it may be possible to establish a more viable analysis. Hall describes the work in the following terms:

> Like many of his large-scale works it has cycles within cycles. In this case, three large cycles contain nine short cycles, each subject to invented laws of expansion and contraction.[166]

Hall appears to be suggesting that the work is divisible into three main parts, or cycles, but it is not clear from this whether he means that each of the three large cycles contain nine smaller cycles, or whether there are just nine shorter cycles in total. It is the difficulty of establishing what Hall is referring to which makes it impossible to comment on his

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[164] 'Birtwistle's *Nomos*', *Tempo*, No. 86 (1968), pp.7-10.

[165] See the comments in Birtwistle's programme notes to *Tragoedia* (reproduced in Hall (1984), p.175): "*Tragoedia* deals with a number of ideas which have not appeared explicitly in my work since *Chorales for Orchestra*, and its music appears practically note for note in my opera *Punch and Judy*, for which it was a preliminary study."

[166] Hall (1984), p.60.

remarks. It is also not clear whether he is referring to cycles within the cantus line or at the surface of the work. Smalley, on the other hand, turns his attention directly to the cantus line and suggests that:

> [The] cantus firmus runs continuously through the first 130 of the work's 146 bars .... At first single pitches are passed from instrument to instrument. Not until bar 96 are two pitches sounded simultaneously, three at bar 107 and four at bar 129. The constant presence of this cantus firmus ... defines the form .... The division of the work into three sections is also marked by violent solo crescendos on the amplified clarinet (at bars 37 and 94).[167]

Despite the contradiction implicit in this description, where references to the cantus line suggest a division into four sections rather than the three stated in the last sentence, Smalley's account provides a roughly symmetrical formal scheme, which could be summarized as follows:

Section 1	opening - bar 37
Section 2	bars 38 - 94 (with a climax in bars 87-90)
Section 3	bars 95 - 130 (with a climax in bars 123-4)
[Section 4]	bars 131 - 146

As mentioned earlier, the first division at bars 37-8 is supported by a clear break in the music, a pause which follows the clarinet crescendo (on D flat), and there is a return of a figure in the horns which first appeared on page 2, but Smalley does not explain how this structural break relates to the cantus line. The pause in bar 94 is accompanied by another clarinet crescendo (this time on A flat, a fifth away from the previous cadence) and Smalley relates this to the presence of the first use of two simultaneously sounding pitches in the cantus, but that in itself does not explain the importance of this moment in terms of the pitches in the cantus line. The sounding of three simultaneous pitches in bar 107 is not accompanied by a cadential break in the music, although the continuum parts move to a unison D following a series of rapidly ascending scalic figures (this may relate back to the D flat in bar 36). In addition, across the page at bar 109, a cor anglais figure from page 3 (which Smalley labels Example 4 in his article)

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[167] 'Birtwistle's *Nomos*', *Tempo*, No. 86 (1968), p.8.

is literally restated in a new context, although the texture is not interrupted here. However, at bar 131, two bars after the first occasion when all four cantus parts come together, a new texture begins, marked 'meno mosso (crotchet = *c*.52)'. At this point the cantus moves freely between unison statements, exactly as the continuum had done before when forming a counter-line (a feature that will be discussed later). The continuum, on the other hand, adopts a circular texture which is composed of a single block of material repeated nine times before breaking off and leaving the cantus to continue until the end. Although I would accept the division suggested by Smalley, more needs to be said about the cantus line, and the pattern of recurrence of various ideas throughout the work - patterns which do not necessarily conform to these structural divisions.

According to Michael Hall:

> throughout the piece four amplified wind instruments, flute, clarinet, horn and bassoon, unfold very slowly a long *cantus firmus*, which for all intents and purposes is through-composed. In true Schenkerian fashion it represents a prolongation from the dominant (G) to the tonic (C).[168]

The problem with Michael Hall's observation is that G does not function as a dominant, nor C like a tonic, in this work. Undoubtedly, the fact that the piece begins and ends with these tones respectively, could be construed as a metaphorical gesture by Birtwistle, acknowledging his discovery of Schenker. In fact, pitch G has more claim to be a 'tonic' than C, since it is the first chromatic pitch in a tone row which although never restated in its original order, exerts an influence over the development of the piece. However, the tone row does not, in the main, determine the sequence of pitches in the *cantus firmus* - which I shall refer to as the cantus line.

In keeping with the title of the work,[169] the cantus line provides a simple melodic

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[168] Hall (1984), p.60.

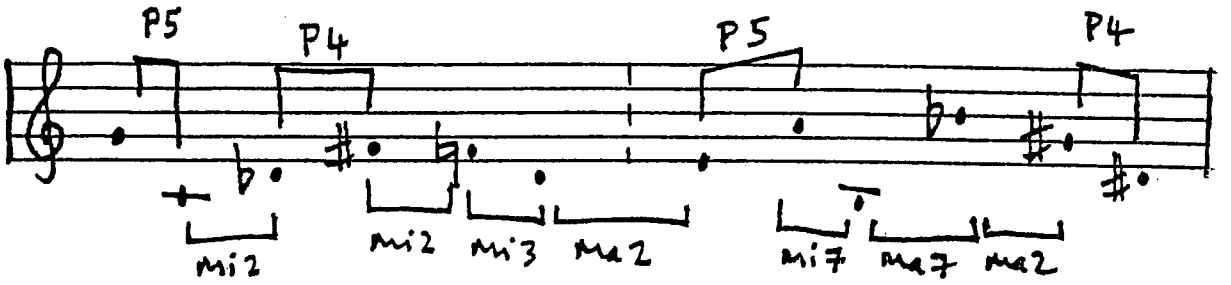
[169] According to Michael Hall, who has derived his comments from Roger Smalley (p.60 of his *Tempo* article), "... the title, a Greek word, has wide implications. It refers both to the melodic patterns which accompanied the recitation of the epics and concepts of law and order." Another interpretation is suggested by Bruce Chatwin. In his book *The Songlines* (London: Picador, 1989), p.184, Chatwin explains the word's link to the modern Greek usage, where it simply means 'law': "*Nomos* is Greek for 'pasture', and 'the Nomad' is a chief or clan elder who presides over the allocation of pastures. *Nomos* thus came to mean 'law', 'fair distribution', 'that which is allocated by custom' - and so the basis of all Western law." In his chapter "Nomad Invasions' in *What Am I Doing Here* (London: Picador, 1990), p.219, Chatwin develops this

formula which acts as the law-giver, determining the shape and structure of the work. From it much of the other instruments' material is generated, including a counter-line in the continuum which begins to appear around bar 65 and climaxes in bar 124. However, the notion of a series determined by the order in which the twelve chromatic pitches are first presented still operates behind and around this scheme. Whilst the cantus line appears to have been derived from a separate system, the shadow of a tone row is cast across the work at various moments. The row is as follows:

Example 12 *Nomos* The tone row



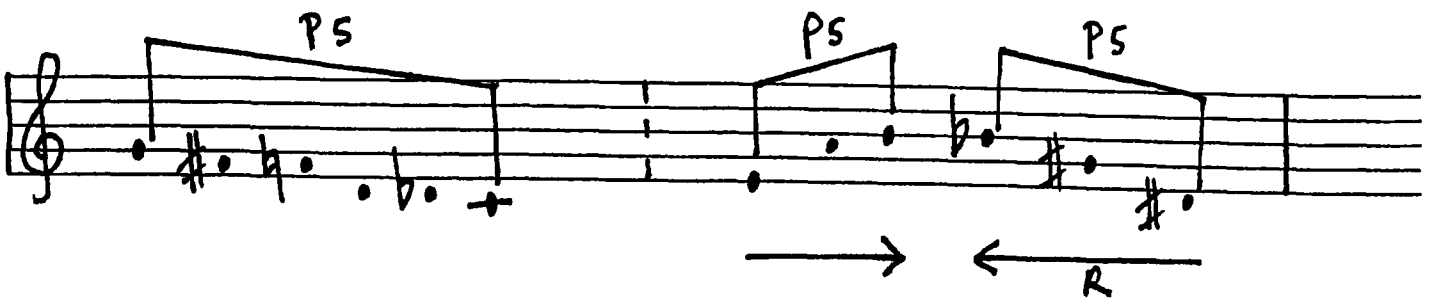
Analysis of the row



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further: "A nomad proper is a mobile pastoralist, the owner and breeder of domesticated animals .... Nomadism is born of wide expanses, ground too barren for the farmer to cultivate economically - savannah, steppe, desert and tundra, all of which will support an animal population providing that it moves. For the nomad, movement is morality. Without movement, his animals would die. Nomads never roam endlessly from place to place, as one dictionary would have it. A nomadic migration is a guided tour of animals around a predictable sequence of pastures. It has the same inflexible character as the migrations of wild game, since the same ecological factors determine it ... the herdsman [plots] his annual orbit to suit the needs of his own particular livestock. A nomad's territory is the path linking his seasonal pastures. Iranian nomads call the path *Il-Rah*, The Way. The 'way' of one tribe intersects with the 'ways' of others .... Herdsmen claim to own their 'ways' as their inalienable property; but in practice all they ask is the right of passage through a given stretch of territory at a fixed time of the year."

Re-ordered and condensed



The row is best understood in two halves, each with its own form of symmetrical design. The second half is the most obviously symmetrical, with two perfect fifths (A-E and G#-D#) flanking two major seconds around a minor second. A feature of this design is that notes 10 to 12 are a retrograde of notes 7 to 9, and both are (0,2,7) collections. When re-ordered slightly, the first six notes reveal two neighbouring clusters around C and G, which, when expressed as an ordered collection, fill the perfect fifth space between these two notes: (C- D flat-D) and (F-F#-G). In this order the pitches form the symmetrical collection (0,1,2,5,6,7). Finally, one other important feature, from the start of the row, is the presence of two (0,1,6) collections, and when notes 1, 6 and 12 are brought together (0,1,5) is formed.

The complete cantus line is given in **App 39: 1-2**. There are four principal sections which roughly coincide with the divisions suggested by Smalley. The first section, which forms an introduction and coincides exactly with Smalley's plan, ends on page 14. During this time the cantus line unfolds a tritone from G to C#, and back to G. Another feature is a repeating three-note contour, which can be expressed as <2-3-1>, where 1 is the lowest note, 2 the middle, and 3 the highest. During section two, from bars 37-94, the cantus line is characterized by a regular pattern of alternating three- and four-note contours which results in a circular, wave-like motion. Whilst the line is directed in the sense that it expands, the repeated seven-note shape (divided as three plus four) confers a regular, circling motion. The three-note contours are based on those from section 1, although the contour is altered from <2-3-1> to <1-3-2>, which results in a scheme based on two sets of expanding contours: <1-3-2> and <4-3-2-1>. The implication, from the evidence in the score, is that Birtwistle began by writing-out all the possible forms of these two types of contour, moving outwards in semitones. By comparing the first interval of

each contour it can be deduced that the original forms were 'filtered' (that selections were made from the available options) in the direction of ever-wider contours. For instance, the first intervals of the four-note contours proceed as: **1**, 2, 3, **5**, 6, 7, 8, 10, 13, 15, **17**, 18, 19, 20. This brings the first half of the piece, or second section, to a close on the interval 20 contour. Similarly, the first intervals in the three-note contours proceed as: 7, 8, 10, 11, 13, 14, 16, 17, 18, 20, 22, 23, 25, 26. Unlike the four-note contours, however, the three-note figures return to approximately the same registral position, beginning on one of four pitches: A flat4, G4, A4, or B flat4.

During section two, therefore, the cantus line is based on an expanding yet continually repeating series of contours, or basic shapes. As was seen in the discussion of form by D'Arcy Thompson, in Chapter 3, a simple generic form has been subjected to gradual distortion, whilst retaining its basic outline or identity. Jonathan Cross has pointed to the use of line and circle in Birtwistle,[170] and here a line has been constructed from a circular process. Perhaps this is what Michael Hall had in mind when referring to the use of cycles in the piece. There are moments which seem to represent return, but these do not add up to the numbers mentioned by Hall. During the four-note sequence the three intervals marked in bold represent moments of cyclical return, whereby the original contour [D flat, C, B, F#] expands outwards by a perfect fourth to form [F#, C#, G#, C#/D flat], and then again by an octave. Similarly, the contours beginning with intervals 2 and 3 expand outwards by a perfect fifth to form versions 8 and 7, respectively. One other potential expansion looks set to occur from version 10 to 20, however the final pitch is written as A flat rather than C, thereby altering the contour from <4-3-2-1> to <4-3-1-2>.

The question arises, was this a deliberate alteration? If so, why? One explanation is that A flat is used because of its position as note 11 in the tone row, which seems appropriate as section 2 is drawing to a close. This idea is supported by the fact that the clarinet A flat is accompanied in bar 93 by a three-note figure in the xylophone which consists of notes 1, 12 and 6 of the row. Furthermore, section 3 begins by picking up note 6 of the row, stated in the cantus line and supported by horns 4 and 1. At important

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[170] 'Lines and circles: on Birtwistle's *Punch and Judy* and *Secret Theatre*', *Music Analysis* 13/2-3 (1994), pp.203-25.

structural moments it appears that alterations may have been made to the pre-compositional scheme in order to relate the music to the tone-row ordering. One other feature of the xylophone figure is that its contour, <2-1-3> echoes the last three-note contour in section 2 in retrograde inversion. In more than one way, therefore, it is a suitable cadential gesture.

Smalley's suggestion that a third section extends from bars 94 to 130 is supported by an examination of the cantus line. From bar 94 until bar 130 the cantus line continues with the three- and four-note contour pattern, although this time moving in reverse, gradually contracting through intervals 20, 17, 14, 6, 5 and 4, in the four-note collections. During this process there is an allusion to one of the cycles of return established in section 2 with the appearance of [F#-C#-G#-F#] at interval 17, and [G flat-C#-A flat-G] at interval 5. The line begins with an expansive gesture from D3 up to B flat4, to A6, and back down to B4. The first three pitches here form (0,1,5), which relates back to the xylophone figure that brought section 1 to a close. The opening D (note 6 of the row), however, is not part of the three-note contour which suggests that it may have been added as a link to the end of the last section. Another anomaly occurs on page 56 where E flat appears between two three-note contours. This is note 12 of the row and either side of it are notes 6 and 1. In the music this moment coincides with the climax of the third section, with a near tutti unison in the continuum on B flat (note 10 of the row) which marks the end of the continuum counter-line.

The final section, from bars 131 to the end, is characterized by unison statements in the cantus, separated by more freely flowing movement. It is unclear to what extent the free flowing material belongs to the cantus line, or in fact whether the pitches played in unison alone constitute the line. However, when the pitches played in unison are considered separately it appears that they are reinterpreting section one. They do this by referring back to the space between G and C#. At the end of the piece, C# becomes an upper neighbour-note to the final C, whilst the lower neighbour-note B is hammered out in the trumpet during the nine-times repeated continuum block on pages 61-5. When the continuum drops out of the piece, B (note 9) continues within the cantus, receiving five unison statements out of a total of 17. The pitches which are most prominent amongst those played in unison are G (note 1), B (note 9) and C (note 2), which together form

(0,1,5) - the same collection formed by notes 1, 6 and 12.

Another reference to sections 1 and 2 is the emergence of four-note ascending contours, which reverse those used before. The sense of expansion and contraction has disappeared, replaced by a more static quality engendered by the fairly fixed register of the parts during the unison chords. The piece ends by alternating C with a literally symmetrical chord [E flat4-A4-G#5-D6], which consists of two tritones around a major seventh. Contained within this symmetrical chord are notes 11 and 12 of the row. But why is this alternated with note 2 (C) rather than note 1 (G)? Presumably, because the Schenkerian 'allusion' dictated C (as Hall points out). To argue that C has been 'prolonged' in any sense, however, would demand that C received harmonic support throughout the piece, which is not the case.

Another important feature of the work which is directly linked to the cantus line is the emergence of a counter-line in the continuum. This counter-line begins by supporting the cantus in bars 25-34. Then, from around bar 65, two separate strands emerge which run in parallel to the cantus. These are related to one another, and to the cantus line, by intervals based on fourths and fifths (for example, in bar 65: the cantus note is A; the viola, cello and first flute, clarinet and horn play E; flutes 3 and 4, and E flat clarinets 2 and 3 play B). These two counter-line strands come together briefly in bar 70 on a unison D (note 6), when the cantus pitch is G (note 1), before diverging once again. Finally, the counter-line appears more clearly, as a single strand, in bar 79, beginning: C#, B, C, B flat, E flat. From bar 82 it even moves in rhythmic unison with the cantus - once again, in coincidence with the cantus move to G (note 1). In the second part the counter-line resumes on E (bar 97). It then moves, via a series of ascending scales, to a unison D (note 6) in bar 108. From this point onwards, the counter-line is more clearly demarcated, and it gradually grows, attracting more and more parts until it climaxes in bars 123-4 (page 57) on a near tutti, *ffff* B flat (note 10). Significantly, this coincides with notes 6, 12 and 1 (D, E flat, G) in the cantus (see **App 40: 1**). The implication here is that the cantus line has been contrived to reflect the tone row at the point where the counter-line ends.

At the very opening of the work the continuum parts support the cantus line, gently inflecting the opening G with quarter tones, then opening out in a wedge form,

through the cor anglais solo on page 3. From bar 13 the continuum parts largely move in unison with the cantus, with the exception of the antiphonal expanding wedge figure derived from the horns on page 3. From bars 25 to 34, in between the continuum's unisons with the cantus line, the parts move more freely, recalling the earlier cor anglais and bassoon solos, on pages 3-5. The cor anglais phrase is significant because it constitutes the first lyrical moment in the piece. As such it represents a counter-melody to the cantus line, developing into the slower-moving counter line. On page 4, in bar 13, the bassoon solo picks up the lyrical 'baton' from the cor anglais in a phrase which seems to reflect the tone row ordering rather than the cantus line, which at this point has moved to A flat, supported by the oboe and double basses.[171]

In bar 34, at the end of the first section, contour assumes an important role in the continuum (see **App 40: 2-3**). This is brought about by a prominent, ascending figure in the second flute, rounded off by a flourish in the piccolo, which dovetails with the first three-note contour of the cantus line in section two. At this point the tone row ordering is alluded to. The flute figure begins with notes 6, 12 and 1 of the row, forming a (0,1,5) collection which is replicated in the next three notes of the line. As noted above, the use of pitches 1, 6 and 12 together becomes a feature of the work at moments of structural importance, suggesting a conflict between the two controlling factors of cantus and tone row. However, on this occasion the cantus line consists of notes 2 and 1 of the row, moving on to 11, 12 and 10 which form the first three-note contour at the start of section two. The implication is that Birtwistle deliberately chose to reflect the tone row at the start of the cantus line in the second section.

The challenge of this piece, it seems, was to incorporate everything Birtwistle had so far developed in terms of the deployment of distinct musical objects, within the context of a relatively seamless work which appears to have been designed to give the impression, at least, of a gradually evolving structure. What would be the function of objects within this work? Was there a role for the kind of processes seen in *Entr'actes and Sappho Fragments*, where models were stated, alluded to and reinterpreted? How would objects be presented from different perspectives within the context of a processional piece?

One option was to develop apparently independent sounding material which was

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[171] The bassoon solo moves around notes 5, 11, 12, 1, 2 and 3, before closing on 1, 12 and 7.

derived in some way from the cantus line. This would enable Birtwistle to reintegrate the ideas if necessary, and to invest the musical objects with characteristics which would allow them to allude to processes in the line. In this sense, perhaps, Birtwistle's work most closely resembles a Schenkerian analytical concept - that of deriving the foreground of a piece from the 'composing-out' of ideas that are latent in the background: of the surface features being a series of diminutions of simple progressions in the deep structure.

Several writers, including Smalley, Hall and Clements, have noted that the cantus line becomes more assertive throughout the piece and finally silences the continuum. Smalley actually goes further and comments that:

> If more complex pitch and duration patterns operate in *Nomos* than those already mentioned, a fairly close look at the score has failed to identify them. At this stage, then, it is impossible that they could be heard either .... Direct conflict between the amplified wind-quartet and the main orchestra is postponed to a very late stage in the proceedings and, perhaps because of the amplification system, perhaps because of my position in the Albert Hall, I was only intermittently aware of the wind quartet up to that time, whereas it would seem essential to the conception of the work that one should sense its presence throughout.[172]

Given the density of the scoring around the cantus line, is it not likely that Birtwistle did not intend the cantus to be heard other than "intermittently", and that its function would be akin to the background structure in a Schenkerian graph? If so, the foreground ideas would have the purpose of projecting the cantus line into the ears of the listener, not directly but through a process of allusion and suggestion.

From the opening until bar 24 the music in the continuum is concerned with introducing the various motivic ideas which return throughout the piece. The most important of these is a two-note figure, C-D flat, introduced in bars 1-2 by the bassoons, which Smalley labels 'motive c' in his analysis (see **App 41: 1, a)**. This idea, which I have labelled M1, is derived from notes 2 and 3 of the row, therefore its recurrences throughout the work relate the music to the tone row rather than the cantus line, which does not introduce C# until page 13. One development of this idea is M2, a three-note, descending figure in the bassoon and contrabassoon, first heard in bars 19-20 (**App 41: 1, b**). Another recurring feature, labelled M(k), is the pulsating figure in the horns,

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[172] Smalley (1968), pp.9-10

introduced in bar 4, which moves from F# (note 4 of the row) through E# (note 5) to an ascending motion, consisting of D, E and A (notes 6-8) (**App 41: 1, c**). Smalley labelled this figure 'motive d' in his analysis. It is characterized by a pulsating motion which calls to mind the opening of *Ring A Dumb Carillon*. Its restatement on page 15, immediately after the clarinet crescendo and pause, immediately links the start of a new section with a sense of cyclic return. Across pages 18-21, M(k) is used in dialogue between the oboes and trumpets, counterpointing the recurring use of M1 and its associated ideas in the xylophones. Here, as Smalley noted, the similarities are as noticeable as the differences, since the ascending xylophone figures begin to move out of step with one another in exactly the manner in which earlier the strings, playing a developed form of M(k), moved out of kilter with the wind ensemble.

The cor anglais solo on page 3 carries the first lyrical phrase of the piece and introduces notes 9-12 of the row (**App 41: 2, d**).[173] Beneath this figure, repeated Cs in the cello combine with the C-D flat figure as well as G in the cantus line, which together form collection (0,1,5).[174] Collectively, these ideas form an important moment which is derived from the opening C-D flat motive (M1) on page 1. This moment is reworked throughout the piece, as indicated by the following table:

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[173] This is Smalley's Example 4, on p.9 of his article. In hindsight, one can see how this wistful, languid solo was the source for similar sounding figures which recur throughout later works, particularly during the 1970s, especially in *Meridian* and *The Triumph of Time*. In the latter piece, the return of a cor anglais solo and a shorter saxophone solo is used as a metaphor for the constant, unchanging nature of real time.

[174] Smalley notes that the cor anglais phrase "only appears once more in its original form, on a piccolo towards the end of the third section" in bars 109-10, on page 50, and this roughly coincides with the first use of three simultaneous pitches in the cantus line (in bar 107). Smalley suggests that the inclusion of the cor anglais phrase at this point is due to its "generic likeness" to the woodwind counter-line. This is a feature which has become characteristic of Birtwistle's working methods, where a particular context suggests the inclusion of a pre-existing object which is then inserted into the texture. Closer examination of this moment, however, reveals more than just the appearance of the cor anglais figure. In fact, bars 109-110 constitute a reworking of the moment when the cor anglais line originally appeared in bars 7-10, and this in turn is a reworking of page 1.

Table 4 *Nomos* Appearances of M1

Page	Contents
Section One	
1	M1 in harp and bassoons, with D flat in the trombone, G in the horn, and C and G in the cellos
3	M1 in harp and bassoon, supported by trombone, C in the cello and G in the horn, and cor anglais solo
7	M1 in harp and bassoons, followed by M2 (a three-note descending bassoon figure (D-F#-E))
15	D flat-C in the cantus line, marked 'very intense', followed by a pause and the start of the second section
Section Two	
17-20	M1 in horns and bassoons, followed by M2 and ascending figures in the xylophones (repeated four times)
21-24	M1 developed: C-G# in trumpet 1, repeated five times
26	Clarinet and bass clarinet variation of M1, associated with a repeating xylophone refrain which continues through to page 32
Section Three	
43-44	M1 in harp and bassoon, and D flat in the trombone, C in the cellos and double-bass, A in the cantus, and E in bassoon 3
49-50	M1 in harp and bassoon, and D flat in the trombone, C in the cellos, A in the cantus (moving to E) and E flat in the counter-line (moving to B)
54-57	M1 followed by M2, in the strings, used repeatedly in association with unisons in the counter-line leading to the climax on page 57
58-60	mobile in the oboes and piccolo based on M1, repeated five times
Section Four	
66	C-D (variation of M1) repeated in the flute in the final bars of the piece

This is where Birtwistle's music relates to Stockhausen's moment form - when it not only reintroduces ideas into new contexts, but actually transplants entire contexts and inserts them into new ones. The result is a dense layering of events which simultaneously recalls the past and responds to the present moment, the 'now'. At bars 109-110, on page 50, it looks in the score as if a transparency of page 3 has been placed over the cantus and continuum counter-line at this moment, and that key elements, such as the scoring of M1 in addition to the cor anglais solo, have been traced on to the existing context. Another key feature from page 3 which has been reinterpreted is a triadic harmony which was formed between the cello C, horn G (from the cantus line) and the harp, trombone and bassoon D flat (forming a (0,1,5) collection). On page 50 this is reworked as a

symmetrical (0,3,6) collection: A-C-E flat, which was a feature of *Three Sonatas for Nine Instruments* and *Tragoedia*. This change is a response to the fact that the cantus line now provides pitch A, and the continuum counter-line a unison E flat. Two contexts, therefore, have combined to create a third. A similar reintegration of page 3 occurred slightly earlier, on page 44. Here the counter-line was on E and the cantus on A, with C provided by elements from page 3 (cello Cs and M1 in the bassoons and harp). Consequently, a (0,3,7) triad was formed between A, C and E, followed by a momentary symmetrical (0,3,6) triad when the counter-line moved from E to F#.

Many of the moments listed above use regular, literal repetition. One effect of this is to provide the music with a constant pulse, a regularly moving third layer which complements the more freely moving cantus line and its counter-part in the continuum. It also establishes a connection between bars 19-24 and bars 42-46 where M1 and M2 return once again and are four times repeated, this time with the ascending xylophone figures from bar 20. This regular pulsing motion is taken over by the trumpets and xylophones from bar 50-56, and carried on by the xylophones alone from bar 57-72.

In the second half of the work, from bar 99, a derivative of M2 is introduced by the trombones and tuba (see **App 41: 2, e**), labelled M3. This idea effectively operates in the manner described above, providing drive and pulse to the piece in its move towards the end. Moreover, it is perhaps the single most audible item which directly relates to the cantus line. It consists of two, three-note contours, the first of which is identical to the three-note contour in the cantus line, and the second mirrors the descending four-note contour. The regular rhythmic profile of M3 is a diminution of the cantus line, and an idea which looks ahead to the short, contour-based figures in Birtwistle's next major piece, *Verses for Ensembles*.

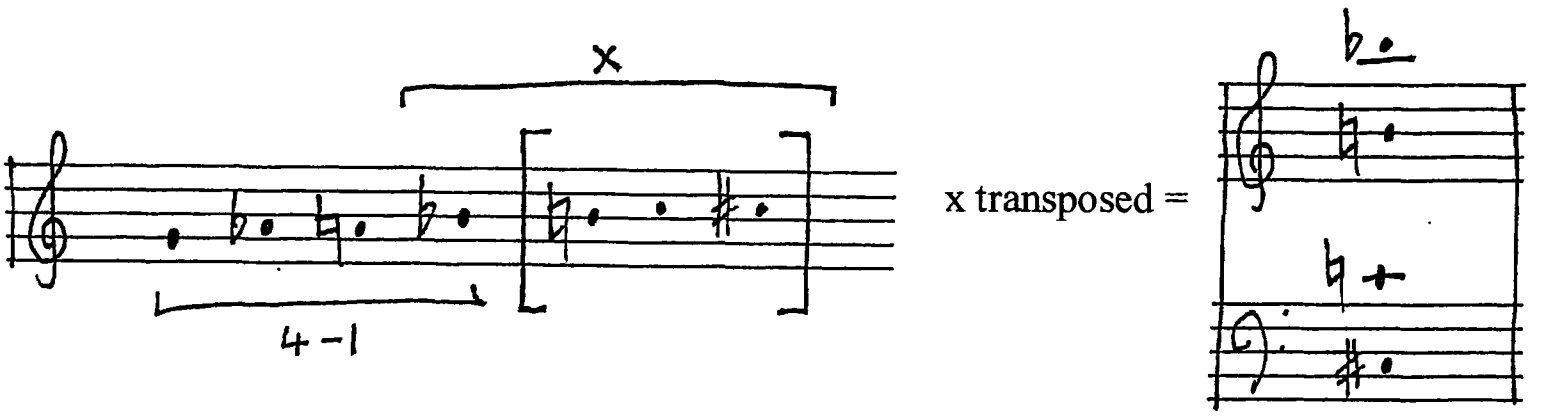
Another idea which is closely related to the cantus line is shown in **App 41: 2, f**. This idea is labelled K(m) and through its constant return it plays an important formal role. K(m) is first introduced in the continuum (in the first flute, oboe, clarinet, bassoon and horn) at the start of section 2, on pages 16-17.[175] It consists of two features, both linked to the cantus line. The first of these is the opening chord [B flat, B, C, C#], which forms

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[175] K(m) reappears, note-for-note, on pages 26-27, 34, 43 (at the beginning of section three), 48-9, and 52-3 (shortly before the climax in section three).

the collection (0,1,2,3), or set 4-1, arranged with a spacing of 11 semitones between each part. A function of the repetitive use of K(m) is the continual reintroduction of these four pitches into the music in order to project on to the final bars of the piece, where B and C# are re-introduced as neighbour-notes to the final repeated unison C. The 4-1 chord is related to the three-note contours in the cantus line. If the first notes of the three-note contours, which are registrally fixed, are isolated it can be seen that they form set 4-1: (G4, A flat4, A4, and B flat4). The opening chord in K(m) can then be seen as a transposed, vertical projection of this collection, as follows:

Example 13 *Nomos* Pitch set relation between the cantus part and K(m)



This extends the original upward from G, A flat, A and B flat, through B and C to C#, which is a reflection of the very opening progression in the cantus line from G4 to C#5.

The second feature of K(m) is a four-note descending contour. This is a reflection of the four-note descending contours in the cantus line, emphasized by the fact that on its first appearance K(m) occurs simultaneously with the four-note descent in the amplified quartet. This first appearance is still further related to the cantus line as the last pitches in each part anticipate the next four pitches of the cantus line, namely B, G, F and B flat. The occurrences of K(m) can be related back to the enigmatic cor anglais solo on page 3. The first pitch in the cor anglais, B, is accompanied by D flat and C, and this (0,1,2) collection (set 3-1) may be seen as the origin of the 4-1 chord.

During the second section the structure of the cantus line is reflected in the music in a number of obvious ways. The first of the four-note descents in the cantus line occurs on page 15, bars 39-40, where it passes from the clarinet to the horn and bassoon. Attention is drawn to this moment in several ways. Most obviously, this is the first time during the piece that the amplified wind quartet is heard alone, without any form of

accompaniment. There is a large crescendo on the first pitch, D flat5 on the clarinet, and this is followed by a pause before the pitch sequence continues C5-B4-F#4, played 'dolce', passing from the clarinet, through the horn to the bassoon. According to Smalley, the clarinet crescendo is a feature of the work which announces the beginning of new sections. By understanding the nature of the unfolding cantus, however, one can see how the line has determined the structure and, in turn, the reason for the crescendo signpost. The use of D flat here, followed by C, results in an audible retrograde of M1 at an important structural moment. The crescendo on D flat can also be explained by the fact that it stands a tritone away from the opening G4, and is a recapitulation, and enharmonic translation, of the C#5 on page 13 which marked the end of the introductory opening wedge. Preceding this descending four-note contour is the first of the <1-3-2> contours. This begins with a perfect fifth, from A flat4 to E flat5, which sets up a neighbour-note movement from the initial G-A flat, and above that from C#-E flat-D flat. The perfect fifth not only represents an 'end-point' in terms of the expanding wedge, but it may be read as a cadential gesture, alluding (purely metaphorically) to the role of such intervals in perfect cadences in tonal practice.

Nomos: The sketches

The *Sammlung Harrison Birtwistle*[176] of the Paul Sacher Foundation, lists for *Nomos* 37 sides of sketches, 45 sides of draft, and a fair copy of 70 sides. The number of sketches is not particularly large by the standards of other similarly sized works, and the amount of revealing information is limited. However, examination of the sketches immediately raises questions of composer choice. Do the sketches explain any more about the scheme used to generate the cantus line? Do they give any indication of the use of a tone row? And what indication do they present regarding alterations of the schemes employed? Does Birtwistle override his schemes in a significant way?

The only person so far to have made reference to the sketches for *Nomos* is

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[176] This was prepared in 1994 by Michael Taylor, of Trinity College Dublin. At the time of writing this thesis the list exists only in unpublished form.

Michael Taylor. His remarks are contained in an article concerning an abandoned first attempt at *The Triumph of Time*, which dates from around April 1970 (almost two years before the final completed work was produced). The early version of *The Triumph of Time* was based on the idea of an extended aria, initially in the soprano saxophone, moving to the trumpet. Taylor's observations regarding *Nomos* relate to a chart he reproduces which illustrates the way Birtwistle's 'time line' for *The Triumph of Time* was generated from an expanding wedge:

> The saxophone aria ... was composed independently, as it is written out, complete with migrations to horn and trumpet, on seven pages. The family likeness between this line and that in the earlier orchestral work *Nomos* (1967-8) is obvious, both act as a type of cantus firmus constructed from five note sets. While no sketches survive for the *Nomos* line, there are two pages showing the derivation of the saxophone pitches [in *The Triumph of Time*], though those relating to the durations have not been located.[177]

The most obvious point concerning the relevance of the sketches to the analysis of *Nomos* emerges from an apparent contradiction in this statement. If no sketches for the line in *Nomos* survive how is Taylor able to say that the line is "constructed from five note sets"? Is this an assumption on Taylor's part in response to an examination of the scores? It may, in fact, be in response to two six staff sheets in the *Nomos* sketches which appear to be part of a larger series of tables now missing. The surviving extracts contain permutations of five note sets, based on the expanding wedge: B, C, B flat, C#, A. An extract from this is shown in **App 42: 1**. The expanding wedge is written along the top line of the example, and beneath each five-note group various re-orderings are written, based on the numbers down the left-hand side of the page. These tables do not appear to relate to the cantus line, or the counter-line.[178] However, alongside these extracts is another loose, six staff sheet which contains the cantus line in section two, with bar lines

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[177] Michael Taylor, 'Birtwistle's First *Triumph of Time*', *Mitteilungen der Paul Sacher Stiftung*, Nr.8, März 1995, p.19.

[178] The exact use of these tables remains a puzzle. One possibility is that they were used as a resource for chordal material in the continuum. This is suggested by the fact that the opening five-note set, in the top left-hand corner, contains the four pitches which form the opening chord of K(m), and the fifth pitch, A, is played in the clarinet the first time K(m) appears, on page 16. However, this does not account for the brackets in the table which pick out a large number of groups of four notes.

which divide it into groups of seven (see **App 42: 2**). The list reveals that the contours used began one note earlier than my analysis suggested. Although it does not show how the contours were produced, unlike the table that survives for *The Triumph of Time*, it does confirm that seven note contours were used.[179] This does not answer the question posed by the analysis over the selection of contours from a range of options. It also does not rule out the possibility that two or more types of contour have been overlapped: for instance, ones with cardinalities of three and four. The fact that the sets in the sketches begin a note before those in the analysis does not invalidate the analysis, as the presentation of the sets in the score, in terms of rhythm, dynamics and the development of associated figures, suggests that an emphasis is placed on the four-note descending motion. This results in the sense that the lowest pitch is the last note of the contour, rather than the first, as the sketches suggest.

What this deviation from the analysis does show is that section two actually begins on G (note 1 of the row). It also says something about the final clarinet A flat on pages 42-3: the sustained, crescendo note, which draws section two to a close. This note is not included in the sketch for the line. It has, instead, been derived from the row (it is note 11) and added to the cantus line scheme as a link to the start of section three, which begins a tritone away on note 6 of the row. A number of markings have been made on this sheet, but they do not obviously relate to events in the score.[180]

The next useful survival is an apparently innocent line of pitches, written in green pen at the foot of a sheet in the draft, which is transcribed below:[181]

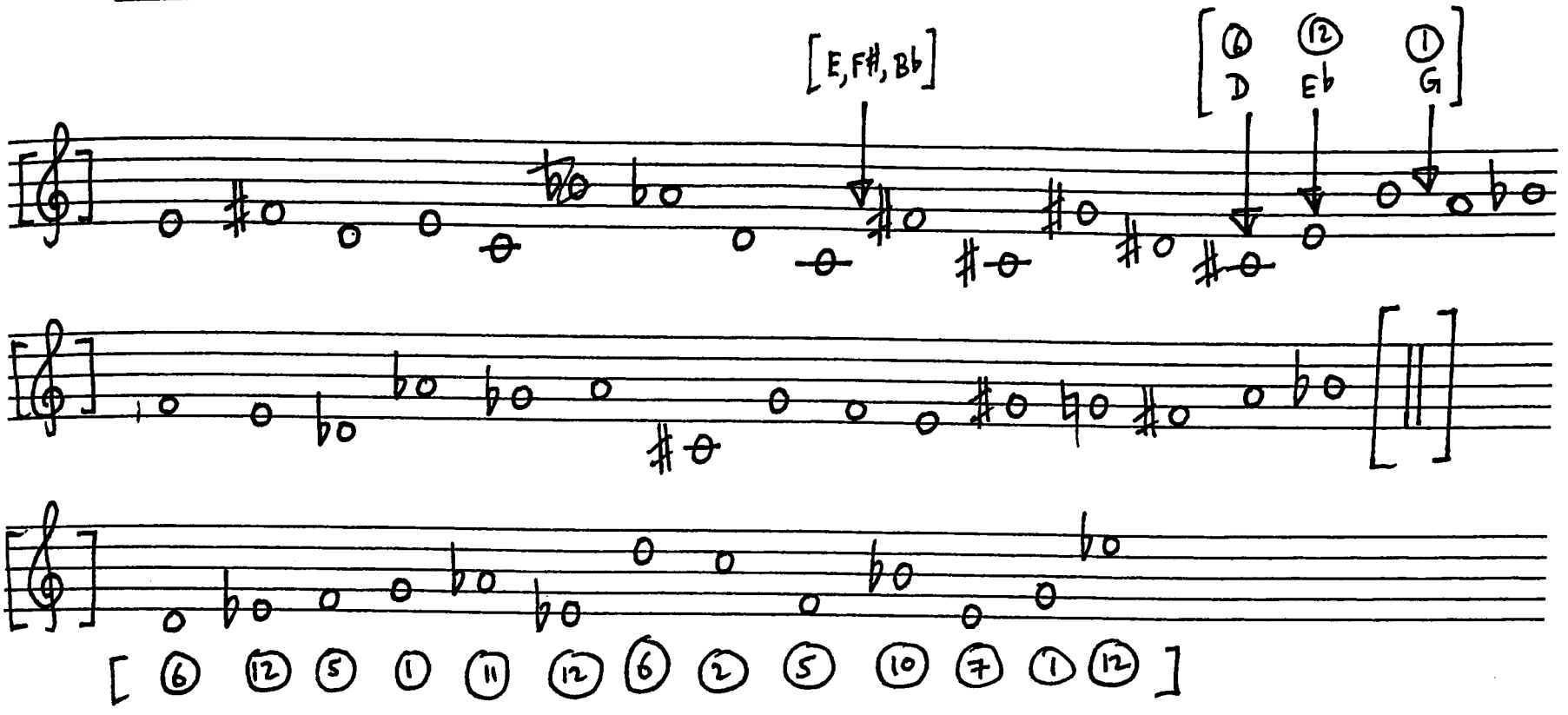
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[179] Jottings on the *verso* of a loose A4 sheet contains a list of the instruments in the cantus quartet arranged in different combinations, divided into groups of seven. This suggests that Birtwistle orchestrated the cantus line by using a permutational scheme based on this number, which reinforces the cyclic construction of the line.

[180] The only exception to this is the word "here" written next to three bracketed notes: B, E and G, which may correspond to the use of K(m) and an accelerando in the score.

[181] In this example, the information in square brackets in the first line indicates additions and alterations present in the score, the double bar line at the end of the second system marks the fact that the counter-line in the score ends here (with the near tutti climax on B flat), and the numbers under the third system refer to the position of these remaining, unused pitches within the tone row.

Example 14 *Nomos* Transcription of a line of pitches relating to the counter-line, contained in the draft



This is a preliminary version of the continuum counter-line running from page 44 to 57. A number of additions and alterations have been made, which once again point to the role of the tone row at moments of structural importance. The preliminary line extends beyond the actual pitches used. These additional pitches may have been originally intended to proceed to the end of the work. This theory is supported by the fact that the redundant section begins on note 6, ends with note 12, and is otherwise confined to notes from the beginning, middle and end of the row: notes 1-2, 5-7, and 10-12. The other main alteration involves the addition of pitches D, E flat and G to pages 49-50. These are notes 6, 12 and 1 (the familiar (0,1,5) collection). These pitches are added at the moment that the piccolo reintroduces the cor anglais motive from page 3, and they play a key role in the reinterpretation of model A by providing E flat, which forms set (0,3,6) with the cantus line A, and the repeating Cs.

One other addition to this line is the insertion of pitches E, F# and B flat on pages 47-8. These emendations result in a break from the pattern of relation by a perfect fifth between notes in the cantus and continuum, instead introducing a minor third and an augmented fifth (E-G and B flat-F#). The alteration may be a reinterpretation of the opening of the counter-line in section two, on page 29, which began with the same three

pitches. A preliminary draft of this moment has survived, and it divides the line into two separate moments, circled and labelled 1 and 2. The page began with the pitches E, F# and B flat written out along the bottom with their rhythm, indicating that these had been predetermined. Above this line, the first circle contains a version of the flute, clarinet, horn and bassoon movement to E, and the second contains the progression from F# to B flat. The final versions, as they appear in the score on pages 29-30, are also contained in draft form, and again the moment around E is placed inside a circle and labelled with a prominent number 1. Above this is another line of B-C, with "2 picc's, 1 E flat clarinet and 1 oboe" written beside it. This counter-counter-line continues, across the page, as C#-F-G above the second circle. Once again, this illustrates how the durations of each unison must already have been decided. Unfortunately, no sketches survive which give any indication as to how this was done.

Another revealing page in the draft is a sheet which contains the first sketch of the cor anglais motive which appears on page 3 of the score. Beneath this are several other parts, and a line with the rhythm for the cor anglais which seems to have been written down first. This demonstrates that the motive was conceived in isolation: as a moment, to be inserted when the need arose. The harmony on the page is not exactly as it appears in the score. The repeating Cs are present, but the C-D flat figure from page 1 is missing. Is it possible that this moment was conceived before the opening? If so, this lends weight to the theory that Birtwistle began by imagining momentary, highly characterized situations which could be inserted whenever seemed appropriate, with necessary amendments to fit the context.

Several rhythmic charts survive. These reveal that where layers of ensembles move through the texture at different rates, Birtwistle would work out the rhythms of each group according to a different kind of pulse: i.e. semiquaver, demisemiquaver, triplet quaver, and so on. Because the notes are eventually tied the sense of these differing pulses is largely lost, but the method guarantees the avoidance of synchronization between the parts of different groups, and therefore strengthens the sense of instrumental layering. In this way the moments of rhythmic unison often sound like interruptions rather than resolutions.

Finally, the draft version contains a first attempt at the work's opening which bears

the title *A Prelude to Arcadia.* This title may explain the remark Birtwistle made in his programme note to the piece that,

> *Nomos* is not 'definitive' - it is rather a fragment of a more extended epic, whose beginning we don't know and which continues long after the amplified instruments stop playing.

Smalley was not convinced by this "speculative suggestion", and felt that the piece "stands up for itself as a compelling work of music and has no need of vague philosophies for its support."[182] In one way, however, the piece does continue beyond its final bar, into the processionals of *Meridian*, *An Imaginary Landscape*, and *The Triumph of Time*. In particular, variations of the melancholy cor anglais motive return in two of these works, retaining the structural, cyclical role. *Nomos* also represents a 'prelude' to the concern of the 1970s with landscape, and a modernist interpretation of arcady and the pastoral idyll. (This theme will be developed in Chapter 4, which discusses *An Imaginary Landscape*. It also has relevance to Chapter 5 which examines *Melencolia I* and *Silbury Air*).

Verses for Ensembles: Analysis

Following its first performance on 12 February 1969, *Verses for Ensembles* was widely received with critical acclaim. This not only contrasted with the more cautious reception accorded to *Nomos*, but it highlighted an ostensible difference between the two works. As discussed above, according to Roger Smalley, the cantus line in *Nomos* had been largely inaudible in performance. To several writers *Verses for Ensembles* represented a triumphant resolution of problems encountered in the earlier work. According to Peter Heyworth, writing in *The Observer*, this resulted from the abandonment of the strings and a concentration on a smaller ensemble.[183] Michael Nyman also supported this view:

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[182] Smalley, 'Birtwistle's *Nomos*', *Tempo*, No. 86 (1968), p.10.

[183] *The Observer*, 16 February 1969: "It may be that I initially underestimated *Nomos* .... But whatever its merits I suspect that Birtwistle was here encumbered by an apparatus about as appropriate to his style as evening dress to a bathing holiday. What, for instance, did those massed strings contribute beyond padding and comfort for the timid? In his new *Verses for Ensembles* ... Birtwistle has stripped the orchestra so that it meets, not the purpose of Tchaikovsky or Wagner, but his very own, and as a direct result his writing has gained

> It seems with [*Verses for Ensembles*] that Birtwistle has solved the problem of the over-elaborate vertical and melismatic density which at times threatened to stifle *Nomos* ...[184]

Most reviewers of *Verses for Ensembles* were impressed by the clarity of its form and the expression of its ideas and believed that the piece improved through repeated listening.[185]

I should like to examine these claims in relation to the ongoing analytical concerns of this thesis. Having generated a series of foreground gestures in response to an unfolding, if largely inaudible, cantus line in *Nomos*, was Birtwistle's interest in line merely abandoned in *Verses*, or was it expressed differently? Where exactly does *Verses* stand in relation to his earlier pieces? A first reading would suggest many links to *Tragoedia* and *Punch and Judy*, but are there, in fact, tangible links to the more organic processes seen in *Nomos*?

* * *

Between *Nomos* and *Verses for Ensembles*, Birtwistle continued his experiments with single lines in two pieces for solo clarinet, *Linoi* and *Four Interludes for a Tragedy*.[186] The *Four Interludes for a Tragedy* were reworkings of the interludes in *Monodrama*, a work Birtwistle had composed for the Pierrot Players but withdrawn after its first performance in May 1967. *Monodrama*, for soprano, speaker and chamber group, was based on the early Greek dramatic form in which a single actor takes on several different roles. In the score Birtwistle calls the soprano the Protagonist, and the speaker Choregos. These terms

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immeasurably in incisiveness and impact."

[184] 'Two New Works by Birtwistle', *Tempo* 88, Spring (1969), p.50.

[185] Stanley Sadie wrote in *The Times*, on 1 September 1970: "The piece is a fine one, brilliant, urgent, colourful, full of ideas. Its shape makes good sense, too: the repeats, the cross-references, the parodies all become clearer on re-hearing. And at several points I found myself struck by the essential rightness of what was happening". On 30 December 1969, following a repeat performance in the Queen Elizabeth Hall, Colin Mason wrote that the performance "renewed and strengthened our first impression of it as one of the finest English instrumental works of the 1960s."

[186] *Four Interludes for a Tragedy* is scored for basset clarinet in A and tape, and was first performed without tape on 18 October 1968, and with tape on 10 February 1969.

are derived from the opera *Punch and Judy*, where Punch was the protagonist and Choregos was a character who narrated the tale and was brought into the drama as one of Punch's unfortunate victims. *Verses for Ensembles* represents the final satellite work around *Punch and Judy*, and following its completion Birtwistle's interest moved to the Orpheus legend. In turn, this new interest spawned a host of vocal and instrumental pieces that relate to the music drama *The Mask of Orpheus*, a work which occupied Birtwistle throughout the 1970s and early '80s. These new stylistic tendencies had been predicted by *Nomos*, but before pursuing this direction Birtwistle evidently felt that he still had one more chapter in the *Punch* narrative left to deliver.

The most obvious link between *Verses for Ensembles* and other pieces related to *Punch and Judy* is the fact that it develops the distinctions first established in *Tragoedia* between various soloists, or protagonists, and a chorus. In his titles for the sections of *Tragoedia*, Birtwistle demonstrated that his thinking in this regard is a reflection of Aristotle's categorisation of the various components of Greek Tragedy, such as Prologue, which according to Aristotle precedes the chorus's entry, and Episode, which should appear between complete choral songs. Along these lines, Jonathan Cross has proposed a formal scheme for *Verses for Ensembles* based on the Greek terms used in *Tragoedia*. This is shown in **App 43: 1**. Through these tables, Cross illustrates a similarity between the scheme for *Verses for Ensembles* and that of *Tragoedia* and *Punch and Judy*. Unlike *Tragoedia*, however, the Episodion sections in *Verses for Ensembles* are identical, thereby demonstrating a more literal interpretation of the Greek form than previously had been the case. The role of chorus and soloist in *Verses for Ensembles* is highly reminiscent of that in *Punch and Judy*.[187]

In the Spring of 1969, shortly after the first performance of *Verses for Ensembles,* Michael Nyman wrote a perceptive review of the piece for *Tempo* magazine, which

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[187] In the stage work, the protagonist, Punch, proceeds on a quest for Pretty Poll three times, during which he carries out a series of ever more brutal murders culminating in his cheating the devil. Interspersed between these murders are sections for a chorus figure (Choregos) which, in the style of Greek Tragedy, serve as frames, commentaries and reflections on Punch's actions. Following the death of Choregos and the devil, Punch is beset by nightmares concerning his murderous acts which, in Greek theatrical terms, represent the *peripeteia* or turning-point of the work. The devil within Punch vanquished, he is finally accepted by Pretty Poll and the opera ends with a dancing chorus.

highlighted the central formal and motivic features of the work.[188] Nyman also touched on Birtwistle's compositional method, observing that the word verses in the title indicates the importance of re-composition in the piece, noting that "Re-composition = variation = versions = *Verses for Ensembles*." What is remarkable about Nyman's comment is that it hits upon the title which the sketches reveal Birtwistle originally had in mind for the work: *Verse Variations for Four Ensembles*. The four ensembles in question are woodwind, divided between high and low instruments, brass, and percussion. In fact, there are five groups, as the percussion is also divided between pitched and unpitched instruments. The sketches show that Birtwistle played around with various ideas before deciding on this specific arrangement of ensembles, but the basis was always a tripartition between brass, woodwind and percussion.

Although he presents no specific formal outline for the work, Nyman notes that the form is indicated by the movement of instrumentalists to and from designated positions on the stage. The seating plan from the score is reproduced in **App 43: 2**, and I have summarized the players' movements in **App 43: 3-4**. Nyman notes that,

> the separated instrumental groups ... are spatially disposed on the platform so as to characterize the musical ideas and the dramatic interplay between them rather than to directionalize the sound.[189]

These movements suggest a palindromic design with two trumpets 'signalling' the outer parts, surrounding a central section of solos for horn and woodwind.

It is possible that the principle of spatial separation in *Verses for Ensembles* is Birtwistle's personal response to Stockhausen's *Gruppen*. A comparison may be made between Stockhausen's use of three orchestras and Birtwistle's three main ensemble groups. Other comparisons are revealed by Stockhausen's description of the processes in his work:

> ... the orchestras ... sometimes play independently and in different tempi; from time to time they meet in common audible rhythm; they may call to and answer one

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[188] 'Two New Works by Birtwistle', *Tempo* 88, Spring (1969), pp.47-50.

[189] *Ibid.*, p.49. Several writers felt that the movements of the performers had little or no effect on the sound during performance. On 13 February 1969, Ronald Crichton wrote in *The Financial Times*, "The least effective part of the work ... was the visual, spatial one. The movement of the players vaguely strengthens the ritual feel of the music but made, in this hall, surprisingly little difference to the sound, even when the trumpeters stood at the back ...".

> another; for a while only music from the left, from the front or from the right may be heard; the sound may transmigrate from one orchestra to another, etc.. As already happened with the distribution of the five loudspeaker groups in the electronic composition *Gesang der Jüngline*, the spatial location from which the music is heard now becomes of importance in listening to instrumental music too: spatial deployment becomes functional.[190]

It is arguable how far Birtwistle's work actually realizes the intentions behind Stockhausen's piece, or even the extent to which he intended to emulate that work. There are two moments in the score, at figures 28 and 68, where the duetting trumpets break free of the tempo in the continuum, but otherwise the ensembles play in the same tempi. Similarly, whilst there is considerable contrast between the ensembles in *Verses*, the layering of different textures does not play such an important role. Spatial deployment in Birtwistle's work is certainly functional, in the sense that it reinforces the form of the work, but critics have generally found the effect this has on the actual sound of the piece is negligible.

One obvious way in which *Verses for Ensembles* responds to avant-garde developments from the late 1950s and early '60s is through the incorporation of chance, specifically by the insertion of mobiles for brass and woodwind. The players have to decide beforehand which dynamics, from *ppp* to *fff*, to choose overall. Within each part there is then further scope for variation, since each player can choose from a number of possible 'routes' through each line. This idea is also applied to the central woodwind solos, as well as one or two of the horn solos. The notation Birtwistle uses here is most likely derived from Boulez, who first used this technique in his third piano sonata (1957); Berio employed a similar type of notation in his work *Circles* (1960).[191] The mobiles in *Verses* are unusual because they offer a degree of autonomy to parts but within the context of a group. The work also develops Birtwistle's clearest distinction between solo cantus parts and continuum-like groups; in *Nomos* the distinction is less clear because the cantus is not fully audible for much of the piece, and line is carried more audibly by the continuum.

During Nyman's discussion of the form of the work, it becomes apparent that the

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[190] Karl H. Wörner, *Stockhausen*, (London: Faber and Faber, 1973), pp.37-8.

[191] In 1970 Birtwistle composed his most ambitious exercise in permitting performers choice. The piece is called *Signals* which, according to Michael Nyman, was the title originally intended for *Verses for Ensembles* (although this is not indicated in the sketches).

use of terms such as verse, refrain and ritornello is problematic. How, in a work in which formal repetition and juxtaposition is so prevalent, does one differentiate a verse from a refrain? This may be better understood in relation to the concept of perspective in Birtwistle's music. Depending on the way a particular section is heard, it might be described as a refrain, in another as a verse. With several layers moving in parallel, any one musical item or section has a dual, or even multiple, function and identity. For example, on a first hearing the solo sections in the centre of the piece may be perceived as verses which develop as the music unfolds, becoming ever more ornamental, and the recurring wind mobiles may be heard as less developmental, chorus-like refrains. On a second hearing, however, it may be noticed that the wind mobiles are never the same, since they alternate between the woodwind and brass, and internally there is variation because of the choice offered to performers. Conversely, the woodwind solos may be heard as reinterpretations of one another, since they are underpinned by the same horn solo and percussion accompaniment.[192]

One of the strengths of Nyman's analysis is his identification of all the key elements (or objects) in the work, and the role of some of these as signals. He also identifies what he calls the development of "a new and entirely convincing cadential language".[193] Central to Nyman's analysis of the work is the labelling of ideas which themselves are drawn from the musical past. In contradiction to Nyman's statement that Birtwistle is "unconcerned

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[192] The idea of multiple interpretations of sections in his music is touched upon by Birtwistle in conversation with Ross Lorraine, in 'Territorial Rites 1', *The Musical Times*, October (1997), p.8:

RL Several composers have consciously used the idea of framing devices - I'm thinking of Monteverdi, Stravinsky ... just a ritornello can be a frame in the sense that it's something you've heard, and therefore you don't need to listen to it in the same way, so that it acquires a sort of neutral status.

HB Yes, but I think also that there's a sort of perverse thing in me, in that when you have a refrain, or something that repeats obviously, it's a question of what's the bread and what's the filling. Maybe my pieces are all refrains, but I do like to think that in my music there's an ambiguity about what the bread is and what the filling is.

RL Is that because the ritornelli are always varying a little?

HB Yes, because it's making a different statement each time.

[193] Nyman (1969), p.50. The basis of the new cadential language lies in the re-composition of a rising, accelerando passage that appears at figures 5, 14, 57 and 76.

with historical 'problems'",[194] this work, more than any other, draws on features which are familiar from the tonal past: canons, fanfares, a horn ground, ritornellos, and chorale-like textures.[195] Whilst these elements are not totally integrated into the music in the way one would expect in a tonal work, their existence calls earlier forms to mind. However, rather than representing a direct relationship with strictly tonal models, the presence of these features is more likely a response to Stravinsky, in particular the *Symphonies of Wind Instruments*.[196]

The most obvious connection between Stravinsky's work and Birtwistle's is the use of fanfares, ritornellos, and chorales which signpost the form of the piece, and which do not function in a strictly tonal way. The works by Stravinsky and Birtwistle also share a scoring for winds, a radical use of discontinuity, and a high degree of instrumental variety and contrast. This last feature is summarized by Stravinsky's own comments about *Symphonies of Wind Instruments*:

> [It is] an austere ritual which is unfolded in terms of short litanies between different groups of homogeneous instruments.[197]

Richard Taruskin has suggested that the various sections of Stravinsky's piece express the parts of the *panikhida*, a Russian Orthodox service for the dead, with choral singing and plainsong interspersed accordingly.[198] Michael Hall made a similar analogy when discussing Birtwistle's work.[199] Antiphony is certainly important and chorale-like

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[194] *Ibid.*, p.47.

[195] Michael Hall believes that this, combined with the use of borrowings from Bach in *Medusa* (composed in 1969), demonstrates that Birtwistle had "succumbed to the fashion of the day: parody." (1984), p.50.

[196] A more detailed comparison between Stravinsky's and Birtwistle's works will follow shortly.

[197] Stravinsky and Robert Craft, *An Autobiography* (New York: W. W. Norton, 1962), p.95 (first published as *Chroniques de ma vie* (Paris: Denoël et Steele, 1935)).

[198] Richard Taruskin, *Stravinsky and the Russian Traditions: a Biography of the Works Through 'Mavra'* (Oxford: Oxford University Press, 1996), pp.1486-99.

[199] "... nearer the front and at right angles [to rows for percussion and brass] are what look like choir stalls for the woodwind ... and at the very front ... are two lecterns for any instrumentalist who has a solo. The ecclesiastic allusion is not without justification, for as soon as the music starts it becomes evident that Birtwistle is making use of two kinds of chant found in the Christian liturgy: antiphonal chant (the alternation of two or more choirs) and responsorial

sections are separated by solos: but these are developments of tendencies already seen in Birtwistle's music. If *Verses for Ensembles* does represent an allusion to a religious service, it is not a relation explored in any depth, merely a utilization of certain techniques familiar from church music. In the absence of corroborative statements from Birtwistle, *Verses for Ensembles* is perhaps best understood as a legacy from Stravinsky and a response to Stockhausen.

Turning now to the sketches, The *Birtwistle Sammlung* lists 61 sides of sketches and 16 pages of first draft for this work, as well as a complete fair copy that runs to 96 sides. **Table 5** lists the principal contents of the sketches and the first draft:

Table 5 Pages from the sketches and first draft for *Verses for Ensembles*

Sketches
21 sides of A4 (all *recto*)

pages	*contents*
1	Rhythmic chart
2	"variation for 3 ensembles" (experiments with various combinations)
3	"variation for 1 ensemble"
6-10	Rhythmic chart sequence
11-13	Rhythm and pitch in green, blue, red and black pen: scheme for the trumpet fanfare at fig.4
14-15	As above: scheme for brass canon at fig.8
16	Pre-compositional plan, in red pen (relating to figs 8-57)
19-20	Rhythm for trombone, horn and trumpet
21	53 groups of four-note sets, in five columns

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chant (the alternation of soloist and a single choir) .... Yet when the sounds begin to impinge on the ear, one realizes it is not a Christian ritual but the desecration of one. They have a violence which can only be called barbaric: 'raw' is the word used in the score." Hall (1984), p.52.

40 sides of A2 size manuscript (all *recto*)

pages	*contents*
2	Figs 34-6; bassoon solo, plus bongos, congas and horn
5	Figs 3-4; "all extemporisation P!" for percussion
6	Figs 6-7/10-12; red, blue and green pen
14	Figs 16 and 37; "brass refrain": musical mobile, written on its own; some slight variations with the published score
20	Fig. 28; used as a base for cutting other pages
21	Fig. 30; includes a brief sketch which reveals the origins of the woodwind canon
23	"Oboe solo from *Verses for Ensembles*"
28 above	Fig. 52; piccolo solo, minus the last four notes, and horn line written
29	Fig. 75; left side contains page 114 of the score, right side is empty, which may reflect a marker to indicate the return of material from the opening, but its continuation was left until later
30	Unidentified

<u>First Draft</u>

16 sides of A2 size (all *recto*)

pages	*contents*
1	"Verse Variations for 4 Ensembles"; opening to fig.1
4	Figs 4-6; overblowing not marked in, and with different pitches
5	Figs 8-10; the material is presented in reverse in the draft (i.e. as figs 10, 9, 8), suggests also that fig. 7 was added at a later stage
6	Fig.9 followed by fig.13, therefore figs 10-12 added later; "insert Brass piece"
7	Figs 18-19; rhythmic and general alterations in the final version
8	Figs 19-21; reworking of the opening
9-16	Figs 21-30; "Verses" in top right of page 16

The most interesting item in the extant sketch material is a pre-compositional plan for the work. **App 44** is a transcription of Birtwistle's plan. It shows the main body of the work (figures 8-57) and begins at the top left-hand corner, continuing along the bottom, where the alternating brass mobiles and solo sections are clearly shown. On the top half, the three parallel lines represent the three ensemble groups: (from top to bottom) woodwind, percussion and brass. The large empty box represents the Episode which is repeated immediately after the end of the second line. What is missing from this sketch is the opening, the repeat of the Episode and the concluding section. If nothing else this surely suggests a break with nineteenth and early twentieth century practices of sketching a work from beginning to end (at least always with an idea of the beginning in mind) and

of deriving ideas for the body of a work from its opening. The block-like scheme that Birtwistle uses here brings to mind the moment-form scores conceived by Stockhausen, as well as the block-like structure of Stravinsky's *Symphonies of Wind Instruments*.

In Stravinsky's piece, alternating solo and ensemble passages surround a dynamic central section dominated by the brass, moving in rhythmic unison. Stravinsky's Episodes consist of slow moving chords, dark and sombre sounding. Birtwistle has reversed most of these elements in his own work, but the defining characteristic of rapid movement between different ensemble and solo groups has been directly transplanted into the sound world of the 1960s. The stimulus for Birtwistle's opening gesture may have been Stravinsky's opening, which, characterized by repeated high Ds in the flutes and clarinets, acts as a signal for new ideas throughout the work (see **App 45: 1, a**). Birtwistle's opening, in which the horn takes on the role of signaller is shown in **App 45: 1, b**. In *Verses for Ensembles* this idea returns several times in order to announce the beginning of a new section, such as the start of the Episodes. It is also reworked two more times in the opening. The first reworking is in the woodwind, at figure 1 (**App 45: 1, c**). The sketches show that **c** was conceived simultaneously with **b** as they appear together on a single sketch leaf, with **c** above **b**. The order of events in the score, therefore, is not necessarily a reflection of the order in which events were composed. Finally, **App 45: 1, d** shows a third reworking, with high Ds in the oboe paired with A flats in the horn. A comparison with **a** shows that Stravinsky's flute line has been translated into the oboe, whilst the role of initiator remains with the horn, whose A flat noisily announces the start of **d**. This device also performs an act of closure, and is used to end the piece as a whole - as the accelerating cadence which Michael Nyman refers to in his article. Analysis and sketch study combined, therefore, has confirmed that the opening and closing material was conceived together after the initial formal plan had been drawn up.

The role of the horn is a prominent feature of Birtwistle's opening plan - it is inserted into three sections in the top half and included with every woodwind solo. The note at the bottom of the page is an instruction that the brass refrain should not include the horn. It is excluded from the ensembles, therefore, and acts as a mediator during the central solo sections. Jonathan Cross has pointed out that the horn line in the central solo

sections is a variation of a flourish it has at the start of the piece (see **App 45: 1, e**).[200] This flourish is absent from the start of the pre-compositional plan, which suggests that the horn line written for the solo sections was composed first. An analysis of the pitches in this line, shown in **App 45: 1, f**, reveals a palindrome (see interval succession: 7, 9, 10, 11 [pause mark] 11, 10, 9, 7), which may support the theory that **f** was conceived before **e**.

The horn also develops another idea which receives specific reworkings at key moments. This is a four-note figure heard just before the beginning of the woodwind mobiles marked 'refrain' in Birtwistle's plan and shown in **App 45: 1, g** (this figure is not indicated in the plan). This idea makes a dramatic reappearance at the end of the piccolo solos, the last in the central section, alongside a variation of the flourish - see **App 45: 1, h**. In many ways, one could argue that this point of rediscovery or recognition of familiar material, now in a new instrument and a new context, represents the *peripeteia* or turning-point in the piece, especially as it is immediately followed by the repeat of the Episode and a conclusion which itself revisits the opening material in a slightly different manner, showing the trumpets' A-E repeated note pairing and the oboe's high Ds in a new light.

The characteristic feature of the horn's four-note figure is contour; and this is the chief difference between Birtwistle's opening - a four-note, ascending figure, and Stravinsky's - a contourless repeated D (with a drop to B in the clarinets) rounded off with a flourish characteristic of his Russian period. What Birtwistle's sketches reveal is that almost every aspect of the work is conceived in terms of contour - specifically groups of three, four and five-note contours. Before expanding my discussion of this, however, the issue of pitch must be considered in relation to the sketches.

The tone row is carried at the opening by the horn. The order in which it presents the twelve notes of the chromatic scale is presented in **App 45: 2, a**. Various features of the row point to the importance of fourths and fifths. Notes 1 (D#) and 12 (A flat) are a perfect fourth apart, as are notes 6 (B flat) and 7 (F). The two central pitches are flanked by two augmented fourths, followed by two minor seconds, which are flanked by a perfect fourth and a fifth. A pitch-set reduction reveals three (0,1,6) sets and two (0,2,6) sets, all

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[200] 'Birtwistle's Secret Theatres', in *Analytical Strategies and Musical Interpretation* (Cambridge: Cambridge University Press, 1996), p.217.

of which outline an augmented fourth (see **App 45: 2, b**). As has already been seen in previous works, notes 1, 6 and 12, in particular, often form important moments of focus throughout Birtwistle's music. As was seen in *Nomos*, this is sometimes allied to short figures, notable for their contour as much as their pitch content. A summary of contours used in *Verses for Ensembles* is given in **App 45: 2, c** to **h**. Significantly, each figure contains notes 1, 6, or 12 of the tone row. There is some variation in terms of contour as well as pitch, but they are linked through their use of four notes, and by their positioning at important structural moments.

Birtwistle was reported as saying, in an interview with Michael Tippett at the time of the first performance of *Tragoedia*, that he could re-write the piece using different pitches and not unduly change the work.[201] This remark begins to make sense if considered in the light of the sketches for *Verses for Ensembles* since the piece is largely governed by the manipulation of underlying schemes of contours. It is, in fact, true to say that for large periods of this work the actual pitch classes themselves do not matter. Incomprehensibility has become an important, yet controlled, feature of the music, and a concentration on noise emerges in this work as an especially new concern for Birtwistle.[202] This is expressed either through pitch clusters, or the trilling, pulsating sections for percussion which become denser as the work progresses. Messiaen's *Couleurs de la Cité Céleste* (1963) is perhaps one source for this new-found celebration of density of sound, especially in relation to the upper woodwinds. The progression towards noise is something which characterizes the woodwind solos too, as they become ever more saturated with trills and ornaments, culminating in a scurrying piccolo solo full of chromatic grace notes and trills. However, this is not true for all of the work. The reason behind these moments of 'pitch anarchy' is precisely a desire to move away from pitch stability and clarity in order to establish a dialectic, or antiphony, between moments which stress certain pitches and moments which do not.

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[201] This is referred to in Michael Nyman's *Tempo* article (1969), p.50.

[202] *Ibid.*, p.47, Michael Nyman describes moments of *Verses* as "deliberately unfocussed material", and in 'Summary Justice' (a review of the South Bank 'Secret Theatres' concert series), in *The Musical Times*, July (1996), pp.31-4, Robert Adlington commented that, "A willingness to negotiate with comprehensibility remains an important part of Birtwistle's make-up, one that doesn't sit comfortably with the idea that his music presents an arena wherein to behold a spectacle."

What can analysis say about the role of associated pitches and their projection through extended lines? An examination of the score reveals clear examples of long-range pitch structuring, which are summarized in **App 45: 3**. The horn's opening emphasis on D# (note 1) leading to a sustained E natural (note 5); the horn's flourish idea which centres on C (note 2) and which brings every one of the woodwind solo sections to a cadence from G (note 11) to C; and the oboe and horn pairing D (note 10) and A flat (note 12) all point to a deliberate attempt at creating a sense of focus and association of pitch and musical gesture throughout certain extended parts of the music, one based on the ordering in which the chromatic pitches were initially introduced by the horn.

Finding evidence of this planning in the sketches, however, is an altogether harder task, which suggests that the tonal focus has been grafted on to continuum-like textures which themselves have been derived from entirely random procedures. However, the sketches do show signs of Birtwistle writing tonal stability into his pre-compositional schemes. This is the case for the trumpets during their fanfare at the start of the work - a section conceived outside the pre-compositional plan. The trumpet fanfare, played from solo positions at the front of the stage, is reminiscent of the reiterations of a single note by the trumpets at the opening of *Punch and Judy* after Choregos has sung, "Let's [*sic*] trumpets sound". In *Verses for Ensembles* the two trumpets begin with a reiterated A (note 9) moving to the pairing of A and E (note 5), in a reworking of the horn and oboe accelerating cadence. These two pitches are the upper neighbours to notes 12 and 1 of the row (A flat and D#) (see **App 45: 4**). The sketches for this passage reveal an underlying scheme of a series of parallel fourths. In the score, however, this is almost completely lost, except for the opening and ending. Birtwistle's sketches show how this is achieved (see **App 46: 1-2**). The parallel lines are staggered and the pitches placed at pre-determined locations. To distort this scheme even further, Birtwistle moves between the two lines, so that each part will contain pitches from both lines, and the groups are exchanged freely.

This method of distorting a pre-determined plan, whilst maintaining a degree of focus, is common to other sections of free polyphonic writing, where the music attempts some kind of lyrical expression. For example, it applies to the three canons, two of which are shown on the pre-compositional plan. The first is scored for the two trombones and horn, the second for piccolo, E flat clarinet and oboe, which appear either side of the first

Episode. After the second Episode the two are combined. The sketches show that the woodwind canon is based on two contours derived from four pairs of fifths (A flat-E flat, E-B, F-C, and F#-C#). Notes from these pairs were re-arranged and distributed across two octaves, as detailed in **App 47, a**. Birtwistle selected pitches from these contours, retaining them in their respective registers (with the exceptions of E and E flat), then re-organized the scheme so that each line begins on E flat (note 1 of the tone row) and ends on a unison C# (note 3). As a result, the free-moving polyphonic lines in the score are held in a meaningful balance through the original conception of contours based on pairs of fifths.

To begin to understand the procedures that may have gone into Birtwistle's selection and ordering of notes during moments when pitch association is important, it is necessary to turn to the sketches for the brass canon, which contain more information. These sketches however bear much less resemblance to the finished score than the draft for the woodwind canon. This is reminiscent of the sketches of Paul Klee in his *Notebooks* and *Pedagogical Sketchbooks* which so interested Birtwistle at this time. Klee's working methods varied from sets of tables which have no visible connection with the final artwork, to sets of formulae or verbal instructions which suggest principles that his paintings attempt to express. There are also sketches which show the bare bones of a painting, so that the finished artwork is easily distinguishable.

As **App 48: 1-2** details, in the upper three lines of the sketches for the brass canon, the bare bones are hardly visible, however Birtwistle's own summary of his selections along the bottom of the page more closely resembles the version in the score. Birtwistle began with a sequence of 20 pitches, divided into four groups of four-note contours, shown in **App 47, b**. The note sequence once again begins on E flat (note 1) and stresses stable fourths and fifths, reflecting the importance of these intervals in the tone row. It is arranged symmetrically around A, with D and E forming two outer pillars, and the outermost notes a fifth apart. In the sketches these notes are arranged in four groups of five, staggered across the three parts on specific pulses, but ending together. There are three lines which criss-cross, each one gathering pitches for its respective part and the resulting rhythm and pitch sequence for each line is written out along the bottom. In the score the canon is asymmetrical, closing on D, E and C#. The remaining notes are

presented in rhythmic unison and moulded into a single line which anticipates the four-note solo horn figure discussed earlier. The breakaway polyphonic strands find their ultimate lyrical expression in a single line, and this device reflects the fact that the underlying symmetrical scheme has been distorted.

In the work's most intense period of focus, which occurs towards the end of the Episode, the trumpets take the leading role. Here the compositional scheme is designed to produce entirely random results. The first half of the Episode is concerned with different combinations of rhythmic contour and it really does seem as if pitch does not matter. Taking a reworking of the opening as its starting point, now with the horn flourish, the woodwind, brass and xylophones take up the call of the four-note contour, remoulding it in different rhythms, note groups and in parallel motion. When the xylophones enter the parallel motion is broken and the sense of rhythmic grouping is lost. Birtwistle then inserts the rising form of four-note contour which announces the return of the entrance of the trumpets who now stand on solo platforms at the very rear of the stage and announce the second half of the Episode.

At this point Birtwistle introduces a short block for the two trumpets and glockenspiels, which is spliced into the continuous texture of the ensemble. Each block represents a reorganisation of elements derived from six different contours with prescribed intervals. Here it is interesting to note the findings of Stephen Walsh in an article on the sketches for *Symphonies of Wind Instruments*.[203] Walsh has shown that Stravinsky's work consists of two opposing types of material: a mobile, lyrical texture; and a static, chordal texture. Within these textures Stravinsky either interpolated or 'spliced' related ideas composed in isolation. In Birtwistle's case his inserted trumpet and glockenspiel blocks are related to the surrounding material because they are derived from a similar series of intervals dictated in advance and organized according to various contours. However the parts in the blocks are rhythmically independent of one another and seem to express a desire to free themselves from the surrounding rhythmic patterns. The trumpets are more lyrical in tendency, but their efforts towards establishing an uninterrupted line are continually thwarted. That is, until the final phase of the Episode, when the trumpets

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[203] 'Stravinsky's Symphonies: accident or design?', in *Analytical Strategies and Musical Interpretation* (Cambridge: Cambridge University Press, 1996), ed. Craig Ayrey and Mark Everist, pp.35-71.

escape the metrical hegemony of the ensemble and are presented with a single line in their own tempo (see **App 49, a**).[204]

In the sketch leaves relating to this section I have been unable to locate any indication of the trumpet line. What is extant are the workings for the chords in the woodwind and brass which surround the trumpets. On a single A2 size (16 staff) sheet, with woodwind at the top and brass below, Birtwistle has written out the pitches in columns which correspond more or less to the rhythmic position of the chords, so it can be assumed that he had already established the rhythm for these chords before affixing their pitches. The sketch leaf contains three groups of interlocking three-, four- and five-note collections written in red and black. At the top of the page is a series of numbers each of which represent an interval. From this line Birtwistle derives columns of intervals which dictate exact movement from one chord to another and therefore the pitches within each chord. Apart from the first notes of each new group, the results are utterly random. Of particular intrerest here are the discrepancies between the number tables and their application. Often this looks like the result of deliberate alterations designed to create points of contact between the randomly-generated chords and the trumpet solos. Occassionally, however, these may simply be the result of Birtwistle's own errors when copying from his number tables. The procedure is summarized in **App 49, b** and **c**.

In some cases Birtwistle's alterations are simply inversions - for example, moving three steps up instead of the required nine steps down. On these occasions the changes seem designed to complement the trumpet solos, for example by highlighting certain pitches by placing them at the top or bottom of the chords. At other times, alterations are made which anticipate or double pitches in the trumpet line, sometimes placing the altered note in a deliberately high register. Some numbers are changed in order to graft symmetry and focus on to the pre-compositional scheme. The clearest example of this is shown with an asterisk - where, in traditional terms, an F# major triad is produced in the brass, supported by F# in the bassoon, when the trumpets are sounding a sustained B natural,

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[204] In many ways this represents Birtwistle's response to the kind of experimentation found in Stockhausen's *Zeitmasse* (1957), frequently cited by Birtwistle as a source of inspiration, which integrates metronomic definition with free tempo and, in Paul Griffiths' words, "liberates the bounding energy of [its] ideas": *Modern Music: The avant garde since 1945* (London: J.M. Dent and Sons Ltd., 1981), p.112.

thereby producing a stack of fifths from B to F# to C#. This chord and the F major triad immediately before it, represent rare but calculated moments of harmonic support for a solo line. These findings support the theory that Birtwistle 'adjusted' the results of his random procedures in order to bring certain moments or lines into focus.

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The sketch study of *Verses for Ensembles* has indicated that it is not always possible to account for the schemes of pitch association which analysis reveals. The sketches have shown that in the works discussed Birtwistle began with various long-range plans: one based on pitch in *Nomos*, and one concerned with texural change in *Verses for Ensembles*. When filling-out these initial plans, however, Birtwistle begins with a very simple idea, such as an expanding chromatic wedge, and subjects it to a series of permutations. Generally, the results of his re-ordering of pitches and rhythms go straight into the score. However, a significant gap exists between the permutational processes which produce material for specific pages and the larger, overall shemes discussed in the anaysis of the score. I have attempted to bridge this gap by referring to examples of Birtwistle's occasional alterations to the results of his schemes, as well as identifying the controlled aspects: the moments where composer choice is exercised.

Birtwistle's sketches usually represent a set of ideas that are largely independent of the finished musical work, in a manner quite opposed to those of Stockhausen whose sketches had a one-to-one relation to the the final score, and his idea of the finished 'work'. For Birtwistle, realising the implications of contexts was a separate act of creation to the one which produced his initial ideas. Introducing sketch material into Birtwistle studies means introducing another object for analysis, one which requires its own particular methods to unravel. The space between sketch and score requires an interpretational method which does not presuppose a relationship, but one which is able to respond when tangible connections are revealed.

Chapter 4

An Imaginary Landscape (Time and The Pastoral)

New Concepts of Form

In 1969 and 1970 Birtwistle wrote a number of instrumental works which push formal considerations to the foreground. One of the results of these experiments was a concentration on developing a listener's awareness of the beginnings and ends of sections by signalling, or sign-posting events. These structural markers, or landmarks, represented the only form of 'rhetorical' transition between ideas, and the result was an increased sense of formal division and block-like structure. The results, however, were not always to Birtwistle's satisfaction, and two pieces from this period, *Signals* (completed August 1970) and *Eight Lessons for Keyboards*,[205] were not published; the score of *Medusa* (completed September 1969) was withdrawn. *Medusa* evoked the harshest response from Birtwistle, who later claimed that it was "a lie":

> *Medusa*'s a piece with something stuck here, something stuck there without rhyme or reason. There's nothing in it which has the right to be placed next to a Bach chorale, least of all to be transformed into one. It's a lie, and I didn't see through my own lie; that's why I don't like it.[206]

As indicated above, the piece is uncharacteristic of Birtwistle's style as it is based on a parody of Bach's Chorale Prelude on the Magnificat (*Meine Seele erhebt den Herren*) and the Chorale *Wer nur den lieben Gott lässt walten*. Much of the reason for Birtwistle's decision to withdraw the work may have resided in the tension that existed at the time between the concerns of the Pierrot Players who were performing works by Maxwell Davies which were directly based on pastiche and parody techniques, and the rather different preoccupations and concerns then motivating Birtwistle. In the end, in 1970, Birtwistle broke with the Pierrot Players, briefly forming a group called Matrix with Alan Hacker.

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[205] This received its first performance on 13 January 1970.

[206] Hall (1984), p.147.

During the period from 1969-70, Birtwistle became fascinated with the Orpheus myth, which was to be the subject of his next large-scale piece of music theatre, *The Mask of Orpheus*. This shift in interest was also accompanied by some changes in his life. In late 1969, Birtwistle returned to England and settled in the London area, moving between a number of different addresses. Being in London gave Birtwistle access to an electronics studio then being run by Peter Zinovieff in Putney. This resulted in various collaborations. The use of tape is a feature of works up to and including the eventual centrepiece of the 1970s and early '80s, *The Mask of Orpheus*, which uses among other electronic components a pre-recorded tape to represent the voice of Apollo.

Birtwistle began the decade by announcing that "new concepts of time are my main compositional preoccupation."[207] This increased concern for time emerged, in one sense, from Birtwistle's fascination with the Orpheus myth where Orpheus, forced to face the irreversibility of time, is frustrated in his desire to return in order to save Euridice. The Orpheus legend also describes a journey and this too informed Birtwistle to the extent that the metaphors used to describe his instrumental pieces during this period often involved descriptions of journeying and directed motion. In another sense, the interest in time grew as a result of Birtwistle's involvement with electronics and the possibilities these presented in terms of setting a regular, clock-like pulse. *Chronometer*, composed in 1971-2, is entirely focused on the ticking of clocks, but the result is a deconstruction of objective, clock-time.

According to Peter Zinovieff, the construction of *Chronometer*, composed at the same time as *An Imaginary Landscape*, involved the recording of about 100 different clock mechanisms of varying durations, which were analyzed and subsequently regenerated by computer. One feature that emerges from *Chronometer* is a new, more highly calculated level of concern for the duration of ideas.[208] In this sense, Birtwistle's

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[207] Birtwistle, cited in Hall (1984), p.74.

[208] The composition of *Chronometer* suggests an interesting link with a book first published in 1969, following doctoral research carried out at Stanford University in the late 1960s: Robert Ornstein's *On the Experience of Time*. In this book, the author's stated desire is to understand time's conundrum: "We continually *feel* time passing but where does it come from? We continually experience it but we cannot taste it, see it, smell it, hear it or touch it. How, then, *do* we experience time? What do we *use* to experience it?" (Oxford: Westview Press, 1997 repr. of oringinal version, p.15). It is tempting to imagine that Birtwistle read Ornstein's book whilst in

Imaginary Landscape is linked to John Cage's five *Imaginary Landscape* pieces and other works he composed which make use of electronics from the late 1930s through to the early '50s.[209] These works represent possibly the earliest use of electronics in instrumental music, and they were designed to enrich the percussion repertoire in a search for new sounds. Aurally, the 'imaginary' element might most obviously be linked with the sonic material, which contains percussive sounds previously unheard in a work of 'art' music. In themselves these sounds form a context. The content, or landscape, is provided by the co-ordination of events.[210]

Cage's works from this period show an increased interest in real, or clock time, reflected by the fact that performers had to use stop watches to determine entrances and exits. The emphasis is on the co-ordination of events in space (the score) and time (duration). "That's why I've made the analogy of landscape", Birtwistle said in an interview about music and painting, "in that it's a place that's *there*":

> There are certain elements in certain places, and I choose to compose my way through them. It's as if I compose all the elements first, and move through them, and can return to them - which introduces the element of repetition.[211]

Princeton, and that *Chronometer* represents a musical response to Ornstein's discussion of the role of chronometers, which are mechanisms, natural or artificial, for measuring the passing of time. For instance, Ornstein observes that 'clocks' (atomic, mechanical, chemical, etc.) do not run at the same rate. He also discusses the nature of a 'biological clock' which may be expressed as a combination of different periodic rhythms: "heart-rate, finger-tapping, etc." (1997 reprint, p.31). *Chronometer*, it may be argued, reflects these features through a deconstruction and transformation of the idea of a constant pulse.

[209] Cage has explained that the title of his *Imaginary Landscape* pieces does not refer "to a physical landscape. It's a term reserved for the new technologies. It's a landscape in the future. It's as though you used technology to take you off the ground and go like Alice through the looking glass." This is taken from 'A conversation about radio in twelve parts', in *John Cage at Seventy-Five*, ed. Richard Fleming and William Duckworth (Lewisburg: Buckwell University Press, 1989), p.277.

[210] This is nicely illustrated by the score for *Water Music*. While the unusual sounds emphasize the chaotic, random qualities of the work, the order of the sounds describes a narrative, that of preparing a Campari Soda which is ready, "not entirely, for there is insufficient time", to drink. Whilst the narrative element may be missing from *Imaginary Landscape No.4* (1951), conceived for 12 transistor radios, the attention in the score is focussed on instructing the performers which frequency to tune to, which determines the object heard, and the duration required.

[211] 'Territorial Rites 1', Birtwistle in conversation with Ross Lorraine, *The Musical Times*, October (1997), pp.4-5.

The implication of this remark is that Birtwistle begins with a conception of the main "landmarks" in his piece and also of their position relative to one another. This sounds like a pre-compositional plan, and yet elsewhere Birtwistle has vigorously denied his use of such schemes.[212]

An obvious example of a piece in which objects "are just there" and that have to be composed around is *Cantata* (written Spring 1969), scored for a small ensemble and soprano. During this piece a refrain is stated five times throughout the piece, and another, slower moving mobile texture, using square notation, appears at letter H (page 12).[213] The refrain, labelled as such in the score, is familiar from *Verses for Ensembles*, and bears a close aural relation to the woodwind mobiles used in the earlier work. Scored for flute, clarinet, glockenspiel, violin and cello, the refrain uses square note-heads to indicate a proportional system which leaves the actual lengths of notes to the performer's discretion, and bracketed lines indicate possible routes from one note to another.[214] As in the earlier piece, the refrain has two sets of dynamics, loud and soft. Although generally each line of text follows on from a statement of the refrain, the effect is of the text fitting itself around the refrain. At the opening, the refrain actually disrupts the sentence structure as it appears between "Let all the earth shed" and "tears". The effect emphasizes tears, but at the risk of leaving the body of the sentence lost in time, half-forgotten.[215]

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[212] For example, in Hall (1984), on page 152 he is quoted as saying, "I would never formalize, never predict what the piece is going to be .... There's certainly no pre-composition." And to Andrew Ford in 'The reticence of intuition', *Composer to Composer* (London: Quartet Books, 1993), "I don't have any plans. I don't do any pre-composition at all", p.56.

[213] The sketches for *Cantata* reveal workings for a first version of the piece which differs in many ways from the final version. One chief difference is the absence of the refrain idea which is instead expressed as a three-note contour, in the clarinet, viola and cello, on [A3-C6-E flat3]. A similar idea was ultimately used at the ends of sections.

[214] The directions for performance in the score indicate that the conductor will decide on the overall tempo of the refrain, the duration of each separate beat, whether to play legato, detached or staccato, and whether to play dynamics A or B. The performer decides which choice of notes to play, including those in square notation.

[215] A sheet of A4 in the sketches for *Cantata* reveals part of the process by which Birtwistle assembled the fragments of his text from the writings of Sappho and *The Greek Anthology* (translated into English) (Harvard: Harvard University Press, 1916-18). The sheet contains fifteen lines selected from different pages, but only the last two are used: "No longer does my mouth utter sounds..." and "Let all the earth...", which appear at the end and start of the piece, respectively.

Another similarity to *Verses for Ensembles* is the use of a short, repeating contour as a cadential feature. **App 50, a** shows the three-note figure [B flat4-G5-C#4] which recurs with the same pitches, but in slightly different rhythms and in different instruments. The essential characteristic, however, is always the same: it is a pause, a moment of suspension or conclusion. The way this idea is deployed is highly reminiscent of the harp cadence figure in *Tragoedia*, initially given cadential status but later used within sections. This first happens on page 14 where its appearance in the flute overlaps with the clarinet line (see **App 50, b**). On page 17 the figure moves into the voice on "ah!" (after "etched by love"), where it is given extra resonance by the celeste (marked "as loud as possible"). The figure is then alluded to over a larger time-span, beginning in the clarinet on page 18 (C), moving to the flute on page 19 (B). Finally, two new versions of the idea appear on the last page, one starting a semitone higher than the original, [B4-G#5-C4], the other beginning a semitone lower, [A4-F#5-A#4]. The soprano ends on A, the same note on which she began.

This represents an important precedent for a feature which distinguishes *The Triumph of Time* and which is closely bound to Birtwistle's interest in temporal progress. When describing the later work Birtwistle drew a chart, given in **App 51, a** which illustrates a continuum of change,

> so that, for instance, where A is an element that is circumscribed and never changes, one descends through a sequence of potentially unlimited degrees of change to the musical object which is in a permanent state of change.[216]

This language is reminiscent of the Second Law of Thermodynamics which has been used to help explain the necessity of time to move forwards, or 'time's arrow'. The law states that heat can only flow from a hotter body to a cooler one, and it therefore describes changes of state (from snowman to puddle, for example). This theory reveals that entropy (a measure of the capacity to change) is closely linked with time, in particular a sense of irretrievable loss, as experienced by Orpheus. To Birtwistle the use of a repeated, unchanging object may have seemed like an appropriate metaphor for the impossibility of

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[216] Michael Hall (1984), p.175-6. This is reminiscent of John Cage's process when composing *Music of Changes* (1951). Cage designed a means for "metamorphosis" whereby certain elements of his charts (corresponding to, for example, tempo, duration, sound/silence) would be allowed to change and others not. Mobile elements were replaced whereas immobile ones remained.

altering Euridice's predicament, despite Orpheus's best efforts. It represents the impossibility of changing the past. The use of an unchanging, or little modified, recurring motive is also a feature of *Medusa* and *Signals*, as well as the first and final versions of *The Triumph of Time* where the soprano saxophone plays A-E-B flat.[217]

Signals was the first piece Birtwistle wrote for Matrix and it developed the notation first used for the refrain in *Cantata*. No score of this piece is commercially available; however, Universal Edition does possess a fascsimile of a printed version, and there are sketches for the work in the Sacher Foundation. The piece is divided into five sections, which Birtwistle labels strains. Each strain is concerned with offering the performer, a solo clarinettist, different kinds of choices. In Strain 2 the choices concern degrees of accelerando and ritardando. During the section a three-note contour very like the one in *Cantata* is deployed at moments to signal a break and the start of a very different texture. **App 51, b** is a summary of the main textural changes, based on alternating rhythmic pulses. The form of Strain 2 illustrates a new association between concepts of time, textural change and form in Birtwistle's music. The movement is divided into six sections which are all repeated. These are separated by two kinds of sustained events, one of two notes, the other with three. These events are the unchanging signals which announce a halt in one texture and the beginning of a new one. They also mark formal dividing lines because they are the only elements not characterized by pulse. During the pulsed sections different rhythmic modes are used to manipulate and distort the basic patterns. Each section has a different tempo marking, but this is altered with each repetition. For example, the first section is to be played at crotchet = 120, 60 or 80, thereby altering the basic pulse. Birtwistle also instructs the performer to vary the figures during the third section by lengthening the gap between the first and second notes. Although he requests that the tempo remain constant, the effect is a distortion of the pulse in the listener's experience.[218] The importance of a changing pulse anticipates *Silbury Air*

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[217] When I examined the sketches for the first version of *The Triumph of Time* this motive was on the *recto* of page 43, which is marked number 9 of a continuity draft.

[218] This example suggests interesting parallels to certain pieces by Ligeti, for example the *Chamber Concerto* which was being written at the same time. The importance of tempo changes in Strain 2 of Birtwistle's piece also relates back to a point made by Cage in relation to his *Music of Changes*. He noted that,

> The *Music of Changes*, and even the timelength pieces for percussion and stringed

(1977). There is also a possible link between this piece and Ligeti's fascination throughout the 1970s with broken machines and mechanical rhythms, and this is further developed by Birtwistle in *Carmen Arcadiae Mechanicae Perpetuum* (1978).

In *An Imaginary Landscape*, the role of the unchanging signaller of textural change is fulfilled by a series of interjecting tutti chords which are usually marked with pauses. This device was anticipated by Strain 5 of *Signals* where the statements of a series of ten complexes, with a number of possible routes on offer, are separated by a choice of four notes marked with pause marks (**App 52**).This device is also used in *Medusa* where held chords interrupt the piano as it plays a transformation of a Bach gigue, the chords eventually bringing the piano to a halt (**App 53: 1-2**). In *An Imaginary Landscape*, each chord employs different pitches and registral spacings but nonetheless each one represents a slightly altered version of the same idea. The chords usually stand outside the main tempo, and they act to halt the flow of the linear material to which they bear no relation. The effect of the chords, like the figures in the works above, is to freeze the action. Once again, this was something which Birtwistle made use of in *The Mask of Orpheus*, where for instance the moment when Euridice is bitten by a snake is re-enacted over and again, to the extent that the scene is frozen in time.

In *Medusa*, the same function is performed by a pair of fixed features which are used to interrupt and order events. The first of these ideas, which appears at figure B (**App 54: 1**) is a palindromic, ascending/descending shape, which recurs four times throughout the piece. In the sketches this is referred to as the 'Medusa theme'. This idea bears a striking resemblance to the texture used at the centre of Berg's film music for *Lulu* (see **App 54: 2, b**). This scene is literally palindromic and at its centre the music rises to a sudden climax before descending and retracing its steps in reverse. Birtwistle's flute line, which climbs from D6 to C7, is very similar to Berg's upper line from D5 to Dflat7, and

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> instruments, are all written in rhythmic structures, but structures that have become so flexible through the admission of accelerandos and ritards that the time is no longer fixed. At that point, then, where you introduce accelerando and ritard into a structural principal [*sic*] based on timing (in other words when it becomes flexible), it's on its way to no longer being necessary and its moving into process.

William Duckworth, 'Anything I Say Will Be Misunderstood: An Interview With John Cage', in *John Cage at Seventy-Five*, eds Richard Fleming and William Duckworth (Lewisburg: Bucknell University Press, 1989), p.19.

both examples retrace their steps exactly. This was anticipated by a similar figure in *Nomos*, which occurs on page 7, bars 19-21 (**App 54: 2, a**).[219]

The fact that the examples in *Nomos* and *Medusa* appear from nowhere and disappear just as quickly demonstrates an increasing tendency in Birtwistle's music towards the use of self-contained objects. The sketches go further still and actually show ideas being sketched independently, in boxes. This may be seen to bear out the analytical approach adopted in this thesis towards earlier pieces, especially *Entr'actes and Sappho Fragments.* Several pages in the sketches chart the development of the two main ideas. On the *verso* of a sheet of A4 size graph paper, titled "Medusa Elements", three items are listed, numbers II and III of which are labelled "Medusa theme" and "Xyl. flower", respectively, with a note that the Medusa theme will appear four times.[220] The other "element" is the continuum, which consists of seven items, including C-B in the clarinet and C#-G in the flute. Another element listed elsewhere is the chord idea used to interrupt the Bach gigue. On one page it is written in a box, scored for celeste and glockenspiel, with "13 times" written beside it. Elsewhere, the Medusa theme and xylophone ideas are worked out together. A first version of the Medusa theme was written out within what appears to be a picture of a jellyfish (**App 55: 1**). This relates to D'Arcy Thompson's discussion of medusoid forms in his book *On Growth and Form*:

> The living medusa has a geometrical symmetry so marked and regular as to suggest a physical or mechanical element in the little creature's growth and construction. It has, to begin with, its vortex-like bell or umbrella, with its cylindrical handle or manubrium .... No sooner made, than it begins to pulsate; the little bell begins to 'ring' .... Certain it is that the tiny medusoids of *Obelia*, for instance, are budded off with a rapidity and a complete perfection which suggests an automatic and all but instantaneous act of conformation, rather than a gradual

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[219] Although not literally symmetrical or palindromic, the *Nomos* figure has several things in common with the *Medusa* example. The symmetry is implied by the bassoon and harp C-D flat figures in bars 19 and 21, the trombone D flats, and the horn's E flat-B flat figure, which surround a central rising and falling scale in the xylophones and a high woodwind chord, in bar 20. This ascending/descending motive, another version of which can be seen at letter L in *Cantata*, becomes a topos for Birtwistle and is a feature of later pieces, such as *Gawain* and *Earth Dances.*

[220] The *recto* of this page contains a sketch of ascending three-note contours for *Nenia: The death of Orpheus.*

process of growth.[221]

Birtwistle's sketch appears to be an attempt at reproducing this description in the form of a self-contained musical idea, one which has "a geometrical symmetry so marked and regular", "a mechanical element", and which "begins to pulsate" and "ring", as indicated by the repeated notes and accelerando markings. What is also of significance for Birtwistle is that the description is of a natural process which is "automatic and all but instantaneous ... rather than a gradual process of growth." Here then is a self-contained, perfectly symmetrical, mechanical, yet natural object, which has been formed almost instantly. This idea does not appear in the score, but certain aspects of its design are matched by the ascending/descending motive shown in **App 54: 1**. The other self-contained idea in the sketches is first heard on page 2, and recurs five times during the work. This is shown in **App 55: 2**.

Despite his sense that *Medusa* represented a form of "selling-out" to the style then favoured by Maxwell Davies, the work is an important contribution to Birtwistle's development as it led him towards a formal endpoint in *Signals*, in which ideas are juxtaposed without any form of transition. *An Imaginary Landscape* reworks this formal position during its first section, but in its second section simple block juxtapositions give way to a more complex technique of layering, which in turn gives way to a series of steady transitions, based on incremental alterations. The textural changes at the end of *An Imaginary Landscape* conform to a continuum of change, each difference happening by degree rather than *en masse*. In this way, *An Imaginary Landscape* summarizes the transition of formal technique in Birtwistle's musical language at this time and as such thoroughly deserves closer investigation. By 1976, when *Melencolia I* was composed, Birtwistle had become extremely concerned with the moments of transition and the effect of this was to destabilize the musical objects as they became designed to accommodate change. This resulted in an altogether more continuous texture, based on the potential for change, the entropy, of each moment.

Before exploring these issues in relation to *An Imaginary Landscape*, it is

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[221] *On Growth and Form* (Cambridge: Cambridge University Press, 1997), p.74, contained in the chapter titled 'The Forms of Cells'.

important to account for two sketchbooks produced in 1970 which contain evidence of an attempt at systematizing Birtwistle's use of contour, which he had already been applying in works as early as *Nomos* and *Verses for Ensembles*. The next section will also consider *Nenia: The death of Orpheus*, as it is closely bound to ideas found in the sketchbooks.

'Modual Book' and *Nenia: the death of Orpheus*

The Sacher Stiftung *Birtwistle Sammlung* contains three WHSmith manuscript books which appear to originate from the same time, one of which is dated April 2 1970, and titled 'modual book'. This book, listed in the Sacher inventory as Sketchbook 1, and another listed as Sketchbook 2, contain ideas for *An Imaginary Landscape* and *Nenia*, as well as for *Prologue* and a first version of *The Triumph of Time*. This demonstrates the scope of Birtwistle's creative energies at this time, which were indirectly aimed at the eventual production of *The Mask of Orpheus*, begun in Autumn 1973.

Table 6 is an inventory of the modual book:

Table 6

page	*contents*	*date*
Cover	"Modual Book. The Triumph of Time"	2 April 1970
1	Permutations of three-, four- and five-note ascending contours moving forward by one position each time.	2 April 1970
2	Table illustrating the relations of three-note forms, based on three possible positions, with labels P, I, R and RI. The top line shows a palindromic presentation of the 6 maximum permutations of a basic ascending three-note contour.	
3	Table with circles and lines with arrows illustrating the networks of association of the groups listed on page 2.	
4	Table listing four-note contours in 24 groups of four	
5	Table, on two separate A4 sheets of graph paper taped together and stuck into the sketchbook, representing the networks of association between the groups on page 4. Arranged in the form of a large circle, with lines and arrows. "IV Factor. The Triumph of Time" written at the top, and the date.	2 April 1970
6	Relates to the first version of *The Triumph of Time.*	
7	As above	
8	"Time line beginning T.T"	
9	"Timp modes" for *The Triumph of Time*	
10	Sketch for *Prologue*	
11	As above	
12	Unidentified	
13-28	Sketches for *An Imaginary Landscape*	

I have been unable to relate the contents of the opening pages to the first version of *The Triumph of Time*. However, certain sketches for *Nenia*, although they do not draw on the tables systematically, do correspond to the same procedures and do visibly work with the idea of associated forms. Pages 1 to 5, including the 'pull-out' chart, are concerned with working out all the possible permutations of three- and then four-note contours. It appears from page 1 that the intention was to do the same for five-note contours but the sketchbook does not get that far. Page 1 (again dated 2 April 1970) begins tentatively, varying each contour (three, four and five) by moving forward one position each time. However, this did not appear to satisfy Birtwistle, as his note in the bottom right-hand corner records, to himself, "not possible only produces one large interval. ie. two intervals. small and large."

Page 2 focusses on three-note contours (**App 56: 1**). The top line lists the six total possible forms and arranges them in a palindromic shape. This naturally led to a more

systematic table which adopts P, R, I and RI to denote the standard forms of permutation familiar from serial technique, and these terms are applied to each of the six original forms in turn. Page 3 then groups the forms which are identical (**App 56: 2**). This is done by drawing six circles, around which the labels of the identical forms are written, four to each circle. The first circle, for example, contains P1, RI1, I6 and R6. Between the circles inversional relations are indicated by lines with arrows, linking RI1 to R1, for instance.

Page 4 (**56: 3**) is the most ambitious, detailing every possible permutation of a four-note contour. Although this begins with a simple rising form, which is inverted at position 12, and the last form is 24, the logic behind the permutations here is idiosyncratic, to say the least. The most 'tidy' summary I have been able to reach is presented below:

Example 15 Possible criteria for the order of four-note contours on page 4 of the 'modual book'

no's	1, 5, 9, 13, 17 and 21	begin on 1	(every 4 from 1)
"	2, 6, 10, 14, 18 and 22	" " 2	(" 4 " 2)
"	3, 7, 11, 15, 19 and 23	" " 3	(" 4 " 3)
"	4, 8, 12, 16, 20 and 24	" " 4	(" 4 " 4)

Thus:

1 1 2 3 4	**2** 2 3 4 1	**3** 3 4 2 1	**4** 4 2 3 1
5 1 2 4 3	**6** 2 3 1 4	**7** 3 4 1 2	**8** 4 2 1 3
9 1 3 4 2	**10** 2 4 3 1	**11** 3 2 4 1	**12** 4 3 2 1
13 1 3 2 4	**14** 2 4 1 3	**15** 3 2 1 4	**16** 4 3 1 2
17 1 4 2 3	**18** 2 1 4 3	**19** 3 1 2 4	**20** 4 1 2 3
21 1 4 3 2	**22** 2 1 3 4	**23** 3 1 4 2	**24** 4 1 3 2

Each group, from 1 to 24, contains four forms. The top-left form is the prime, the bottom-left is the inversion, the top-right is the retrograde, and the bottom-right is the retrograde inversion.

Page 5 (once again dated 2 April 1970) is titled TV Factor', and also links the page to 'The Triumph of Time' (**App 56: 4-5**). Referring to contours by label alone, this chart

attempts to arrange all the possible four-note contour forms in a large circle with numbers 1 to 24 moving anti-clockwise. One exception is number 12, which has been placed at the top of the circle next to 1, presumably because these are related through inversion. Ever keen to find symmetries, Birtwistle drew in an arrow linking forms 13 and 14 at the bottom of the circle, but then had to delete it as these are not inversionally related. Each number in the chart is determined by the P form, and is accompanied by the three other contours which are identical to that particular P form (for example, P1, as seen before, is replicated by RI1, R12 and IR1). Birtwistle's next step was to list, on the right-hand side of the page, the forms related through inversion, which came out as follows:

1	12	(2)		
14	23	(2)		
4	13	(2)		
7	18	(2)		
2	15	20	21	(4)
3	5	22	16	(4)
6	11	17	24	(4)
8	9	10	19	(4)

From here Birtwistle drew lines with arrows, as seen before with the three-note contours, indicating the groups linked through inversion. Pages 5 to 12 are then concerned with working-out ideas for the first version of *The Triumph of Time*, although none of them seems specifically related to the charts at the start of the sketchbook. Pages 13 to 28 (the last page in the book) are all devoted to sketching ideas for *An Imaginary Landscape*. These are also apparently not related to the charts of contours. It is not until the next sketchbook, which has *Nenia* written on its front cover, that lists of contours reappear and it emerges that associated contours are used which may have been drawn from, or inspired by, the tables in the modual book. To illustrate this I will examine two particular examples from *Nenia*, the first based on the opening section of text, from the start to figure 13, which is predominantly set as *Sprechstimme*, and the second based on the central melismatic setting of Orpheus's lament, "Euridice, Euridice ...", from figure 15 to 20.

Before doing this it is worth summarising the important pages concerning *Nenia* in Sketchbook 2 and the third sketchbook, which is included in the *Skizzen und Entwurfe* category under *Nenia*. There are other sketches for *Nenia* besides these, which I will

describe where necessary.[222] These bring the total number of sketches to 30 sides, and there are 26 sides of draft.

Table 7

Sketchbook 2

page	*contents*
Cover	"Nenia" (in Birtwistle's hand). " + orchestral piece written after Nenia? Triumph of Time." (In fact, the other sketches are for *An Imaginary Landscape*).
1	"Nenia" written at the top. Table used to determine the rhythm for the *Sprechstimme* from the opening to fig.15.
2 to	Permutations of three-note contours using all five lines of the stave. Used determine the *Sprechstimme* from the opening to fig.8. Also contains ascending contours which may represent a first attempt at composing the opening as, on another sketch page, some of these contours (written in red) are linked to rhythmic figures used in the voice in part one.
3	An exploration of the possibilities of the ascending three-note contour, derived from page 2, using all five lines of the stave.
4 and 5	Single line with pitches and square brackets used to determine the pitch and vocal qualities used in the sung material from the opening to fig.15. four-note contours used to determine the pitches are written at the top of page 4. Page 5 also contains sketches for *An Imaginary Landscape* (relating to trumpets, trombones and tuba at fig.55).
6-8	Sketches for fig.6, "a crazy and predetermined whim", voice and instruments.
9	Unidentified
10 and 11	Sketch of vocal line for part 3, from "The snarls of venomous ..." to the end.
12-21	Sketches for *An Imaginary Landscape*.

[222] I have decided only to describe important sketch pages. It must be remembered that the ordering of all Birtwistle's material in the Sacher Stiftung at the time of writing, apart from the contents of sketchbooks, is not fixed and that until the material has been placed onto microfilm the best way to locate particular sheets is through visual identification. Any numbering I attribute to pages, except in the case of sketchbooks, is my own and may be subject to change.

Nenia Sketchbook, in *Skizzen und Entwürfe*

page	*contents*
Cover	"NENIA" written in top right-hand corner.
1	A list of the first 16 chords used in the bass clarinets
2-3	Draft sequence (numbered 11-12 by Birtwistle) for the central, melismatic setting of "Euridice".
4	Blank
5	Draft sequence (numbered 13)
6	Blank
7	Draft sequence (numbered 14)
8 and 9	Blank
10-13	Draft sequence for figs 29 to 33 (numbered 18-19)
14-18	Blank
19	Sketch for "What blame, what sin?", figs 21 to 23

Birtwistle devised the soprano part of *Nenia* in accordance with the design of Peter Zinovieff's text which implies three voices: that of narrator, Orpheus and Euridice. This is emphasized by a switch from one form of singing or *Sprechstimme* to another as the voice in the narrative changes. In the sketches Birtwistle labels these differences as "thin", "Q" (perhaps for quivering, as it applies to trills and tremolo effects) and "full". One other label is "bounce" which occurs, for example, on "ri" in the 4/4 bar before figure 8, and "di" in the 4/4 bar after figure 9. For the first part of the work (from the beginning until figure 15), the narrator is presented through *Sprechstimme*, whilst Orpheus and Euridice are sung, utilising the vocal effects listed above. Around figure 10 the voices of Orpheus and Euridice become entwined before a final, resolute call of "Euridice" at figure 12. This half-way point in the first part is indicated by a number of features, all characterized and determined by contour. The declamation of "Euridice" at figure 12 is the first clear statement of a contour, in this case P2 from the table of four-note contours in the modual book (page 4). Beneath this piano 2 rises with an overall shape of P1, subdivided into four groups of the three-note contour P1, as listed on page 2 of the modual book, and the bass clarinet descends through what must be assumed, as no table exists, to be an I1 five-note contour. There is a pause after this, followed by the remainder of the first part during which the voice uses "natural speech inflection" with no sense of pitch.

The sketches indicate that the whole of the vocal line in the first part has been constructed through a systematic application of three and four-note contours. Six four-

note contours were chosen for the voices of Orpheus and Euridice but these, with the exception of the example at figure 6, were overlapped in a manner which will be explained more fully in the second example. The *Sprechstimme* passages, used for the voice of narrator, were sketched independently of the sung material.[223] They consist of a sequence of three-note contours based on the five lines of the stave. The actual selection process is not contained in the extant sketches, but **App 57** gives a transcription of the relevant sketch for the narrator's voice. There is no apparent grouping of associated forms, although in general terms P forms are often followed by R or I forms.

The second example is much more obviously related to the tables of associated contours in the modual book. This begins at figure 15, the start of the melismatic central section in which Orpheus sings of Euridice, "Euridice, my love ...". The first stage in composing this was to devise a scheme of overlapping, associated contours derived from the tables contained in the modual book. The sketch for this is written on the recto of an A2 size sheet, shown in **App 58: 1-2**. The vocal line is based on three contour networks, which are written out in the top right-hand corner of the page. These are the three-note complex, labelled 4 on page 2 of the modual book, the four-note complex, labelled 8 on page 4, and a five-note complex not listed elsewhere. There are seven sections, dictated by the text. A list on the left-side of the page links each complex to a section:

a	3
b	4
c	5
d	3, 4
e	4, 5
f	3, 5
g	3, 4, 5

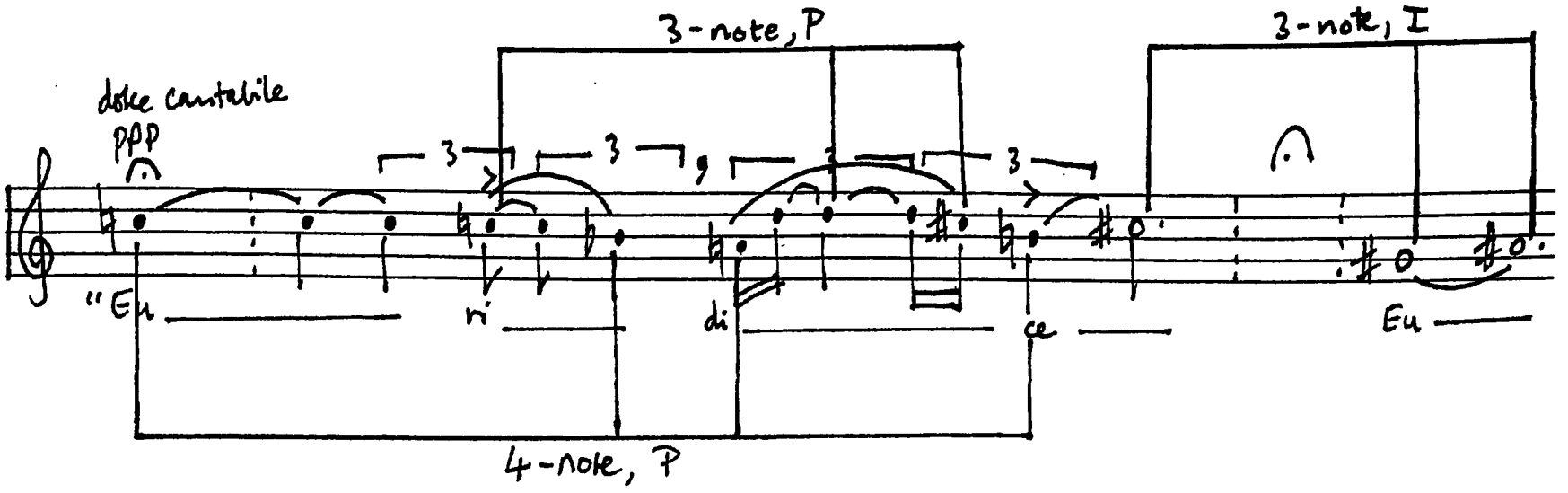
These, in turn, are rearranged in the order d, a, g, b, f, c, e. At the bottom of the page, the resulting line is written out with pitches, but without a rhythm. The pitches are based on re-orderings of an expanding chromatic wedge around C. Square brackets indicate the overlapping of contours, which are used in the order P, I, R, RI. **Example 16** shows the

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[223] Neither of these sketches make reference to other features in the score, except for a number of vertical lines with arrows in the sketch for the *Sprechstimme* material which correspond to interjections of sung music.

vocal line as it appears in the score, with annotations to indicate the overlapping contours:

Example 16 *Nenia: the Death of Orpheus*, soprano part at figure 15, page 15 of the score



A similar process was used to compose the vocal line from figures 21 to 24, based on the three-note complex 3 from page 2 of the modual book, and a selection of four different prime forms from the table on page 4. The most characteristic shape used is that of P4 which appears three times in succession at the end of the section, to the words "love me, love me", and the resulting motion of overall descent lends a melancholy air to the music, which is extended by a five-note descending figure in piano 2 at figure 24. As was seen in the earlier works discussed above, contour is used as a framing device as well, since this figure in the piano is an inversional retrograde of an ascending five-note figure the piano played at the start of this section, at figure 20. Similarly, at figure 30, while the bass clarinets descend through a five-note contour, the B flat clarinet ascends to a shrill G6 leading to the climax on "blood".

The exclusion of contour is also an essential element of *Nenia*, particularly at the end of the work, where syncopated pulses dominate and the voice assumes a much flatter line. Here the emphasis is on creating a feeling of steady motion which not only depicts the flow of the river as it carries Orpheus's remains away, but it perfectly illustrates the mood of the natural surroundings as they lament the loss of Orpheus: "All the world and skies mourned and despaired his death. / The women were turned to rocks and the rivers moaned / As his remains were carried on their surface to the sea." This is an example of

the pastoral literary device known as the pathetic fallacy, where natural surroundings and animals are in sympathy with the mood of the characters. This balances out the role of situation and character discussed earlier and expresses the two-way nature of the relationship between landscape and character, situation and action, which Birtwistle exploits throughout his music.

An Imaginary Landscape

The Sacher Stiftung *Birtwistle Sammlung* contains a large number of sketches and pre-compositional jottings for *An Imaginary Landscape*, including material which can be described as plans for the work, determining in advance of actual composition the sequence and duration of events.[224] This calls to mind a number of interesting parallels, most obviously that of John Cage's *Imaginary Landscape no.4* the score of which contains the kind of information Birtwistle was considering at the very earliest stages of writing his own *Imaginary Landscape*. Through its use of electronic media (Cage's work is scored for twelve transistor radios) and the layout of its score, which uses clock time notation to indicate when events are to take place, Cage's *Imaginary Landscape no.4* also relates to Birtwistle's tape piece *Chronometer*, which according to Michael Hall was being composed at the same time as *An Imaginary Landscape*. During the composition of *Chronometer* Hall reports that the principal considerations were of the distribution and duration of ideas:

> [*An Imaginary Landscape*] was composed when he [Birtwistle] and Zinovieff were working on *Chronometer*,[225] to date his one and only purely tape piece. Following John Cage, whose various Imaginary Landscapes all involve electronic processes of one kind or another, he fed information into Zinovieff's computer in the hope that this electronic process would give him some interesting proportions

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[224] The *Sammlung* lists 180 sides of sketches (including 29 located with manuscripts relating to other pieces; see the bibliography for more details). There are also 42 sides of first draft, and 60 sides of fair copy.

[225] There is a discrepancy here. According to the information in Hall's list of works (1984), which is reproduced in the *Universal Edition* catalogue (London: Universal Edition, 1994), *Chronometer* was composed from Winter 1971-72. *Imaginary Landscape* was performed in June 1971, so for the two works to have been written together work on *Chronometer* would have had to have begun well before Winter 1971.

for the piece; but the results disappointed him and he amended them.[226]

An Imaginary Landscape is scored for 4 trumpets, 4 horns, 3 trombones and tuba, 8 double-basses, and percussion (including 2 xylophones, 2 timpani, and vibraphone). The work is divided into two halves by a change of seating at figure 34. The first position (Brass Position A) groups the players in trios (e.g., trumpet 1, horn 1 and trombone 1), whereas the second grouping (Brass Position B), at figure 34, arranges the players by family (i.e., trumpets 1-4), therefore outlining a shift from groups of trios to quartets. The work explores different combinations of instruments as they pass, linearly, through a series of interruptions which take the form of single chords either held as pauses, or given a short rhythmic value. These chords are scored differently each time, with altered instrumentation, pitches and dynamics.

Within the two main sections of the work there are numerous, often rapid changes of texture, and even within those sections there is a high degree of variety, calling to mind Birtwistle's analogy when describing the work:

> The musical procedure has an analogy with the way one experiences, visually, physically, a natural (or man made) landscape. One starts, stops, moves around, looks at the overall view, fixes one's attention on a particular feature, or on a detail of that feature, or on a fragment of that detail, or on the texture of that fragment.[227]

The feature which most closely fits the description of the "overall view" may be the chorale texture which not only ends the work but appears at various moments throughout the piece. I say this may fit Birtwistle's description because when listening to the chorale it is not the detail of the individual part movement that characterizes it, but the overall impression created by parts moving at a steady, walking pace, roughly in rhythmic unison. This idea suggests motion, albeit slow motion, and it is an idea that Birtwistle reworked to even greater effect in *The Triumph of Time*, particularly at the opening. There the parts are more noticeably out of step with one another in a manner which is in sympathy with the awkward, weary procession detailed in Breughel's etching of the same title, which

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[226] Hall (1984), p.85.

[227] *Ibid.*, cited on p.85.

Birtwistle maintains he saw after starting work on the piece.[228]

The chorale texture, shown in **App 59: 1**, is characterized by its sustained, linear motion. At first it makes various short appearances, at figures 2, 5, 11 and 13, before continuing in a more extended stretch from figures 19 to 24. Throughout the work, and in particular during the first half, this material is contrasted with a more fractured, thinner texture which first appears at figure 12 (see **App 59: 2**). This is characterized by a mixture of staccato and sustained motion reminiscent of sections of *Le Sacre du Printemps*.[229] The first half of *An Imaginary Landscape* consists of placing these two contrasting blocks one after the other. The two textures are heard together at figure 27, where the chorale texture returns but is joined by two xylophones whose spiky, piercing motion is supported by sudden, loud interjections in the brass. The fractured texture takes over completely at figure 29, faster and louder than before. The first half ends with the chorale-like texture thinned down to the barest sound but accompanied, and almost overridden, by the two xylophones playing *fff*. At figure 32, as the xylophones continue, the brass drops out and is replaced by the double basses. This section (from figure 32 to the change of position at 34) contains the slowest rate of change in the entire piece. The xylophones go on repeating the same short phrases while the double bass chord changes one note in every three bars.[230]

The second part of the work, section B, begins at figure 36 following a held chord which, exceptionally, is assigned a length in clock time (*c*.3-4 seconds). Section B occupies the centre of the piece, from figures 36 to 61, and contains some of the densest periods of juxtaposition and fragmentation of textures. A pre-compositional plan for this

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[228] Michael Taylor, however, points out in 'Birtwistle's First *Triumph of Time*', *Mitteilungen der Paul Sacher Stiftung* Nr.8, März, 1995, the sketches indicate that the title existed at the very outset, when Birtwistle began work on the first version of *The Triumph of Time*. However, the 'out-of-step' processional opening of the final version is not contained in the first attempt, which leaves open the possibility that Birtwistle was dissatisfied with the first version on the basis that it did not reflect his impression of the painting well enough.

[229] An example of this is the *Danse Sacrale*, for instance at figures 142-146, 167-172, and 180-181. Juxtapositions of more sustained, linear textures with blocks of regular, detached, homophonic material, may be found in the *Jeux des Cites Rivales*, for example at figures 59-62.

[230] The density of material here is reminiscent of the harmonies Ligeti was composing at the time, where change occurs incrementally. Examples of this may be found in *Ramifications* (1968-69), especially at figures 82-96; in the Chamber Concerto (1969-70), third movement, bars 12-40; and in the Double Concerto (1972), in the second movement, bars 91-102.

part of the work is contained in the sketches, along with other more detailed sketches for sections of the plan, and I will shortly turn to an examination of these. Section B lays the two contrasting textures one upon the other, rather than continue the scheme of vertical, block-like oppositions of section A. This can be seen immediately from figure 36, where the fractured material forms a continuum to the horns' sustained cantus. From figure 38 onwards it becomes clear that the fractured material is circling and repetitive, built from repeating blocks of varying length, whereas the sustained texture, which reappears in the trombones and tuba at figure 40, is more developmental.

At figure 61 (**App 60**) the trumpets and xylophones play a variant of the three-note contour first heard on page 1 of the score. This signals the beginning of the third and final section, C, which reintroduces a number of elements from section A, sometimes literally repeated within a new context. The attempt of the previous section at bringing the various orchestral groups together continues into section C, resulting in four loud tutti unisons on E (at figure 67), F (68), D (69), and E flat (70-71). Once again, this recalls the work's opening which stressed G, D, E flat, A flat on page 1, followed by A, E, D and B flat. The ultimate gesture of reconciliation between the groups is provided by the final chorale, which is anticipated by a literal quotation of two chorale statements from section A (figures 2 to 3 are repeated at 73+2 to 74, and 5 to 7 is repeated at 75 to 77). From figure 71 to 80 the music is underpinned by a series of long, sustained chords in the double basses. The entire orchestra take up the fractured texture from figure 80 to 81+2, following the lead of the two xylophones, until the first trumpet, horn and trombone introduce a variation of the horn theme previously heard at figure 15, characterized by rhythmic unison. The remaining parts form a counter-line and the whole texture is supported in the double basses by the return of their slowly changing sustained harmonies, and this leads into the final chorale at figure 87. Towards the end of the chorale the parts begin to drop out, leaving 10, then 5, 3, 2 and finally 1 part and the two tam-tams. The final pitched instrument to play is the first horn, and its few remaining notes are the nearest the work comes to solo expression.[231]

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[231] Michael Hall (1984) comments (on page 85):

> What is unusual about the work is that no soloists are involved; there are only choruses, groups of instruments. Indeed, the influence of Stockhausen's *Gruppen*, the work which revolutionized the use of space in music, is manifest. Stockhausen's description of his

In the sketches, the most interesting item to emerge is the body of a pre-compositional plan for section B of the work, which provides a key to unlocking the numerous subsidiary sketches which exist for the work. This is shown in **App 61: 1-3**. The plan is arranged in a similar way to the one that survives for *Verses for Ensembles*, with instrumental groups arranged on three, occasionally four, horizontal lines, and vertical divisions which mark changes of texture, of which there are 28 in total. The vertical lines all correspond to the position of chordal interruptions, both those given rhythmic values and those with pause marks. The chords therefore indicate an automatic change of texture. The textures themselves are specified by colours on the plan. A key at the top of the page indicates that yellow = 1, red = 2, blue = 3, green = 4 and black = 5. The two textures I have discussed above are represented on the plan by yellow (the fractured material) and red (sustained). The other three colours represent new textures which are used to increase the density of information, and this corresponds to Birtwistle's programme note for the first performance of the work which indicates that the piece is "a single movement built from five different sound-blocks."[232]

The plan begins with red and yellow lines. The red indicates the horns from figure 36 to 37, who play a sustained chord formed after a series of stretto entries; the yellow refers to the double basses, trombones and tuba, which have a more disjointed, fragmentary texture composed of a mixture of short and sustained notes separated by rests.[233] The black line (number 5) corresponds to the block of demisemiquaver

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piece could also be used for *An Imaginary Landscape*. He talks about how the various groups separate or get closer and closer to each other, how one may receive another into itself, how they coalesce. "Then all three orchestras become one - playing in the same tempo, the same harmony, the same hues." This is almost an exact account of how Birtwistle's groups gradually coalesce to play, as softly as possible, the deeply impressive closing chorale ....

[232] Cited in Hall (1984), p.164.

[233] The double basses from figures 38 to 40 (divisions 3 to 4 on the plan) emphasize the repetitive, circular nature of the yellow music, as each pair of instruments (1 and 2, 3 and 4 etc.) merely repeat blocks of pitches of varying lengths (for example, pairs 1 and 2 play [E flat, B, G, C] four and a half times, and pairs 3 and 4 play [C#, A, E, B, G#, A] three times). This device was used in *Nomos*, especially during the closing section. The xylophones also repeat material, although throughout the work they gradually accumulate more repeating patterns, increasing the number of notes played altogether. Page 16 of the modual book contains a series of rectangular boxes each internally divided in seven different ways and arranged in a line. This graphically illustrates the idea of varied repetition which the xylophones display.

quintuplets in the horns, one bar after figure 37, whilst the trombones and tuba continue underneath this with the fractured, 'yellow' music. Another sketchleaf, numbered 1 in a sequence of nine A4 sheets, is titled "yellow music" and details the rhythmic layout from figures 36+4 to 49, a period lasting 123 crotchets. This sequence, however, does not indicate the position of vertical interruptions, which suggests that the material was designed as a continuous thread that was artificially divided at a later stage.[234]

Sketches for the chords which interrupt these continuous designs are located in various places throughout the surviving manuscripts. Some exist in the modual book and Sketchbook 2. During these sketchbooks, where the order of the pages is fixed, the workings for *An Imaginary Landscape* do not follow in the same order that they appear in the score. This does not, however, prove that they were written in the order that appears in the sketchbooks as Birtwistle does not date the pages and he may have simply written an idea on the first blank page he happened to turn to. Given that a plan for part of the work exists, one conclusion may be that the order in which the various elements were composed did not matter since the coherence of the piece was guaranteed by the plan. If, however, the sketches were written in chronological order the implication is that the second half of the work was composed first. Table 8 lists the contents of the sketchbook pages relating to *An Imaginary Landscape*:

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[234] The same applies to the material for brass trios composed for the first half of the work. Here Birtwistle uses colours in a different way, using them to distinguish each trio rather than each texture, since essentially the three trios carry the same texture. The sketches include a sheet of A2 on which the pitches are written out for the three trios, blue at the top, black in the middle and red at the bottom. In his realisation of these charts the pitches are not always taken straight from one line but often chosen by moving between the three lines in each colour. The rhythms are continued on separate A4 sheets, clearly labelled blue, black and red.

Table 8 Inventory of pages in the sketchbooks relating to *An Imaginary Landscape*

Sketchbook 1 (Modual Book)

page	*contents*
13	Sketch for chords. Unidentified; possibly a first version?
14	Sketch for the chords from figs 52+2 to 54+2
15	Titled "chorale ground harmony". May be a first attempt at sketching the final chorale
16	Rectangular blocks with different diagonal fillings, drawn in green, which demonstrate the idea of permutating a basic shape. Also, two scales from C to C1, and two melodic lines: one in C major, the other in F major. The shapes and scales may relate to the xylophone material used throughout the piece as it is based on repeating blocks
17	Sketch for the xylophones from figs 12 to 13 which includes a list of the three-note contours used. Also contains green markings relating to the previous page and workings for the chord one bar before fig.12
18	Pitches for the chords from figs 43+4 to 46+2, labelled I to IV
19	Sketch for the chords from figs 48 to 49-2
20	Blank
21	Sketch for the trombones and tuba from figure 48+1 to 49-1 (this passage is marked in black on the main plan, divisions 10 to 11)
22-23	Sketches for the section on the main plan from division 16 to 21, which corresponds to figs 52+4 to 56.
24	Pitch sketches for horns, trombones and trumpets from figs 54+1 to 70-2, used in the stretto entry, sustained material frequently labelled "red" in the plans
25	Sketch for the chord at fig.52
26	(Upside down). Pitches. Unidentified
27	(Upside down). Sketch for chords. Unidentified
28	(Upside down). Pitch sketch for double basses and horns, figs 36-7, and, at the bottom of the page, for the chord at fig.36

Sketchbook 2

page	*contents*
5	Sketch/draft for the trumpets at fig.55 and the trombones and tuba two bars later - on the same page as workings for *Nenia*
12	Sketch for the chords from figs 66-1 to 67 (in green ink)
13	Sketch for the chords from figs 55+1 to 56-1
14-15	Three-, four- and five-note pitch collections, based on expanding wedge principle. Possibly a resource for the chords?
16-17	Sketch for the chorale texture at figs 5 to 7, repeated at figs 75 to 77
18	Sketch for the timps at figs 15+3 to 18-1
19	Sketch for the chorale texture at figs 11 to 15-1 (in one block, with markings to indicate where possible insertions could be made, not all of which match the interpolations in the score)
20	Pitches for the unison double bass line (parts 1-4), from figs 18 to 19
21	"timp tone" for figs 11 to 15-2

The sketches, both in the two sketchbooks and elsewhere, suggest that this work involved more cutting and pasting, more internal revision than any of Birtwistle's pieces up to that time and possibly thereafter. The reason for this lies in the nature of the project which Birtwistle had set himself, namely to create a musical work whose logic is provided through the pattern of textural change rather than through its pitch centres and themes. Although the piece begins by focussing very clearly on a limited number of pitches, it soon abandons any pretence of tonal ordering or any use of long-range pitch association. Pitch seems more redundant in this work than in any other he had written before; even the closing chorale does not offer a link to the opening through pitch. The effect of the chorale is to move attention away from details such as pitch and instead on to the impression made by the instrumental group as a whole.

One sketch, on a loose A4 sheet, suggests that Birtwistle may have originally conceived a more important role for pitch in his long-range scheme for the work, but abandoned it as the work progressed. This is transcribed in **App 62: 1**. The row of notes at the top, in the treble clef, is repeated underneath with more details added, including a bass line which moves a perfect fifth below the treble part. Box 1 clearly relates to the opening of the piece, where a unison G is heard above C in the double basses (a D is also played in the bass). Box 2 shows an 'unfolding' from G to E flat which occurs at figure 2, in trumpets 1 and 2. The treble line A and bass D in box 3 are heard at figure 3 (A stated *'ffff'* in the xylophones, horns 1 to 4, trombone 1 and trumpet 1), and this 'unfolds' to B flat, three bars after figure 4. As the arrow between boxes 3 and 4 suggests, material which does not relate to this scheme (and which does not emphasize any specific pitches) is inserted between these moments, and it is not until figure 8 that the treble line A in box 4 appears, followed by A at figure 9 and D, three bars after figure 10, which constitute box 5. Another arrow on the plan accounts for the gap until figure 15 when the A flat from box 6 is heard, the B arriving two bars before figure 18. By this time, however, there is already no sign of the bass D flat, and from this point on the bass line of the plan disappears in the score. The E flat in box 7 is heard three bars after figure 31 (written as D# in trumpet 4), after which the only other clear statement of E flat comes at figure 71 during a brief passage in which pitches E, F, D and E flat are played as loud, unison chords. These are the only moments throughout *An Imaginary Landscape* in which

specific pitches are prominent, therefore analysis based on pitch association would, I suggest, prove fruitless in this work.

What appears to matter far more than pitch is texture and the rate at which the textures change. This calls to mind Birtwistle's metaphor of a 'continuum of change' which he later used when describing the motivic features in *The Triumph of Time*.[235] This idea may usefully be applied in *An Imaginary Landscape* to the role of chordal interruptions during the work. One might usefully imagine a continuum related to the interrupting chords which ranges from no effect at all on the progress of a texture, to a complete alteration and the start of an entirely new instrumental grouping. This information is clearly documented in the plan for section B of the work. However, the value of analysis lies in examining these divisions in more detail and exploring the degrees of change between the two extreme ends of the continuum. An analysis may help explain these divisions more fully.

A suitable place to focus this examination is section B, as it contains the highest frequency of changes for which detailed sketch material exists. This section is worked over a number of times by Birtwistle, which was unusual for him. The sequence of events in section B follows almost exactly the details of the surviving pre-compositional plan. The manuscripts suggest that the yellow and red material was composed independently, as two separate, continuous lines. The intervening chords were worked out when required and added later. The black and green textures are generally short and active and usually based on contour, reminiscent of aspects of the 'episodion' section of *Verses for Ensembles*. The blue material is similar to the sustained, chordal red texture, but the parts have greater independence and are characterized by greater intervals within each line, creating a more developmental, melodic effect.[236]

The way in which groups of interrupting chords are sketched points to the segmented fashion in which Birtwistle composed section B. For example, the four chords marked with pauses between figures 43 and 47 are written out together on page 18 of the modual book and labelled I to IV.[237] Similarly, the tutti chords used between figures 52+3

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[235] This was quoted on page 152.

[236] For example, see the music at figure 50.

[237] The pizzicato chords in the double basses during this section were sketched separately.

and 56 are found together on page 14 in the modual book, whereas the sketches for the rest of the music are contained on pages 22 to 23 of Sketchbook 2. An even earlier stage is shown on a sequence of five A4 sheets, mentioned earlier, which are numbered 1 to 101 (representing crotchets and seconds). Here the instructions "WIDE" and "HIGH" relate to the registral spacing of the green material played by the trombones and tuba six bars after figure 52 (regular quaver triplets characterized by changing contours), and "LOW" is written in reference to the trombones and tuba one bar before figure 54. The pulse is written along a central line, altering every three, four or five bars. At the next stage, on page 23 of the modual book, the relevant section of the main plan (division 16 to 21) is re-written at the bottom, now with the addition of metres which include four bars of 3/16 where the tutti chords are to be placed. Above this, 34 divisions (representing 34 crotchet beats) have been drawn and filled with the pitches for the brass.

The sketchbooks suggest that the interrupting chords were not written out in full at the start. Instead, they were prepared in batches and added when required after a first draft had been written (the first draft contains arrows which indicate the intended location of the chords). The two types of chord, one marked with a pause and the other assigned a specific rhythmic value, are generally worked out separately. Occasionally, both kinds of chords are described in terms of H (high), M (middle) or L (low) register. The sketches show that the chorale material used from figures 11 to 15, which is interrupted by a held tutti chord, followed by a block of yellow music from figures 12 to 13, was composed as a single, continuous passage. The sketch, on the *recto* of a loose sheet of A2, shows the chorale in score form, with the double bass unison line and markings for horn 2. At the end of the sixth bar a large vertical arrow has been written which indicates the position of the chord and interpolation. In the score, when the music resumes at figure 13 the sixth bar is repeated again. This method of repeating the end of a passage that is broken off happens each time a continuous texture is resumed. The compositional procedure seems to have been to place the fractured, yellow music inside the sustained material.[238]

The extent to which contour has been used in *An Imaginary Landscape* is not fully

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[238] Another example of this occurs when the continuous, sustained brass trio texture in the first half is interrupted four bars after figure 23. This is followed by an interpolation of yellow music from figures 24 to 27, followed by the last two and a half bars of the previous passage of yellow music, at figure 27.

revealed by the sketches, although there are some pages which suggest how it was used. The xylophone material throughout the piece is based on a series of overlapping contours and two A4 sheets with sketches for the xylophones at figures 24 to 26 show two overlapping brackets, of cardinal 4, one in green the other in red. Page 17 of the modual book contains workings for the xylophones at figures 12 to 13, beneath which four three-note contours have been written which are related to the contour in the music. The three-note forms are P1 to 4 in the table on page 2 of the modual book. Another A4 sheet reveals the use of contour when sketching the passage from figures 67 to 70, in section C, which includes the four unison chords on E, F, D and E flat (see **App 62: 2**). Red vertical lines and pause marks indicate the location of the chords. The sketch divides the passage into crotchet lengths, and is numbered 72 to 90 on its *recto* and 91 to 99 on its *verso*.[239] Numerous four-note contours have been written out which correspond to the stretto entries of the sustained material. For instance, the trumpet entries one bar after figure 68 are represented in the sketches by the contour <1423>, and an arrow links this to the pitches which are written on the top line. Although this contour is written out alongside three other four-note forms, it is not related to the others as part of a complex, as depicted on page 4 of the modual book. It would therefore be speculative to link these contours to the ones in the sketchbook.

A number of times in the plans for the work references are made to lengths in clock time. On the main plan the section from line 6 to 7 is described as lasting ten seconds, and this is divided into six plus four second sections. In the score, however, although the six second section contains three bars of 2/4, the tempo marking is crotchet = *c.*72. The same applies to the four second section, which has two bars of 2/4. On another sequence of A4 sheets which constitute a plan for figures 50 to 78, clock time is mentioned again. At one point Birtwistle has written, "? only 9. 2 more 11 secs." The plan runs from 1 to 101, each division equals a crotchet beat, but in Birtwistle's mind they appear also to represent a second of clock time, regardless of the eventual tempo adopted in the score. It seems that if strict duration was used at a pre-compositional stage it has received a more flexible interpretation in the final score. An indication that, in general

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[239] This puts the start of the sequence at around figure 58, just before the beginning of section C at figure 61.

terms at least, the duration of events was important is provided by a typed transcript entitled "Harry's Number's...A Musy's Programme. March 1971."[240] The transcript makes it clear that the "programme will give a list of numbers for the score to be made from." It also makes it clear that the score concerned is an orchestral one.[241] However, the date indicates that the program was devised some time after work on *Imaginary Landscape* had begun (according to Hall from January-May 1971, but possibly as early as April 1970). This casts doubt on the relation of the program to *Imaginary Landscape* since ideas would have been well developed by this time. Furthermore, in the transcript a total duration for the piece of 1000 seconds (16 minutes and 50 seconds) is suggested, which is the length of *Imaginary Landscape*, but the figure has been altered by hand to read 2000 (33 minutes, 20 seconds), which is closer to the length of the final version of *The Triumph of Time* (around 28 minutes).

Even without knowing for sure whether this programme relates to *Imaginary Landscape* or not, the ideas expressed seem particularly relevant to the work, in particular the emphasis given to "transition patterns", where a continuum of possibilities regarding rates of change is being considered. The notes, prepared by a friend of Birtwistle's called Reid, categorize all the main elements of the piece (durations, dynamics, tempi, sound to silence ratio) and present ten possibilities for each. For example, the time values for duration run: 3, 5, 7, 10, 15, 20, 25, 30, 35, 40 seconds;[242] and dynamics are listed in the

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[240] This has been placed amongst the sketch material for *An Imaginary Landscape*, alongside rhythmic workings marked "yellow, black, blue and red". It is contained in one of two folders with A4 size sketches.

[241] This cannot be the programme Hall refers to in connection with *Chronometer*. This is demonstrated by such lines as, "Orchestral groups change more often than slow dynamics or sound to silence ratios" and "the score will have the following parts for each orchestral group."

[242] The sketches do not confine themselves to these durations alone, however Reid's notes do refer to surprises and discuss moments when "the rules may be broken." This idea is very similar to one which, according to James Pritchett, John Cage used to create time structures. This method "was to specify a single set of proportions that govern both the division of the whole into sections and then those sections into smaller units. The *Two Pastorales* (1951/1952), for example, both have structures based on proportions {2,3.5,5.5}.... Beyond their immediate musical functions, Cage's rhythmic structures serve as regulators of the systems; the structural divisions mark the occasion of various decisions to be made. For example, in *Music of Changes* (1951), the smallest level of the structure determines the points at which tempo and thickness of texture are to be decided and possibly changed." James Pritchett, 'Understanding John Cage's Chance Music: An Analytical Approach', *John Cage at Seventy-Five*, eds Richard Fleming and William Duckworth (Lewisburg: Bucknell University Press, 1989), p.254.

order: *pppp*, *ppp*, *pp*, *p*, *mp*, *mf*, *f*, *ff*, *fff*, *ffff*. The most interesting page, however, refers to transition patterns. The transcript refers to three groups, A, B and C. It is tempting to think this refers to the three main brass groups in *Imaginary Landscape*, but this would exclude the double basses and percussion. The table itself lists the possible rates of change as follows:[243]

Table 9 Reid's "transition patterns" in "Harry's Number's...A Musy's Programme"

1.	x	x	[un-	x	x	y	y	y	y	y
2.	x	x	clear]	x	y	x	y	y	y	y
3.	x	y	x	x	y	y	x	y	y	y
4.	y	x	x	x	x	y	y	y	x	y
5.	x	x	x	y	x	y	x	y	y	y
6.	x	y	y	x	x	x	x	y	y	y
7.	x	x	y	x	y	y	x	y	y	y
8.	x	y	x	x	y	x	y	x	y	y
9.	x	x	x	y	y	x	y	x	y	y
10.	x	x	y	x	y	x	y	y	x	x

Birtwistle has made a number of additions to the text, one of which is to add after TEMPI "= Duration Mode". The word mode is a key term for Birtwistle at this time. In the modual book it applies to contour or shape, and Birtwistle also used it in relation to the themes or objects in *The Triumph of Time*. Implicit in the word mode is mobility, the ability to change into a new form. The table represented above presents ten possible ways of moving from one state, or texture, to another based on the division of each moment into ten components.

Interestingly, considering the date of the transcript, these ideas seem particularly relevant to the final C section of *An Imaginary Landscape*. One indication that the transcript may be related to section C is provided by its detailed dynamic markings. For example, at figure 77, the horns have a short passage in rhythmic unison during which five different dynamics are used (*mp*, *mf*, *p*, *pp* and *f*). More obvious, though, is the fact that

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[243] It is unclear whether events move from left to right, or from top to bottom. It is also unclear exactly what the letters 'x' and 'y' refer to, but the implication is that they are neutral terms which may be replaced by dynamics, durations or textural elements at the composer's will. The table therefore does not appear to be designed to say 'what' happens, only 'how' events will change.

the textures change more according to modes of accumulation and subtraction than by simple block juxtaposition, as in section A, or rapid alternation, as in B. In this way the final chorale represents a logical outcome since it stands at one end of a continuum of change, at the opposite end to the fractured material. An illustration of the process of accumulation is provided by a comparison of figure 71, where the 'yellow', fractured texture is expressed in rhythmic unison, with figure 80, where the fractured texture is introduced into all the parts. This is the result of a steady accumulation which began at figure 77 (see **App 63: 2** and **3**) On the continuum of change, figure 80 stands at one end, and 87 (the chorale) at the other. But these changes are not marked by interrupting tutti chords as they were in sections A and B. The alterations are no longer signalled, and instead the impression gained is of a gradually shifting scene, with different emphases. Further continuity is provided by the fact that strands continue from one moment to the next, as illustrated in Reid's chart. For instance, at figure 77 **(App 63: 2)**, the sustained double basses and trumpets carry on through the transition, which sees the introduction of 'yellow' music in the horns, xylophones and timpani. Nearer the other end of the continuum, at figure 75 (**App 63: 1**) the re-introduction of chorale material (restated from figures 5 to 7) is anticipated by the sustained double basses, trumpets and horns in the previous texture. The idea of modes of transition, a phrase which Birtwistle himself has added to Reid's transcript, functions here to create a highly contrasted yet fluid series of changes.

An Imaginary Landscape as Pastoral Allegory?

In a recent conference paper,[244] Jonathan Cross noted that, "The idea of pastoral is at the heart of many of Birtwistle's music-theatre projects", such as *Down By the Greenwood Side* (1968-9, a 'dramatic pastoral') and *Yan Tan Tethera* (1984, a 'mechanical pastoral'). Cross also pointed out that the Orpheus project itself has an idea of the pastoral at its centre, as it was inspired by a reading of Virgil's *Georgics*. Pastoral also seems to have been a guiding force in Birtwistle's mind when writing purely instrumental works, judging

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[244] 'Birtwistle and the Idea of the Pastoral', delivered at a conference on British Music in the 1960s, at Surrey University, in March, 1998.

by the titles for pieces such as *Carmen Arcadiae Mechanicae Perpetuum* (1977), *Silbury Air* (1977), and *An Imaginary Landscape*. But how valuable are concepts of the pastoral in art and literature to a discussion of Birtwistle's instrumental music, in particular to *An Imaginary Landscape*?

Pastoral, in this discussion, is more than just a natural setting, or the idea of beauty in nature. A critical study of the subject soon reveals that more sophisticated ideas than these are explored in the various representations of pastoral in literature and painting. It may be, however, that Birtwistle himself does not see the relevance of the topic to his music. In a recent interview on a BBC documentary he appeared to dismiss such parallels:

> I saw nature as a terrifying place, it wasn't the sort of pastoral place. I mean, it's hell on earth to live there to be a worm or a bird. I mean, it's all survival of the fittest isn't it?[245]

Whilst there may be a degree of 'tongue in cheek' in this remark (some Northern irony perhaps) it describes the kind of world which has been labelled 'hard' pastoral. According to Paul Alpers, hard pastoral contains "rustic labours, physical coarseness, and the narrow social and economic considerations of poor families and their world".[246]

This raises one of the central disagreements in literature concerning the pastoral, which is whether it is defined by landscape or the relationships between the characters, usually shepherds, which populate that landscape? Birtwistle's remarks suggest the former is true in his case. Human subjects or characters appear to be virtually excluded from Birtwistle's idea of landscape, except as observers moving around, charting the shifting perspective of their natural setting. *An Imaginary Landscape* is but one example from a series of works which have attracted descriptive metaphors, by the composer and critics alike, which stress the importance of landscape and the exclusion of human subjects, dating from *Chorales for Orchestra* (1960-63), through *Nomos* (1967-8), and extending to *Earth Dances* (1986). A recent description of *Earth Dances* emphasizes this point:

> Birtwistle's penetrating projection of the Earth as a living, even conscious, being seems to leave little room for the presence of humanity, lest it be in those frantic woodwind scale runs or the long melodies that thread plaintively through the

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[245] *Masterworks: Six Pieces of Britain*, broadcast on BBC television, in August, 1999.

[246] Paul Alpers, *What is Pastoral?* (London: University of Chicago Press, 1997), p.327.

> turbulence which threatens to overwhelm them. Unconsolingly, it shows us a Nature fearsome in its implacable indifference to human aspirations, a Gaia unaware of her own children. The music is immense, Druidic, unscrupulous, volcanic; it exposes us to elementalities with remorseless unconcern.[247]

Within Birtwistle's theatrical works the characters are locked into the cyclic processes of nature and their surroundings, their motives and actions often caught, suspended, and re-examined. The characters do not appear to be in control of their own destinies, but are instead merely puppets within a greater, higher scheme. What about the instrumental music? Is there a different role for characters within the purely instrumental music, music which internalizes drama and 'imagines'? Is there really little room for the presence of humanity in this landscape?

One condition of pastoral settings seems to be that humans are not in conflict with the natural world; nature and man coexist, albeit with the sense that nature is ultimately in control. This seems to have been Birtwistle's own view when describing the features of a landscape which "are there" and which the composer and, by analogy, the listener must move around. According to Charles Hamm, the same idea had inspired Cage when composing his *Imaginary Landscape No.4* in 1951, as at that time he,

> came to believe that it should not be man's role to shape the world around him to his own desires and habits, but rather to adapt himself to the objects and people surrounding him.[248]

The musical analogy to this, in the case of *An Imaginary Landscape*, might be the way in which the linear textures are interrupted by sustained chords. In the compositional process the location of the chords is fixed in time, as the pre-compositional plan indicates, but the linear material moving "through" the landscape was drafted as a continuous texture which is later interrupted by the addition of the chords. This procedure guaranteed that the music literally "moves around" the chords, which are fixed elements. In section A, this artificial incursion results in a form of time-reversal, whereby the notes played just before the interruption are repeated when the texture is resumed.

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[247] P. Lesh, review of the BBC Symphony Orchestra recording of *Earth Dances*, *Tempo* 181 June (1992), p.34. (On 13/2/99 this was also to be found on http://www.dead.net/cavenWeb/philzone/birtwhistle[*sic*]. html).

[248] Charles Hamm, 'John Cage', *Grove Dictionary of Music and Musicians* (London: Macmillan, 1980).

Artificiality is a key concept in representations of the pastoral. Artifice was necessitated by the need for an imaginative removal to a place of rest, a *locus amoenus*, where time ceases to matter, becomes subjective: in the words of Wordsworth, a place of "Time's uncounted hours."[249] Once again, this is reflected by the chords in *An Imaginary Landscape*, which stand outside the forward-moving linear design, and which literally freeze and hold the action in time. This indicates the role in pastoral of the reversal of time. Pastoral idylls express the natural human desire to halt the flow of time and remove the possibility of death. Similarly, Birtwistle's music is concerned with reversing or interfering with time in an entirely artificial way.[250] In a different way, artifice is also expressed in Birtwistle's music through its use of repetitive, circling continuum textures, which is also a characteristic of Klee's landscape paintings. Klee's landscapes are often based on layers of repetitive patterns which run horizontally across the canvas.[251] Visually,

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[249] Wordsworth, *The Prelude: 1799, 1805, 1850*, ed. Jonathan Wordsworth et al. (New York, 1979), book 8, II, pp.129-41. The idea of artifice in pastoral art is central to Renato Poggioli's interpretation of the genre. He believes that instead of reverting to a country life, the author directs his attention to an imaginary plane where the focus on ideal human qualities is incidental to a natural setting, where the appeal is the exaltation of the "pleasure principle at the expense of the reality principle", and where there is "no other reality than that of imagination and art." For further discussion of this see, Charles W. Hieatt, 'The integrity of pastoral: a basis for definition', *Genre*, Vol.V, March (1972), no.1, p.4. The quotes from Poggioli are taken from 'The Oaten Flute', *Harvard Library Bulletin*, 11 (1957), pp.148 and 159.

[250] The idea of artificiality is discussed by John Barrell in his book concerning depictions of the rural poor in Eighteenth Century English landscape painting: *The Dark Side of the Landscape* (Cambridge: Cambridge University Press, 1980). Barrell argues that most artists constructed an artificial vision of landscape as an idle playground for the rich, whilst the rural poor were depicted as healthy and hard working. Deprivation and poverty were hidden from view. Eighteenth Century critics believed that artists had a duty to express a 'natural' balance in order to convey a vision of social harmony. Where figures were used, harmony was to appear between the working poor and the relaxing aristocracy and within the poorer groups action was to be complemented by rest from action, as opposed to inaction. According to Barrell,

> On a practical level, critics believed that the very structure of a painting was dependent upon establishing a harmonious context, within which every object or figure would assume its 'ordered' place, which was in due proportion to every other object. In other words, a formula had been developed in the minds of critics and painters which determined the presence and relative positioning of subjects within a landscape. (p.46).

However, Barrell argues that certain painters, most notably Gainsborough and Constable, were able by subtle means to reflect the more offensive realities of a situation. This was achieved, for instance, by placing less healthy looking figures in darkened, shaded areas of a painting. "Their success" Barrell notes, "is in the concealment of a contradiction." (p. 52).

[251] A similar idea is more indirectly expressed in Jackson Pollock's *Autumn Rhythm* (1950).

Pastoral (Rhythms) of 1926-27, for example, could be described as a pictorial analogy to musical ostinato. There are different types of ostinato, of differing length or duration, and this idea is present in *An Imaginary Landscape* and becomes increasingly obvious in later instrumental pieces, such as *Carmen Arcadiae Mechanicae Perpetuum* (1978) and *Secret Theatre* (1984).

A desire to remove the human subject from modernist pastoral representations is mirrored in various critical accounts of avant-garde art in America during the 1950s, at the time when John Cage was writing his *Imaginary Landscapes* and *Pastorales*. According to Cage, his *Imaginary Landscapes* were about discovering new and previously unheard sounds with the aid of electronics. Similarly, before his death in 1956, Jackson Pollock claimed that he "saw a landscape the likes of which no human being could have seen."[252] In the period from 1947 to 1950 Pollock produced pictures which, although not obviously concerned with nature, had titles and features which have drawn comparisons with the natural landscape. Referring to works such as *Lavender Mist* (1949) and *Autumn Rhythm*, David Anfam has commented,

> Empty of imagery, they feel intensely full; lacking overt references to nature, the organic patterns of growth nevertheless engulf us; rather monochromatic overall, strong and metallic hues shimmer through their interstices ...[253]

Lavender Mist was a title that the American art critic Clement Greenberg suggested to Pollock, and it later replaced the original title, *Number 1, 1950*. However, other writers have seen more than natural processes in this art and have indicated that it may also be expressing the intrusion of the man-made, artificial, and urban. Timothy J. Clarke, has commented:

> ... *Mist* does not seem quite right. What kind of mist would it be that contained or extruded this thicket of blacks, fibrillated and staccato, as if made from some razor-thin and razor-sharp material? If this is atmosphere, it is one folded up in barbed wire; if this is Nature, it is a generality (a continuity) evoked only to be

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[252] Reported by Lee Krasner in the 'Friedman interview', cited in *Jackson Pollock, a Catalogue of Paintings, Drawings and other Works* (New Haven: 1978), 4, p.264.

[253] David Anfam, *Abstract Expressionism* (London: Thames and Hudson, 1990), p.130.

interrupted - almost choked - by the to and fro of Events.[254]

Greenberg was concerned that modern art was in danger of losing touch with nature, and his criticism of Pollock demonstrates a determination to see nature and landscape as integral to the art which he championed. He was particularly opposed to the over-representation in, for example, Surrealist and Neo-Romantic art, of "paranoia and resentment", "violence, exasperation and stridency", which represented attempts "to cope with urban life [which] dwells entirely in the lonely jungle of immediate sensations, impulses and notions, therefore is positivist, concrete."[255] The aspects which Greenberg wished all modern art to aspire towards included a detachment or distancing from human emotions, a transposition of human feelings into a de-humanized, balanced, Apollonian, abstract art form.[256] However, in January 1946, he wrote a short essay on the pastoral mood in modern painting which introduces the concept of pastoral art as a reflection of human suffering and social unrest:[257]

> [the pastoral] in modern painting and elsewhere, depends on two interdependent attitudes: the first, a dissatisfaction with the moods prevailing in society's centres of activity; the second, a conviction of the stability of society in one's own time. One flees to the shepherds from the controversies that agitate the market-place. But this flight - which takes place in art - depends inevitably on a feeling that the society left behind will continue to protect and provide for the fugitive, no matter what differences he may have with it.
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> This feeling of pastoral security has become increasingly difficult to maintain in the last two decades [the 1930s and 40s]. It is the dissipation of this sense of security that makes the survival of modern avant-garde art problematical. The first impulse is to rush back to the market-place and intervene in or report its activities. Here

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[254] Timothy J. Clarke, 'Jackson Pollock's Abstraction', in *Reconstructing Modernism*, ed. Serge Guilbaut (London: MIT Press, 1990), p.204.

[255] 'Present Prospects' in *Clement Greenberg: The Collected Essays and Criticism* Vol 2 (Chicago: University of Chicago Press, 1993), p.166.

[256] It may be argued that Greenberg was guilty of inappropriately fitting these descriptions to the art which he admired, such as Matisse and Pollock. For example, he suggested that Matisse was at his best when not painting figures, despite the fact that Matisse had declared his overriding interest was in portrait painting. As Greenberg saw it, the best way of supporting Pollock's work was to play down the human, psychological aspects and to emphasize the structured, Apollonian features which seemed most in sympathy with nature.

[257] Greenberg's use of the term pastoral dates back to a review he wrote for an exhibition of landscape painting at the Brooklyn Museum in the Winter of 1945-6.

> political art, some forms of expressionism, popular surrealism, and neo-romanticism complement one another in their anxiety to relate art to the current crisis of our civilisation. What is wrong, however, with surrealism and neo-romanticism in particular is that they stay falsely pastoral in resorting to styles of the past in order to make emotions about the present plain and explicit. Genuinely pastoral art never turns to the past; it simply rejects one present in favour of another - and without escapism. Even today one must look still to avant-garde pastoral art to see revealed the most permanent features of our society's crisis.

As with the task of reconciling Birtwistle's title to the music itself, it seems impossible to accept that the work concerned is a representation of the natural world without reference to the human. In the terms of Virgil's texts, pastoral is precisely a natural world within which humans are an essential component, along with birth, death and tragedy. The idea that pastoral art can reflect social crisis is not a new one. It has been a common theme in literary criticism this century and in the past to identify, in William Empson's words, "putting the complex in the simple."[258] Erwin Panofsky noted that "In Virgil's ideal Arcady human suffering and super-humanly perfect surroundings create a dissonance. This dissonance, once felt, had to be resolved in ... [a] mixture of sadness and tranquility."[259] In 1935, William Empson pointed out that an important feature of pastoral is the conflict between versions of pastoral represented by the characters within the various landscapes. In Virgil's *Eclogue*, for example, two shepherds represent two different ideas. One is at peace with the landscape, the other has been forced to leave his home and is weary and in need of comfort, which is provided by nightfall and the hospitality of the other shepherd.

> *Meliboeus*:
> You, Tityrus, under the spreading, sheltering beech,
> Tune woodland musicians on a delicate reed;
> We flee our country's borders, our sweet fields,
> Abandon home; you, lazing in the shade,
> Make woods resound with lovely Amaryllis.[260]

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[258] William Empson, *Some Versions of Pastoral* (London: Penguin Books, 1995), p.25.

[259] Panofsky, '*Et in Arcadia Ego*: Poussin and the Elegiac Tradition', in *Meaning in the Visual Arts* (Harmondsworth: Peregrine, 1970), p.342.

[260] Cited by Paul Alpers in 'What is Pastoral?', *Critical Inquiry*, Vol.8, Spring 1982, p.450. The translation is by Alpers, based on *The Singer of the "Eclogues": A Study of Virgilian Pastoral* (Berkeley and Los Angeles, 1979), which is based on the Latin text of R. A. B. Mynors, *P. Vergili Maronis Opera*, Oxford Classical Texts (Oxford, 1969).

A dissonance exists between the shepherds, but, Erwin Panofsky has argued,[261] these versions are resolved by the onset of evening:

> *Tityrus*:
> Still, you could take your rest with me tonight,
> Couched on green leaves: there will be apples ripe,
> Soft roasted chestnuts, plenty of pressed cheese.
> Already, in the distance, rooftops smoke,
> And lofty hills let fall their lengthening shade.

Significantly, other writers, such as Shakespeare and Wordsworth, have challenged and developed the pastoral from within. Wordsworth cannot help but see a disparity between the idealized Arcadian vision and the 'reality' of his own experience:

> Tales of the maypole dance, and flowers that decked
> The posts and kirk-pillars, and of youths,
> That each one with his maid at break of day,
> By annual custom, issued forth in troops
> To drink the waters of some favourite well,
> And hang it round with garlands. This, alas,
> Was but a dream: the times had scattered all
> These lighter graces, and the rural ways
> And manners which it was my chance to see
> In childhood were severe and unadorned,
> The unluxuriant, produce of a life
> Intent on little but substantial needs.[262]

The emphasis here, as in the Virgil, is on the human element within the landscape, and the contrast between the suffering human subject and an idealized, imagined Eden where nature is a consoling context for the afflicted.

As Jonathan Cross has noted,[263] this mixture of sadness and tranquillity led to the use of the term 'tragicomedy' to describe some pastoral dramas, such as Guarini's *Il pastor fido* (1585), a title which Birtwistle and Stephen Pruslin adopted for *Punch and Judy* (subtitled 'a tragical comedy or comical tragedy'). Cross has pointed to William Empson's development of this theme:

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[261] Erwin Panofsky, *"Et in Arcadia Ego*: Poussin and the Elegiac Tradition," *Meaning in the Visual Arts* (New York, 1955), p.300.

[262] Wordsworth, *The Prelude: 1799, 1805, 1850*, ed. Jonathan Wordsworth et al. (New York, 1979), book 8, II, pp.183-209.

[263] Cross, conference paper, 1998.

> In tragicomedy, [Empson] argues, the comic part usually provides a sort of parody or parallel in low life to the serious part' - a manifestation of the 'tragic king - comic people convention. A situation is repeated for 'high' and 'low' characters: "this puts the main interest in the situation not the characters ... the situation is made something valuable in itself ... "[264]

From this Cross concluded,

> Music speaking or singing in the pastoral mode invites examination in terms of *situation* rather than *character*; the idea of the pastoral would thus appear to be appropriate more to music concerned with exploring ritual than in developing a narrative argument.

This idea is supported by the verse-refrain structures of Birtwistle's music. Also, a form of secret, private lyricism was seen to be important in earlier works by Birtwistle, and allusion to dance and song is essential to his music as it is in pastoral verse. However, pastoral verses are expressions for and by people from the city, they are not actually the secret thoughts of shepherds but of courtiers. Paul Alpers develops this point in his essay, 'What is Pastoral?', in relation to Shakespeare's *As You Like It*:

> What is striking about the play, when one approaches it with the usual notions of pastoral, is that the forest of Arden is not much of a pastoral world .... The pastoral world of *As You Like It* is not the natural world but what the French mean by *le monde*, society, the human community. The play, indeed, is one of the most striking pieces of evidence that shepherd's lives, not landscape, are at the heart of pastoral. But even when we recognize that the pastoral world of Arden is to be defined by its inhabitants, there is something odd about it: there are more courtiers in it than natives, and the courtiers define the tone and concerns of the play. Shakespeare thus makes explicit what has always been clear about pastoral - that it is a sophisticated form, that it is of the country but by and for the court or city.[265]

With this in mind, the incursion of circling, mobile blocks between the lyrical moments in pieces like *Verses for Ensembles* and *Cantata* may be interpreted as gestures which make the urban origins of Birtwistle's music explicit. These devices are perhaps analogous to the metallic, fibrillated incisions that Clarke noted in Pollock's *Lavender Mist*: the urban penetrating the rural. In *An Imaginary Landscape* the mobiles are replaced by sustained chords. However, the solo lyrical aspect has largely been replaced by communal

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[264] Empson (1995), p.50.

[265] Paul Alpers, 'What is Pastoral?', *Critical Inquiry* Vol. 8, Spring 1982, p.457.

expression, trios, quartets, and larger ensembles. If *An Imaginary Landscape* is to be interpreted as an allegory of pastoral, it is one which expresses not so much a collective feeling, as those of groups of individuals, taking different routes through the same landscape.

Georgina Boyes has argued that the efforts of nineteenth century folk revivalists were directed at fabricating representative folk types based on common experience rather than individual expression.[266] The revival movement was concerned with recovering a lost tradition - an anonymous, communal expression of the past. The contemporary creative voice was therefore deliberately ignored, since this was believed to be a corruption of older, lost traditions. At least one founding member of the Folk-Lore Society recognized this. According to Boyes, "Joseph Jacobs [in 1893] described the Folk as a 'fraud, a delusion, a myth' and 'simply a name for our ignorance.'"[267] These issues inevitably reflect on Vaughan Williams's use of folk music, in his attempt to represent communal expression and the rural landscape. It might be argued that the collective folk represented in Vaughan Williams' music was fake, and reduced the human element to a single, bland identity, placed, artificially, in a harmonious natural setting.[268]

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[266] Georgina Boyes, *An Imagined Community: Culture, Ideology and the English Folk Revival* (Manchester: Manchester University Press, 1993).

[267] *Ibid.*, cited on page 15, quoted from Joseph Jacobs, 'The Folk,' *Folk-Lore*, V (1893), pp.233-8.

[268] Paul Harrington, however, has argued (in 'Holst and Vaughan Williams: Radical Pastoral', in C. Norris (ed.) *Music and the Politics of Culture* (London and New York: Routledge, 1989), pp.106-127) that the origins of the 'folk-revival' coincided with "a renaissance in socialist thought" through the 1890s and early 1900s. Harrington points to Vaughan Williams's "radical lineage" (including Charles Darwin), his declaration to Bertrand Russell at Cambridge in 1892 "Who believes in God nowadays, I should like to know?", as well as his choice of texts and dramatic subjects, in order to demonstrate an underlying humanist, political motivation. The same picture is developed of Holst, who is said to have celebrated Keats's 'Cold Pastoral', or what Imogen Holst described as "the wintriness of his own chosen solitude", resulting in a score like *Egdon Heath*, in which "even a Webernian with a laser beam could not find an excess note to cut away" (p.118. See also the discussion of 'tough' pastoralism in William Morris's 1889 sketch, *Under an Elm Tree*, p.115). However, Harrington concedes, "these late Victorian middle-class socialists ... fall to powder if we drop the full weight of the class struggle on their prim shoulders" (p.125). A less savoury picture of 'The Pastoral School', led by Vaughan Williams, is presented by Robert Stradling and Meirion Hughes in their book *The English Musical Renaissance* (London: Lawrence and Wishart, 1990). Chapter 5, 'Crusading for a National Music', depicts the Pastoral composers and supporters as exclusionary, even racist (citing Vaughan Williams's condemnation of 'Negroid emetics', in reference to the influence of jazz: p.164.) The increasing national introversion in music between the Boer War and the Great

The strongest indication that the human element is just as important to Birtwistle as the context, or landscape, is provided by his comments regarding Piero della Francesca's *The Flagellation*:

> The lyricism, mystery and formalism it contains are qualities I've always wanted to emulate. The actual flagellation is taking place in the background on the left of the picture. There's a symmetry which is not a symmetry. In the foreground on the right are the figures of three men standing as if lost in their own worlds. But they're not puppets, they're genuinely human, and as far as information is concerned, they constitute the most important element in the picture. In fact the flagellation is not what the painting is about at all. The essence of the painting lies beyond its subject. It's about something else.[269]

Birtwistle appears to believe the essence of the painting lies in the "genuinely human" figures that stand on the right in the foreground of the picture. During *An Imaginary Landscape* three different formal situations are explored, but the most interesting is the last. Towards the close of the work the interrupting chords fall away. The final chorale calls attention to the general overall shape, or "overall view". As the parts drop out the attention shifts to the detail, the individual, and at this moment it becomes clear that it is the individual character, in its relation to the landscape, that is the subject of the music. However, one might question the nature of that 'human element', as in the context of the flagellation discussed above it may appear to display an inhuman indifference to the sufferings of others: a condition, perhaps, of the 'hard' pastoral that Birtwistle seems to celebrate?

War, it is argued, was a reflection of the end of England's isolation in politics. Stradling and Hughes also note the "reservations concerning the 'authentic' claims of the folk- and national-music movements ... expressed by musicologists in recent years" (for further discussion of this see pp.176-9).

[269] Cited in Hall (1984), p.148.

Chapter 5

Mechanisms

During the period from 1975-77, the central features of Birtwistle's music are increasingly characterized by a repetitive, circling motion which largely replaces a clear sense of linear direction. Another characteristic of these ideas is an increased tendency towards economy of means. As was suggested in the examination of *An Imaginary Landscape*, in the previous chapter, Birtwistle became more interested in defining boundaries and in confining ideas more rigidly within fixed, pre-defined lengths of time. This meant an increased use of detailed pre-compositional planning of the large-scale, formal features of works, and the use of rotational schemes at the highest level.

In an obvious sense, this represents a logical extension of the small-scale, permutational workings which the sketches reveal Birtwistle employing from as early as 1966. The use of ordered numerical systems to determine events at the lowest level was first expanded to form mobile textures, which offered performers the same set of narrowly restricted choices as Birtwistle allowed himself when composing. In the later 1970s Birtwistle appears to have extended this idea still further into the body of his music, so that its principal material is based on ordered, numerical procedures, perhaps as a result of his experience with electronic media and his use of computer-generated tables.

The term 'mechanism' was first introduced into descriptions of Birtwistle's music by the composer himself in his programme note for *Carmen* (written at the end of 1977), and the term has subsequently been adopted by analysts when discussing this work.[270] The sketches suggest that the term was used by Birtwistle to describe the repetitive, cyclic processes operating within the 'building blocks' or textural themes of *Carmen*. The sketches reveal how these ideas were conceived, and, in addition, a clear indication of the intended boundaries of these mechanisms is presented in a formal plan for the entire piece. The plan represents a natural progression from the one devised for *An Imaginary Landscape*, since it determines the duration and sequence of events. This time, however, there are six building blocks rather than five, and the scheme is used to determine events

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[270] Jonathan Cross, for example, claims that "the 'objects' in the case of *Carmen* [are] the processes, the 'mechanisms' themselves", *The Stravinsky Legacy* (Cambridge: Cambridge University Press, 1998), p.77.

on three levels: the mechanisms (labelled 'materials' in the plan), the dynamics, and the instrumentation and register.

One essential aspect of the consistency within each mechanism is the importance of an underlying pulse. Pulse was a major concern of Birtwistle's at this time, especially in *Silbury Air* where a network of proportionally related pulses is used to structure the work, and as a means of moving from one section to another. In 1976, following *Silbury Air* and prior to *Carmen*, Birtwistle combined his interest in pulse with his first attempt at producing a score for dancers. The resulting work, *Pulse Field*, uses pulse as a means of reasserting experiential, or 'felt' time, over regular clock time. According to the note in the score:

> *Pulse Field*, operating with relative rather than absolute concepts of tempo and duration, seeks to replace the rhythm of the clock with something approaching that of the body. Maybe, as essentially corporeal music, it can help both dance and music to regain that parity and autonomy which all too often is lost through the subjugation of one by the other.[271]

This may represent a statement of purpose which could stand for all three pieces discussed in this chapter. The use of pulse mobiles, related proportionally, was perhaps intended to give Birtwistle's instrumental music a degree of flexibility and spontaneity that previously it had lacked. The ideas expressed above, which relate back to *Chronometer*, are expressed in *Pulse Field* through a formal construct, which consists of placing the material in frames of four bars duration:

> Each frame is articulated by a constant pulse, whose tempo may however change from bar to bar. But, as the title implies, pulse tempi are not determined metronomically but are conceived flexibly, in relation to others, and may be controlled - as is the duration of each bar - by further factors such as dynamic processes and instrumental resonance.

This reveals the connection in Birtwistle's mind between a regular pulse, duration, and texture. This might also be interpreted as a development of the practices discussed in Chapter 2 in relation to Stockhausen's concept of moment form, which marked the beginning of Birtwistle's consciousness of the durations of objects and the sense of 'space'

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[271] These notes are attributed to Birtwistle, but they were almost certainly written by someone else. According to Robert Adlington (on p.150 of the first draft of Chapter Four of his forthcoming book), the original typescript, kept in the Rambert Dance Company's archive, cites the composer Glyn Perrin as the author .

which each idea occupies. *Pulse Field* retains the use of held-notes as signals to change to a different frame, a device which was used in the works discussed in Chapter 4. This device is also used in all three instrumental works discussed in this chapter, especially in *Carmen*. In *Melencolia*, however, rather than signal a move to completely different textures, as was seen in Strain 2 of *Signals*, the clarinet signals herald a return to a basic idea which is reworked steadily throughout the piece which lends the work a greater sense of continuity.

As was seen in Chapter 3, which discussed *Nomos* and *Verses for Ensembles*, Birtwistle has often fluctuated between composing pieces of greater continuity and ones which push block form to even greater extremes. Similarly, in the second half of the 1970s, Birtwistle moved from two experiments which are concerned with expressing ideas with a high degree of continuity, *Melencolia I* and *Silbury Air*, to one of his most radical examples of block form: *Carmen*. In this piece the difference between textures is barely mitigated by brief passages of sustained chords. One of the main concerns of the analyses of the earlier pieces, therefore, will be to explore the extent to which developments in *Carmen* are prefigured in the earlier works. With this purpose in mind, I will proceed to an examination of formal processes in *Carmen* in the light of sketches for the work.

Carmen Arcadiae Mechanicae Perpetuum

The survival of a formal plan for *Carmen*, composed at the end of 1977, provides an excellent opportunity to assess recent analytical work on this piece.[272] *Carmen* has been the subject of three detailed analyses, by Jonathan Cross, Alison Deadman and Brian Robison,[273] and this offers a chance to consider the value of the sketches to analytical

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[272] The sketches for *Carmen* consist of two folders. One contains 48 sides of A2-size sheets, each with 16 staves, plus three sides with the title written upon them. Pages 29 and 30 of this folder are smaller strips, cut lengthways, two and three bars in width respectively. The other folder contains 32 sides of approximately A4 size paper. The A4 folder is divided into three sections: the first three pages measure 21.7/28cm; pages 4-25 are 20.3/32.9cm; pages 26-31, which contain the plan, form a sequence. These pages also measure 20.3/32.9cm, except for the last which is 20.3/17.5cm. When referring to the location of specific sheets I shall use the abbreviation 'folder size: page number' (e.g. 'A2:19').

[273] Jonathan Cross, 'Modernism, Analysis and New Music: Studies in the Music of Stravinsky and Birtwistle', PhD, King's College London, 1994, Chapter 7, pp.289-310; and also

work.

> Birtwistle's programme note to *Carmen* states that:
>
> > It consists of six mechanisms which are juxtaposed many times without any form of transition. The dynamics of the piece have a time-scale independent of that of the mechanisms, creating an independent dynamic life of their own. This process is also applied to the registers of the piece.[274]

It is a measure of the clarity of Birtwistle's vision when composing *Carmen* that Hall, Cross, Deadman, and Robison all agree on the existence of six textural motives in the piece.[275] They also agree that these items are principally characterized by pitch and rhythm, and conclude that dynamic and registral schemes are subservient to pitch and rhythmic processes. However, in the light of certain similarities and cross-references between the six textural motives, Brian Robison suggests "we might need to rethink what the word 'mechanism' meant to Birtwistle."[276] This leads him to uncover a large number of features which further distinguish the motives from one another. The sketches, however, suggest that Birtwistle, as his programme note indicates, considered the textural motives to be mechanisms. I see no reason to drop this term since it is a label which correctly indicates that the textural motives used are characterized by circular, internal repetitions, and could conceivably continue *ad infinitum*.[277] Robison's work is interesting because it demonstrates how close a systematic analysis can come to explaining the compositional method. However, his work raises broader issues which shall be addressed throughout this discussion.

The Stravinsky Legacy (Cambridge: Cambridge University Press, 1998), especially pp.71-8; Alison Deadman, 'Mechanical Arcady: The Development of an Aesthetic in Birtwistle's Orchestral Works Written for the London Sinfonietta Between 1977 and 1984', MPhil, Leeds University, 1990, Chapter Four, pp.56-80; and Brian Robison, 'Towards a Methodology for Analysing *Carmen Arcadiae Mechanicae Perpetuum*, PhD Cornell University, 1999.

[274] Cited in Hall (1984), p.177.

[275] Cross and Deadman discuss the possibility of seven ideas, but ultimately seem to reject the idea.

[276] Brian Robison, PhD, 1999, Chapter 2, 'An overview of *Carmen*', p.27 in an early draft.

[277] There is one exception to this. One mechanism employs a descending scale which obviously could not continue indefinitely. However, this idea does not appear within every version of the mechanism, and it could be argued that it is the exception which proves the rule.

Jonathan Cross's work finds significant support in the sketches, notably in his suggestion that there are "rules of containment", and his statement that a 36 unit-long duration (where one unit equals either a crotchet or quaver length) represents an important building-block which facilitates the use of "proportional modulation." Cross also recognizes that the final section represents a "gestural frame" relating back to the opening. This is supported by the fact that the final three mechanisms represent departures from the formal plan, and therefore a deliberate alteration in order to bring a logical conclusion to a randomly ordered scheme. A reproduction of the first page of the plan is given in **App 64**.[278]

The plan provides the answer to several analysts' questions regarding the independent time-scales for the three schemes. It seems that Birtwistle began by drawing three parallel, horizontal lines, each of which was divided into sections which clearly reflect the durational length of 18 units, and the related values of 9, 36, and 54. This is most evident in the bottom line, which consists entirely of blocks of 18. This means that the number 18 runs through the entire piece, and like a repeating ostinato it provides a mechanistic repetition at a fundamental level.[279] In the plan the upper line is the most varied of the three lines, mixing long and short durations. The sketches reveal that these were derived from divisions of larger units, all based on the number 18. A single A4 sheet contains workings for these durations and shows Birtwistle developing combinations, splitting 54 into four smaller units, 36 into three, and 18 into two.[280] These are distributed by number rotation. The middle line in the plan contains mainly long durations, usually over 20 units in length. These were constructed by combining an accumulating scheme with a decreasing one. The accumulating scheme begins at 20, and continues 22, 24, 25, up to 33. The decreasing scheme descends in the order 18, 15, 14, 11, 10. Notably, the

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[278] The complete plan runs to five and a half A4 size sheets (originally taped together). These are located at the front of the A4 size sketch folder for *Carmen*.

[279] A first version of the work exists on an A2-size sketch (A2:2) which shows bar lines with rhythmic workings for a block of 36 quavers, consisting of 18 bars of 2/8. This version also indicates that Birtwistle's first thought was to begin the work using six different types of cluster around D4, to be distributed amongst woodwind, brass, piano and strings. A list at the top of the page also suggests that Birtwistle may originally have intended to use a range of keyboards: organ, electric piano, piano, harpsichord and celesta.

[280] A4:21.

plan does not include durations for the chordal sections which are placed between the mechanisms. It should also be noted that the plan is much longer than the piece, and provides all the necessary information to have continued the work for another third of its actual length. Initially, divisions in the bottom and middle lines often coincide, but there are only two moments when divisions in all three lines coincide. The first such occurrence appears at the start, after the first block of 18, and the second occurs at the point where Birtwistle leaves his formal plan (after three rotations of the six mechanisms).

The next step for Birtwistle appears to have been to distribute his registral, dynamic and material schemes across these three lines, moving diagonally. It is not clear how this was determined, but it seems likely that Birtwistle made these decisions himself, intuitively. The mechanisms are distributed so that five appear on the top line, nine on the middle, and eight on the bottom. Interestingly, Birtwistle used letters, as Cross does, to describe the mechanisms, which here he calls "materials". Birtwistle's letter scheme relates to Cross's in the following way:

Table 9

Birtwistle	*Cross*	*Robison's motives*
D	A	cyclic-rhythm
B	B	<long, short>
A	C	<high, low>
E	D	skewed-triple
C	E	scattered sixteenths (staccato or with sustained tones)
F	F	approximately parallel

The sketches contain a page which shows the origins of the ordering of the six mechanisms. On page 9 of the A4 size folder, the six ideas are listed in letter form, beneath which there are five different numerical orderings, each crossed off in red crayon:

Table 10

	A	B	C	D	E	F
1	3	2	5	1	4	6
2	6	3	1	5	4	2
3	4	3	6	1	2	5
4	4	1	6	2	3	5
5	4	6	3	1	5	2

This sketch sheet is significant because it is the first indication we have seen of Birtwistle

using number rotations to order events at the highest possible level. However, this ordering was not left unchanged. The ordering in the plan is as follows, with the subsequent alterations written in bold underneath. (The table uses Birtwistle's letters):

Table 11

1	2	3	4	5
DBAECF	CFBEDA **A E**	DEBAFC **E CEA** **A** **F**	BDEAFC **[not used]**	DFCAEB

After entering the initial ordering into the plan, Birtwistle exchanged A and E within the second block. Further alterations were then made to the third block, especially at the beginning, which was changed a total of three times. The alterations did not stop there. The work does not use the last two mechanisms in block 4, or any of block 5. Furthermore, the four mechanisms in block 4 do not, analysis suggests, appear to have been used either. These corrections suggest that the ordering of the mechanisms, especially in the middle and at the end of the piece, was very important to Birtwistle. These changes are not explained, however, by the sketches. Whilst the pre-compositional plan is very good at explaining how and when events occur, it is not so helpful at saying why. For answers to these questions we must turn to analysis.

Cross's analysis of *Carmen* is based on Edward Cone's analytical technique of stratification.[281] If Cross's table is reproduced using Birtwistle's lettering scheme the results match Birtwistle's plan, with only two exceptions, marked in bold. Asterisks indicate where the rotations begin and end:[282]

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[281] 'Stravinsky: The Progress of a Method', *Perspectives of New Music*, 1/1 (1962), pp.18-26.

[282] It is not clear from the sketches how much of an idea Birtwistle had concerning the nature of his materials when he drew up the plan, nor whether a generic form existed for each mechanism which was then varied or simplified as necessary. The likelihood is that Birtwistle had only a general notion of the differences between the mechanisms, and that the degrees of complexity or simplicity were decided as and when the time came to compose each section. Regarding the table, it is perhaps significant to note that the representation of events as shown here resembles Stockhausen's formal charts for *Momente*. However, labelling Birtwistle's mechanisms with Stockhausen's formal labels is highly problematic, largely because of the

Table 12 Analysis of the mechanisms in *Carmen Arcadiae Mechanicae Perpetuum*

DD1 DD11 D14 D22
BB2 B9 B15 B21
A3 **AA10** A18
E4 **E12** E17 E19
CC5 CC7 CC16
FF6 * FF8 * F13 * F20

The two highlighted mechanisms in the second section (A10 and E12) are in fact clouded in the score by incursions of elements from other motives, and this has led to confusion over which label should be applied. In the first instance, found on pages 15 to 17, both Cross and Robison label this moment C (in Birtwistle's lettering scheme). The sketches show that Birtwistle was very definitely writing A, as he clearly labels this moment with the letter A at the top of the page. The confusion is brought about by the incursion of a melody in the trumpet which has a similar rhythm to C. Furthermore, Cross and Robison's analyses have identified a link between the regular staccato semiquavers at this moment and the same features in mechanism C. **App 65: 1-2** shows the first three versions of A and C.

Most obviously, A10 lacks the characteristic marimba and piano clusters which normally define this moment. However, there are not nearly as many semiquavers in this section as there are in any of the three statements of C. The <high-low> feature, which characterizes A, is provided in the bass clarinet's first two notes, and throughout by the viola. The fact that there is a sustained dyad in the horn and trombone relates it to A18, on page 27. But most importantly, the trumpet motive which is added during the repeat of the section relates directly to A18 which also has a motivic idea in its second statement (in the piccolo, supported by the marimba). Moreover, on both occasions the final pitch is held as a fermata, forming the transition to the next block. In A18 the motivic element is longer and is placed in the first violin, embellished by the flute and oboe.

The second disputed moment, E12, is shown in **App 65: 3**. This is labelled A by

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heavy reliance of all the motives on rhythmic and pitch processes. It becomes clear that where formerly Birtwistle's moments were often very distinct from one another, here the differences are less marked since they are differences in kind, i.e. rhythmic.

Cross and E by Robison and Birtwistle. The confusion arises partly because of the brevity of the appearance, and also because of a regular triplet crotchet pulse which does not appear in other statements of E, or during any other mechanism. Although Cross rightly notes that this moment has a different tempo marking to the other versions of E, but the same tempo marking as mechanism A (crotchet = *c*.92), this reflects the fact that the music has been designed both to announce and to lead into the beginning of the second half of the piece. The transitional function is performed by the establishment of a pulse of *c*.92 by repeating triplet crotchets in the strings. This pulse is retained in the subsequent block, F13. The second function, of signalling a new section, is provided by mechanism E. The sketches indicate that this is only present in the brass, and that the other parts, including the string pulse, have been added-on. This is indicated by an A2 sketch page which places square brackets around the brass.[283] Furthermore, in the formal plan, the instructions for this moment differ slightly from the events that appear in the score. Such departures from the plan happen remarkably few times. According to the plan, the dynamics should move freely between *ppp*, *p*, *mf* and *ff*. However, Birtwistle holds the *ff* dynamic back until the entrance of E12 in the brass. The result is a fanfare-like signal which heralds the beginning of the second set of block rotations.

It should also be noted that the A mechanism makes a number of appearances within two D segments, a point also noted by Robison. For example, during the lengthy D22 section, C appears in the piano and marimba.[284] According to Robison, this provides the missing fourth occurrence of A. However, the piano and marimba also introduce A into D11 and if, as Robison suggests, the high-low contours of the climactic fermata chords, on page 34, are considered as yet another variant of A there are possibly five versions of this mechanism in the piece: one more than any other. The quotation of mechanism A within the two D sections which frame the second half of the piece

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[283] A2:25, marked "E 12".

[284] The sketches for this moment (A2:27) show "A5" written next to the piano part. This, however, does not refer to the fact that the chords are from mechanism A. The marking is actually one of several which appear to represent levels of amplification. The first continuous draft for *Carmen* contains many of these markings, ranging from A1 to A5. These were intended to relate to the electric piano and amplified marimba parts, but they do not appear in the score.

strengthens the sense of symmetry in the work.[285]

Birtwistle's alterations to the order of the mechanisms during the second half is matched by the greater degree of irregularity in the durations of the mechanisms, a feature which Birtwistle seems to have engineered:

Table 13 Durations in the plan used for the mechanisms

D	B	A	E	C	F	C	F	B	A	D	E
18	18	18	18	10	14	12	18	18	18	9	9
36		36		36			36		36		

F	D	B	C	E	A	[B	D	E	A][286]	(The score ends here but the plan continues)
18	28	12	30	17.5	34	17.5	25	11.5	62.5	

In particular, these findings support Cross's assertions concerning mechanism D, which he argues acts as a framing device at either end, and that its appearance at figure 11 "would ... seem to signal a structural change, i.e., the break up of the relatively regular proportional patterning so far evident, and this divides the whole into two more-or-less balanced halves."[287] These durational markings indicate that intuitive decision-making has played an important role in constructing *Carmen*. As Cross notes, "After the entry of the [D14] mechanism at figure 11, the proportions of sections in the rest of the work seem to take on a different, less regular, less predictable character. The durations of sections also become more variable and, generally, longer."[288] Robison, however, does not believe that these decisions affect the character of the work, and that instead "the varying degrees of complexity among the various incarnations of any given textural motive play a far more

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[285] Another explanation for the appearance of C during D22 is the fact that according to the plan this was to have been the last mechanism in block 4.

[286] In the score the actual mechanisms used here are E, F, B and D.

[287] Cross, 1994, p.299.

[288] *Ibid.*, p.297.

important role than their relative formal durations." He continues:

> ... if one were to recompose *Carmen* by maintaining the same sequence of material but altering the durations of sections, I believe the resulting contrafactum would resemble Birtwistle's original much more closely than any version preserving the same sectional proportions, but significantly altering the sequence of musical materials (e.g., by placing the simpler versions of motives in the middle of the piece, and the more complex versions at the beginning and the end.)[289]

This point is debatable. If, as the analyses seem to be saying, it is not easy to associate the mechanisms across the piece, how would a listener be able to trace their development in terms of simplicity and complexity? Alternatively, assuming the listener is able to associate the ideas, surely the lengths of sections operate at the same level as contours of relative complexity of the motives, in other words at the level of shape. The greater variety of lengths used in the second half of the piece add to its sense of development and asymmetry and therefore there would be a threshold of change to the durational scheme (as applied to the mechanisms) beyond which the form and character of the work would be destroyed.

I also sense that the role of the dynamic and registral schemes, which are pre-determined, has been misunderstood and undervalued by existing analytical accounts.[290] The degrees of variation between the different versions of the same mechanism that Robison and Cross refer to are only partly determined by rhythm and pitch alterations. In the score, with the two exceptions noted above, the mechanisms are far more obviously identifiable than analysts seem to want us to believe, and if they were any more clearly distinguishable the variations would look like simple repetitions. To the listener, however, I believe the problem of identification is heightened significantly by the registral and dynamic shifts.[291]

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[289] Robison, 1999, pp.219-220.

[290] For instance, according to Cross, Birtwistle's programme note to the work suggests that the dynamics and registers "are 'natural', 'intuitive', 'hand-crafted'.", *The Stravinsky Legacy*, p.73.

[291] A similar view is proposed by Michael Hall when he labels dynamics and register as the capricious element. However, he does this in order to fit the music's elements into his central organising principle, based on the dichotomy of predictable and unpredictable tendencies. The resulting labelling of the mechanisms as the predictable element is rendered problematic by the fact that the registral and dynamic schemes are often responsible for varying the mechanisms

In the plan, the registral scheme is represented by three divisions into high, middle and low registers, represented by numbers 1, 2 and 3. As with the arrangement of the mechanisms, these positions are merely rotated at random, and consequently their rate of change moves at a different frequency and at different times to those of the mechanisms.[292] Similarly, the dynamics are arranged from one to collections of two, three or four different types which are then rotated at random, and the lower-level application of these dynamics (i.e. within sections) is determined by number. For instance, where mechanism A employs four dynamics these are assigned numbers, as follows:

pp	*mp*	*f*	*fff*
1234	567	89	0

These are then applied to pitches which have been written out, together with their rhythm. From the first pitch onwards the numbers applied are as follows: 6540137892152879 46, and so on.[293]

The ambiguous nature of certain mechanisms is a direct result of Birtwistle's faithfulness throughout the main part of the work to his pre-compositional scheme. For instance, the appearance of E19 in a high register may suggest earlier forms of the B mechanism which is consistently high. Similarly, E4 (the first appearance of E) is registrally divided between positions 1 and 3, which contrasts with the middle register versions, E12 and E17. The use of the highest register in E4 also relates back to B2, further confusing identification. Likewise, the dynamics available to Birtwistle at any one time may also have suggested developments or variations which he had not previously considered. For example, during F20, the approximately parallel lines are divided between two groups of instruments (see **App 65: 4**). This idea may have occurred to Birtwistle as a result of the fact that at this point the pre-compositional plan dictates that he must use two dynamics, *ppp* and *fff*. Furthermore, the bass clarinet, contrabassoon, horn, trombone, marimba, piano, cello and double bass parts, which play the *fff* fragments, resemble the

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and hence contributing to their unpredictability.

[292] Sketches detailing the number rotations for these elements are contained in the A4 size folder, especially pages: 8 (register), 11 and 12 (register and instrumentation), 14 (instrumentation), 17, 24 and 25 (dynamics).

[293] A2:8.

clusters of the A mechanism which are nearly always associated with loud dynamics. This further compounds the more frequent use of A in the second half, increasing the possible number of occurrences of this mechanism to six. Another example of ambiguity within a single mechanism resulting from the registral and dynamic schemes concerns the tripartite form of D14, on pages 20 to 21 (**App 65: 5-6**). The introduction of the A-like piano clusters in the middle of D14 reflects a shift in the plan from registral position 2, to 2 and 3, and the *fff* dynamic used here is not in the scheme but presumably chosen to emphasize the piano chords. Subsequently, the music alters once more, this time as a result of a registral shift to 1.

Until C16, in the second half of the work, there is only one real example of a departure from the plan designed to bring the three layers of the piece together. This occurs at C7. According to the plan, the move to C7 on page 10 should be preceded by a shift from registral position 2 to 3. However, Birtwistle delays the change in order to coincide with the arrival of C7. He also alters the dynamics of this mechanism (they should be *p*, but he uses *pp* in the strings, marimba and piano, and *mf/ff* in the horn and trombone). Although from C16 onwards intuition appears to take over decisions regarding the choice of mechanisms, dynamics and registral positions, the durations mostly remain intact and therefore the separation of the layers survives, which does not lend support to Robison's remark that, "we ought not take for granted a complete separation of the mechanisms ... and dynamics or registers in *Carmen*."[294] The alterations Birtwistle does make, however, are clearly designed to contribute to the formal shape in the lead up to the end of the piece. For instance, B21 (which is altered from E in the plan), should move from *fff/mf/pp* to *f*, but Birtwistle uses only *fff*. D22, which follows, should continue as before but instead it begins *ppp*. The resulting contrast permits a build up from *ppp* to *fff*, followed by a brief *ppp* echo, which again is not contained in the plan. Similarly, the sketch for the opening is marked *pp*, whereas in the score it is played *ff* the first time, followed by *pp* on page 2.

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[294] Robison, 1999, p.215. This follows Birtwistle's comments regarding *Secret Theatre*. Birtwistle said of the piece that "It has two layers. That was one thing I thought about in *Secret Theatre*, to make the layers asynchronous; but when I did it they did start to change at the same time." Interview with Paul Griffiths in *New Sounds, New Personalities: British Composers in the 1980s* (London: Faber Music Ltd., 1985), p.189.

One of the key questions addressed in Brian Robison's study was posed initially by Michael Hall following a discussion of sketches for ...*agm*... (composed 1978 to 79):

> The question is: could this system survive the ravages of time, or are the events too idiosyncratic to be reconstructed? Would Geometria endure?[295]

In his search to "lay the foundation for a methodology which accurately reflects how Birtwistle proliferates his ideas, how he manipulates his material", Robison's systematic analysis uncovers generic models, or prototypes, particularly in the melodies and harmony of *Carmen*. The idea that Birtwistle's compositional practice consists of finding ways to express a basic idea in variant forms is consistent with the composer's own remarks, and also relates to my own discussions in Chapters 2, 3 and 4, regarding Birtwistle's interest in D'Arcy Thompson and transformations of basic shapes and contours. Robison's route to discovering generic models is through measuring the frequency of various elements, such as intervals in chords. When analysing the harmony, every vertical interval between all the parts is logged in a table, and a central boxed column marks the modal (or most commonly occurring) value for each interval. For example, when examining the first segment of F20 (figure 17, page 31, bars 237-239), the intervals which occur most often suggest an ordered interval set that actually only appears literally in four of the 29 chords. Each time this chord appears it contains the same pitches: [B1, C2, E2, D3, G, A4].

The sketches illustrate that Birtwistle did indeed begin working-out many harmonic sections, particularly the F mechanisms, with a notion of a generic chord, of its pitches and their registral positions.[296] The technique employed assigns each part a central pitch. Around these central pitches others are arranged based on permutations of chromatic and whole-tone steps. This results in a maximum total of six different five-note collections containing the following intervallic steps: 1122, 2211, 1212, 2121, 1221, 2112. The use of such small intervals means that the overall span (from the top to bottom part)

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[295] Hall (1984), p.103.

[296] Robison demonstrates that there is a registral scheme operating within mechanism A, based on a chain of fifths. This is fully supported by the sketches for A1 (on A2:1). These clearly show Birtwistle beginning with a line of pitches ascending in fifths, with the instrumentation written above, and beneath this an indication of the range of other available pitches either side of the i.c.7-related notes. However, similar sketches do not exist for other mechanisms, or even subsequent versions of A.

will never vary by more than two tones (i.c. 4).[297] In each of these collections the central pitch remains constant, while the notes around it will vary (see "stage 1" in **App 66**). There are then two possibilities. One is to re-arrange the sequence of collections, then re-order the collections internally, applying the same ordering to each part and thereby guaranteeing the repetition of the central, generic chord. The other technique, seen in "stage 2" of **App 66**, is to move backwards and forwards through the table as a whole, thereby mixing chords from different collections and arranging them according to a new number scheme.

The inevitable problem which Robison encounters is that where Birtwistle departs from his scheme it becomes much harder for the analysis to trace the generic chord. Special difficulty occurs when the analysis attempts to explain the woodwind and strings in bars 151-4, during D14 (page 20) (see **App 65: 6**).[298] Here, Birtwistle has divided the parts into two halves, each based on a different pitch centre. For instance, the first four notes in the piccolo line are derived from a collection based around G#5, and the second half uses pitches drawn from a collection based around E flat6. In fact, the two generic chords are presented by the last notes in bars 152 and 154 (although the last oboe pitch in bar 152 was originally E5 rather than F).

Robison not only points to the location of deviations but even suggests possible corrections. This raises the interesting question of the status of these deviations, or 'errors', as Robison likes to call them; who was responsible for them? The sketches show that in nearly every case these departures are present at the earliest stage and that they result from Birtwistle's own mistakes when copying pitches from his initial table into their re-ordered positions.[299] When asked about mistakes and printing errors by Hall, whilst not

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[297] It is this fact which has led Robison on occasion to suggest that Birtwistle began with a large interval that remains mostly constant, whilst the inner parts divide it in different ways. However, this is not the way the sketches indicate Birtwistle conceived the chords.

[298] A2:28.

[299] For example, in F2 (figure 6, page 11, bars 83-5), 16 of the 25 notes in the piano left hand are deviations from the original table (A2:19). There are two deviations in the cello part, one in the bass clarinet, and five in the horn and trombone line. In the top line, the quaver rest in bar 84 dislodges pitch A2 which actually belongs to the chord before. Added to this, the cello's E flat began as F#, and this results in the disruption of a statement of the generic chord, [A2, G, F#, B flat, E, D]. Because of these alterations Robison has not been able to trace the prototype here, although it does appear in the first chord and is literally repeated three times. Furthermore,

accepting printing errors Birtwistle did appear to sanction his own mistakes:

MH: Nevertheless you tolerate mistakes - printing errors, for instance?
HB: No. No, I don't. The printing errors on such pieces as *Précis* are terrible. I don't tolerate them at all. When mistakes occur, such as the mistake in the flute part of *Refrains and Choruses* which you mention, it's the result of a memory lapse, my own memory lapse.[300]

One danger of analysis attempting to correct 'mistakes' is that it is not always right. For example, when discussing the woodwind and string chords in F13, in bars 141-2, Robison suggests that replacing the clarinet's G4 with F4 "removes the anomalous value".[301] Here, Birtwistle has moved through his group of chords, selecting by choice, and the chord in question is correct. In any case, even when mistakes have been made, the results do not adversely affect the sound of the music. This is particularly so as, to my mind, the mechanisms are not defined by their harmony, but by their rhythm, texture and line.

Despite the evidence in the sketches that demonstrates an interest in maintaining a high degree of harmonic consistency within sections, I believe that the linear aspect of the music is still more important to Birtwistle than the vertical one, and that in general his harmony results from the desire to maintain approximate parallel movement rather than to focus on the characteristics of harmony *per se*. Focusing on harmony would demand a broader logic of association across the whole piece, whereas the sketches show the same principles being adopted in slightly different ways for textures which sound very different. The key to explaining these differences lies elsewhere, at a higher-level, determined by formal and structural criteria.

It now remains to see to what extent the features described above in relation to *Carmen* are also present in the two earlier pieces, *Melencolia I* and *Silbury Air*.

Robison's suggestion that Birtwistle may have "filtered a more regular series of larger sets to produce these hexads and pentads" is not born out by the sketches. The idea of filtering, which comes from Hall's analysis of the sketches for ...*agm*..., is used at times (for instance on A2:28, which relates to the C mechanism on pages 22-23 of the score), however it is not a prominent feature of the sketches for *Carmen*.

[300] Hall (1984), p.151.

[301] Robison, 1999, p.23.

Melencolia I

In the five years that separate *An Imaginary Landscape* from *Melencolia I* nine new works were composed. Additionally, between Autumn 1973 and Spring 1975 Birtwistle had returned to America to teach composition, and whilst there he composed Acts I and II of *The Mask of Orpheus*.[302] From 1975 until 1983, however, work on the opera was temporarily suspended and a number of important instrumental pieces were composed in response to various commissions. The first of these instrumental pieces was *Melencolia I*.[303]

Melencolia I takes its title from an engraving by Albrecht Dürer, of 1514.[304] In the engraving Melencolia is represented by an angel, sitting in a dejected posture, clenched fist supporting her downturned head. Sunk in thought, Erwin Panofsky has argued that "she does not hold on to an object which does not exist, but to a problem which cannot be solved."[305] Birtwistle was drawn to Dürer's work by a short essay which Günther Grass wrote about the Melencolia engraving, entitled 'On Stasis in Progress: Variations of Albrecht Dürer's Engraving *Melencolia I*.'[306] In this article, Grass considers stasis and progress as two complementary features, arguing that one is a necessary progenitor of the other. Grass describes the role of stasis as "Hesitation, halts between stages. Thought about thought, until the only remaining certainty is doubt."[307] This aptly summarizes the

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[302] In America, Birtwistle spent a year as a Cornell Visiting Professor at Swarthmore College, Pennsylvania. After this he was invited by Morton Feldman to teach at New York State University, Buffalo. When Birtwistle returned to England he took up a position as Director of Music at the National Theatre, which he held from 1975 to 1983.

[303] The piece was commissioned for Musica Nova by the Scottish National Orchestra Society, and the clarinet solo was written for Alan Hacker. It received its first performance on 18 September 1976.

[304] At this time Birtwistle was avidly reading Erwin Panofsky's *The Life and Art of Albrecht Dürer* (Princeton University Press, 1971), cited in Hall (1984), p.93.

[305] Erwin Panofsky (1971), p.163.

[306] The essay appears at the end of Grass's semi-autobiographical novel, *From the Diary of a Snail*, published in English translation in 1974 (London: Martin Secker and Warburg Ltd). The original, *Aus dem Tagebuch einer Schneke*, was published in Germany, by Hermann Luchterhand Verlag, in 1972.

[307] *Ibid.* (English translation), p.299. The idea of stasis as the dark side of Utopia is a common Modernist trope. For instance, Adorno applies this idea when discussing Huxley's

effect of the held notes and pauses which appear throughout Birtwistle's works written in the 1970s, and which were discussed during the previous chapter.

The figure of Doubt is central to Grass's novel *From the Diary of a Snail*, and it was a feature of Birtwistle's own responses to a number of his earlier works, as discussed in the last chapter, which were withdrawn because of the composer's hesitancy. Similarly, Orpheus is characterized by a state of mental withdrawal, and for this reason a melancholy air is felt throughout Birtwistle's works which relate to the Orpheus story.[308] In Hall's words:

> ... in [Birtwistle's] view, he and Orpheus are quintessential melancholics, simply because both of them are geometricians, both consider music 'a dance of numbers'.[309]

Melancholy is also a condition which relates to pastoral convention. As Charles W. Hieatt has pointed out, "in the literary daydream of pastoral the themes of love, friendship, domesticity, and melancholy are realized without effort or responsibility and are expressed in poetry that tends toward lyric solipsism".[310] He further notes that:

> [Virgil's] philosophical posture, his way of looking at the world in this generic mood is subjective, self-revelatory, and sentimental. His expression is generally brief, melodic, imaginative, tending away from the narrative or dramatic and

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Brave New World during his essay 'Aldous Huxley and Utopia', in *Prisms* (Cambridge, Massachusetts: MIT Press, 1981; 8th repr.1995), p.112:

> ... the pressure that *Brave New World* exerts on everyone and everything is conceptually incompatible with the deathlike stasis that makes it a nightmare.

[308] Traditionally, it is widely believed that melancholy states, such as those of Orpheus, can be relieved by travelling. This strikes interesting parallels with the importance of metaphors of journeying which Birtwistle has used to describe his so-called processionals associated with the Orpheus myth. Robert Burton claimed in his book *The Anatomy of Melancholy* (London: Dent, 1936) "There is nothing better than a change of air in this malady, than to wander up and down ... and take the opportunity of times, places, seasons." Burton devoted his efforts to arguing that travel was the cure for melancholy, for the depressions brought on by settlement. Similarly, Rimbaud wrote in *Une Saison en enfer* (Paris: Mercure de France, 1941) "My health was menaced. Terror came. For days on end I fell asleep and, when I woke, the dark dreams continued. I was ripe for death. My debility led me along a route of dangers, to the world's edge, to Cimmeria, the country of black fog and whirlwinds. I was forced to travel, to ward off the apparitions assembled in my brain."

[309] Hall (1984), p.94. The importance of geometrical thinking is also addressed by Arnold Whittall in his review article, 'The Geometry of Comedy', *The Musical Times*, January (1993), pp.17-19.

[310] 'The Integrity of Pastoral: A Basis for Definition', *Genre*, vol.V, March 1972, no.1, p.4.

> toward the inactive and contemplative .... Thus, as Poggioli says, pastoral gravitates toward becoming an image of the poet's soul, a "vehicle of solipsism."[311]

This critical view of pastoral form seems particularly relevant to Birtwistle's mode of solipsistic expression, and his decision to write for a solo instrument in *Melencolia*. Although the work is Birtwistle's first attempt at a form which approaches the genre of concerto, the role of the ensemble is largely to shade and colour the soloist's expression, rather than set-up a concerto-style dialogue.

Michael Hall, when discussing Grass's work, fails to point out that Grass's essay and novel are an expression of socialist principles, coloured by Marx-like readings of the social situation in Western Germany in 1969, at the time of national elections.[312] One of Grass's techniques is to place Dürer's character, Melencolia, in a modern-day context. She is to be seen standing at a conveyor belt in a Siemens plant, a jobless housewife, bored sick at home in a high-rise flat,[313] or at the wheel of a car in a traffic jam. In each situation the automation and the isolation of modern-day living results in a sub-conscious melancholy state:

> Everything is shallow, empty, calculable, mechanical; one and the same article passes by in heartbreaking uniformity.[314]

These lines are particularly interesting considering analytical work on the

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[311] *Ibid.*, pp.17-18.

[312] The role of Utopian thought is often linked with politics and political reform. According to *The Oxford Companion to Philosophy*, (Oxford: Oxford University Press, 1995), pp.892-3:

Utopian thinking inevitably contains criticism of the status quo. It aims to overcome social inequality, economic exploitation, sexual repression, and other possible forms of domination that make well-being and happiness in this life impossible; death is thus seen as its critical limit. Utopian thought like Plato's *Republic*, Thomas More's classic *Utopia* (1515-16), Tommasco Campanella's *La Città del Sole* (1623), and the social utopianism of Saint-Simon, Fourier, and Owen, concentrates on conceptions of an ideal commonwealth. ... utopias seem indispensable for motivation. The sense of a better, realizable state of affairs not only gives meaning and significance to critical engagement, but also encourages interest in and hope of achieving real change in political action.

[313] Grass refers to, "today's city planning, its utopian projects and high-rising melancholy", *From the Diary of a Snail* (1974), p.303.

[314] *Ibid.*, p.288.

calculable, mechanical processes present in other works written at this time, most notably in *Carmen*. To what extent Birtwistle would concur with Grass's strongly socialist views is not clear, but the increasing role of mechanical features in his music, and the conflict between these aspects and the lyrical, solipsistic expression which is so integral to Birtwistle's pieces, suggests at least some engagement with the relationship between the individual and an automated, social and political context.[315] Grass also builds up a vivid description which might represent a model for the climax of Birtwistle's work:

> A silent Melencolia reduced to silence by the noise of production. You have to listen carefully to hear how in a factory, wherever piecework rules and productivity is the dominant principle, rage accumulates, particle by particle, takes up space, finds no outlet as yet, but looks for one.[316]

In Birtwistle's piece, an outlet is found for this accumulated rage in the form of violent outbursts at the extreme top-end of the register in the clarinet. The soft strings which provide a backdrop to these outbursts are dense, thickly layered chords which although they do not stifle or muffle the clarinet nevertheless represent a form of stasis which mirrors the frustrated attempts of the clarinet calls to break free.

Michael Hall suggests that through its depiction of Melencolia as Geometria, "symbol of the geometrical operations which lie behind art, craft, and many branches of natural philosophy,"[317] Dürer's engraving is significant because it suggests that melancholy

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[315] Integral to this is the effect on the subject's psyche; the psychological tension of the (politically) oppressed individual. This is something which Arnold Whittall explores in his discussion of *Melencolia I* in 'Modernist aesthetics, modernist music: some analytical perspectives', in *Music Theory in Concept and Practice*, eds Baker *et al* (Rochester: University of Rochester Press, 1997), pp.157-180. Whittall feels that the associations Birtwistle drew from Grass's novel may be related to compositional procedure (structure) and compositional attitude (psychology). He suggests that "we can easily forget 1969, or even 1976, when it was completed, and respond to the work as the journeyings of a Don Quixote (the clarinet cantus) with his Sancho Panza (harp), in a world without a Dulcinea, an unremittingly dark world in which there are only degrees of divergence, while hints of convergence prove illusory and provoke more extreme conflict." Whittall develops a similar idea in his review-article of *Pulse Shadows* (meditations on Paul Celan, composed 1989-1996), 'The Mechanisms of Lament: Harrison Birtwistle's *Pulse Shadows*', *Music and Letters*, February (1999), pp.86-102: "melody, if not exactly destroyed, is dissolved: the praise of no one, the negation of resolution, the destruction of what is celebrated, the music flowering into dissolution - all this embodies the dark side of experience from which Celan could never escape", p.96.

[316] Grass (1974), p.289.

[317] Hall (1984), p.92.

is a symptom of a failure to extend thought beyond the limits of physical space, and that for a melancholic such as Birtwistle "only order, a universally respected system, offers security."[318] The analysis which follows will examine the extent to which the processes used in *Carmen* are prefigured in *Melencolia I*, and will also discuss the relevance of the concept of stasis and progress to the study of the work. In general, during *Melencolia I*, circular processes appear to outweigh linear, developmental ones, and it seems hard to locate directed, linear motion that might be said to constitute progress. However, as seen in earlier works, an ordered tone row plays an important role, especially at structural moments, and this is one indication there may be a role for directed motion in the piece.

Analysis and sketch study

The idea that Grass's concepts would be relevant to *Melencolia* stem from Birtwistle's own programme note to the first performance, and this is reflected in critical reviews from the time. The work received its first performance within the context of a music school for students at Glasgow University, at which Birtwistle took an active part. According to Neil Mackay:

> While the piece seemed a *tour-de-force* - throughout the week Birtwistle had stressed (quietly!) to the students in his seminars the importance of economy, of "ambition for the material, ambition for the piece" - it did make one wonder how long this composer can continue to explore a musical area of seeming 'stasis in progress'.[319]

The "importance of economy" is a fundamental principle behind *Melencolia*, and it finds its clearest expression when the piece is considered as a work for solo clarinet, with the harp and two string orchestras providing textural and harmonic shading which is largely in sympathy with the tone and mood of the clarinet. The piece falls into five sections,

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[318] Grass, *From the Diary of a Snail* (1974), p.257. This point is rather strained. Whilst it is true to say that Birtwistle seems happiest working with numerical systems, Hall's discussion about metaphysics and left and right hemispheres (1984, pp.94-7) should, at least, be balanced by a more cultural explanation. Birtwistle's decision to base his thought in numerical processes may also be understood in the light of his schooling with Richard Hall in Manchester, who suggested that composers needed a system to take care of the lower-order workings in a piece.

[319] *Tempo*, December (1976), pp.50-51.

although the last of these is characterized by a series of contrasting blocks which contradict the sense of a homogeneous final part. The effect of the numerous block contrasts at the end of the work erodes the sense of progression and results in a feeling of atrophy: too much change is equivalent to none at all. This is especially evident in the penultimate pages which contain small blocks of apparently unrelated ideas for the strings, which are played in an order chosen by the performers. The effect is of a vast circling mobile, a grand version of the mobiles seen in earlier works, such as *Cantata*. The performers have a degree of choice, but ultimately they are severely confined and the music leads nowhere: it plays mechanically, and has to be faded out since it will not reach a natural conclusion.

Symmetry is also important to the work. This is evident from the layout of the score, which places one string orchestra above and another below the clarinet and harp, and from the position of the performers on the stage, with the two solo instruments at the centre. Aspects of the scoring are reminiscent of the central movement of *Three Sonatas for Nine Instruments*, where the ensemble was divided around a solo viola. Although there is a sense of a symmetrical centre to the piece, the form progresses in the sense that it does not return to elements heard at the beginning of the work, but actually explores new ideas in the second half. The central section is characterized by wide leaps in the clarinet, played *ffff*, and short punctuations in the harp. Either side of this central section the strings play extended heterophonous textures, occasionally coalescing in chorale-like moments which eventually climax in a full orchestral tutti in the final section. The form may be summarized as follows:

Sections:	I	II	III	IV	V
Pages:	1 to 5	5 to 11	12 to 18	18 to 24	26 to 32
Letters:	A to E	E to J	K to N	N+ to Q	R to the end

The simplest form of transition in the work is performed by a sustained note in the clarinet, first used on page 1. A form of suspension or held-note accompanies every transition in the piece, both between smaller divisions within main sections and at major structural points. The longest transitions represent a new development. These are usually

based on a regular pulse which provides a smooth link, resulting in a new sense of continuity between ideas. In certain ways these longer transition sections may be seen to have evolved from the repeating, block-like refrains used in earlier works, such as *Verses for Ensembles* and *Cantata*.[320]

Throughout the work pitch association is carried by the clarinet and its frequent correspondences with the strings. The extensive use of heterophony in the strings also contributes to the importance of pitch in this piece, in a similar manner to the layers of lines used in *Nomos*. D4, first introduced by the strings on page 4, shortly before letter E, forms a reference point marking departure and arrival in a similar manner to the use of E4 in *Silbury Air*. The pitch D reappears at letter K, at the start of the central section, where the clarinet plays a sustained B flat and the two string orchestras play D2 in unison.[321] D2 reappears as a crotchet pulse at letter N, at the transition from sections II to III. Three bars after letter O, D4 is played by the harp, clarinet and first orchestra, at the start of a line which is carried across the page. However, the sense of the projection of D is subsequently largely lost, with the exception of a small number of the mobiles on page 30, and the movement from a sustained G5 to D5 in the clarinet, on the last page.

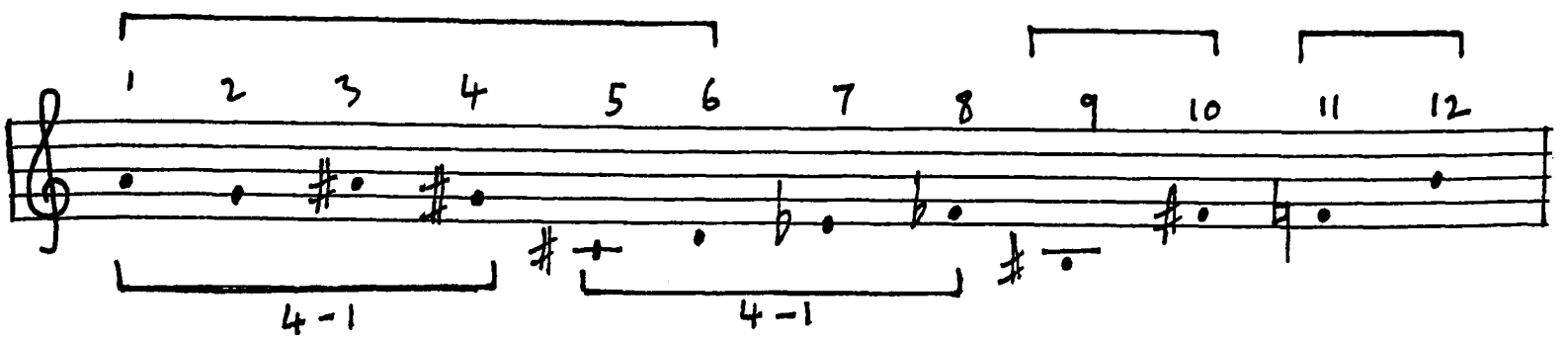
An examination of the important pitches which reappear at structural moments also points to the use of an ordered tone row. For example, at letter K the pitches B flat in the clarinet, G and A in the harp, and D, are notes 1, 2, 3 and 6 of the row (which explains the importance of D throughout the first half of the piece). The tone row is given below:

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[320] This is suggested by the circling nature of the material used, and its lack of connection to the surrounding material, such as the block on page 21, which does not relate to the antiphonal music at letter R, or the climactic section at letter S.

[321] The structural marker here (sustained strings and clarinet) is a reworking of the narrow string cluster around the sustained harp and clarinet at letter E.

Example 17 *Melencolia I* Tone row



The main characteristics are the two 4-1 sets formed by notes 1 to 4, and 5 to 8, the perfect fifth between notes 1 and 6 (A to D), and the two tritones in the second half (B# to F# and F to B). References to the row are most evident at moments of transition, which is familiar from pieces discussed earlier in this thesis (although it seemed to have been temporarily abandoned during *An Imaginary Landscape*). One very clear example appears on page 10, at letter I. Here the clarinet appears to have moved full circle since it plays notes 1 and 2, followed by 3 in the second orchestra violins, and 4 in the clarinet. This comes near the end of section B. Following a transitional section, section C (at letter K) begins with notes 1 and 2 in the harp, and note 6, played in unison by the strings. This moment is a formal reworking of the beginning of section B, at letter E, where the strings played a mid-register cluster below notes 1, 2 and 11 in the harp and clarinet.

The first half of the work, to letter K, is characterized by a series of blocks which rework the opening material from letter A to B (see **App 67**). In this sense the piece differs markedly from *Carmen*. Rather than progress by juxtaposition of contrasting ideas, *Melencolia* proceeds gradually, working over the same opening idea, in two sections, or stages. Both sections may be divided into four statements of the opening idea. Section one, from letter A to E, is framed by the opening sustained A4 in the clarinet and harp, which also descends to G4, and the sustained A4 moving to G4 in the harp and G flat4 in the clarinet, just before letter E. I have labelled the opening idea 'x', and its developed form in section two 'y'. The reworkings of x are clearly marked in the score by the letters B, C and D. The music progresses in terms of a gradual expansion of the overall pitch space employed as well as the introduction of all twelve notes of the chromatic scale. At a gestural level, the four sub-sections have a number of unchanging, static elements in

common:[322]

1. Four dyads in the cellos and violas, played in rhythmic unison
2. A circular line in the harp, with a quintuplet quaver rhythm
3. A slowly unfolding clarinet line

From the sketches it appears that Birtwistle began by conceiving a set of rhythmic variations, written one above the other, which detail four different ways of dividing the same durational block.[323] These rhythms refer to the position of the cello and viola dyads. Examination of the pitches used in each element reveals a degree of change allied to fixed schemes in other parts. For instance, in the first sub-section the viola and cello dyads consist of (G, G# and A#), but this expands to (F#, G, G#, A, A#) in the following three versions. Whilst the clarinet expands its range from a unison A4, to G4-B4, to F4-B4, the harp simply shuffles the same five pitches within an interval 4 span, from B#3 to F flat4. On each occasion, these elements are followed by thicker chords in the cellos and double basses, followed by a held note in the clarinet, twice on A and once on F.

At letter E, x is expanded into a longer and more complex moment labelled y. Although letters E to K follow the same pattern as A to E, there is a greater degree of variation, and the use of heterophony in the strings, anticipated on pages 4 and 5, increases the number of layers in the texture. The number of string chords in each sub-section increases from four, in x, to ten, nine and six in y. As this indicates, there is a gradual shortening of the sub-sections in the third and fourth versions. Although the first version faithfully reproduces the sequence of events from x, providing the thicker chords at letter F, subsequent versions introduce high string harmonics and a more cadential chordal gesture in the harp. One important point which emerges from **App 67** is the association of texture and tempo marking, allied to an approximate sense of proportion between the durations of events. In x, the opening sub-section is always crotchet = 44, and

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[322] Arnold Whittall says of the opening: "[it] remains the archetypal instance of ... 'the model in which mechanisms and organisms ... confront one another'." He also notes that "in order to sustain the twenty-five minute structure of the work, Birtwistle from time to time raises the possibility that the orchestra might be 'won over' to the clarinet's slowly unfolding style of lyric melancholy (see the music between Letters E and G)." (1999), p.176.

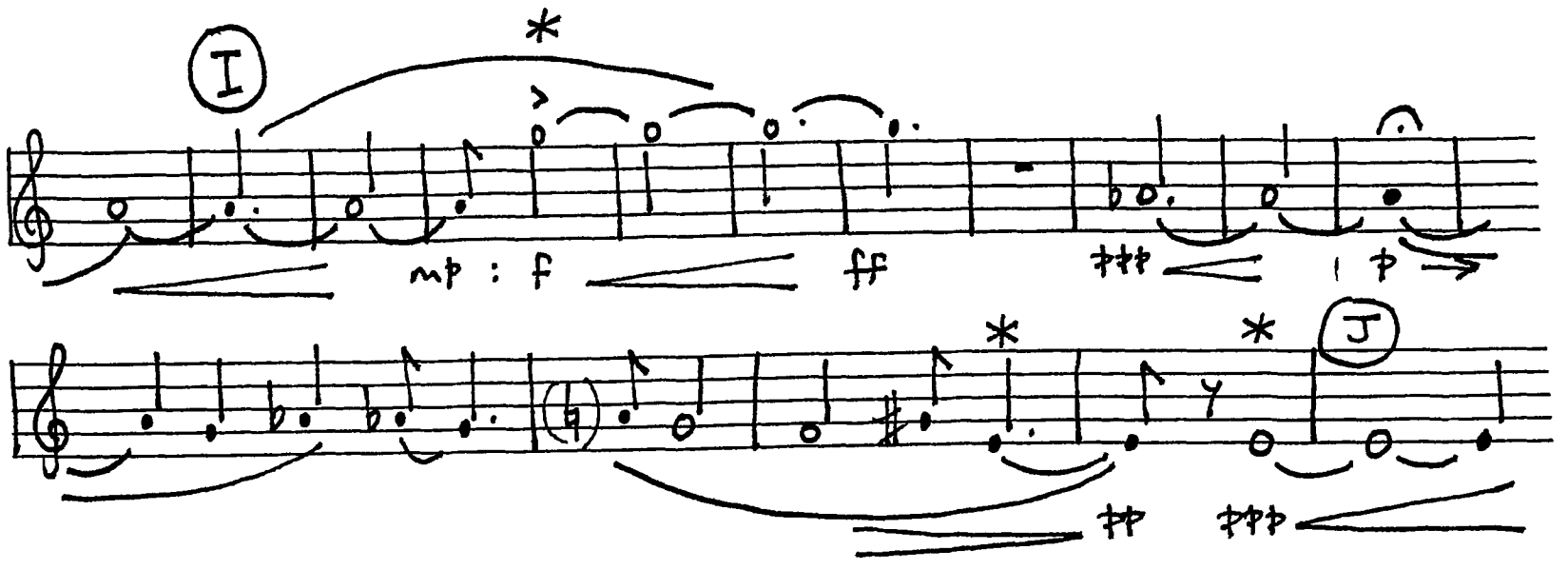
[323] The sketches in question are page 13 in a folder of A4 size sheets, and page 36 of a folder of A2 size pages. In total, the inventory for *Melencolia* contains 45 A4 sides and 64 A2 sides. There are also 31 pages of fair copy.

the third part, with the thicker chords, is always crotchet = 112. During y, the opening sub-section is always crotchet = c.56, but the third part varies between crotchet = c.72, c.96, and a combination of these and other tempi. Separating these blocks are pauses.

A2 size sketches for the y section suggest that the string chords were conceived vertically, based on permutations of intervals 1, 2, 5, 6 and 7.[324] Some of the chords are numbered and others are given letter names, but the origins of these two systems are not clear. The starting-point seems to have been the clarinet line, which is written in the centre of the sketches, its rhythm and metric system on one line and the pitches added underneath. As in *An Imaginary Landscape*, the melodic element (the clarinet and the heterophony in the strings) was conceived as a continuous whole, and the chordal interruptions, like the one at letter F, were interpolated at a later stage. Similarly, the original plan shows no indication of the parts for high string harmonics. This block is not indicated in the sketches at letter G, for example. At this moment in the sketches the melodic line continues unbroken from the bar before G to the 5/4 bar, marked crotchet = c.56. Similarly, the last bar on page 8, the first five bars of page 9, and the section from letter I to the second bar of page 11 have been added at a later stage.

On pages 10 to 11, the clarinet line departs from the first sketch. The score version is given below, with asterisks which mark deviations from the sketch:

Example 18 *Melencolia I* Clarinet line from letter I to J, pages 10-11 in the score



[324] A2:26 and 27.

In the sketch, the line does not ascend to G5, nor does it end on E4, prior to letter J; instead it moves to F# and G. This is especially interesting because at this moment the tone-row ordering appears to come into focus. The clarinet's A4 to G5, at letter I, constitute notes 1 and 2 of the row, and A flat4 is note 4 (which follows note 3, B flat, in the strings). The alteration to E4, at the end of the section, may be because this pitch relates to note 1 of the row (A) by a fifth, and this moment represents the beginning of the transition to the central section, beginning at letter K, which starts on D (note 6).

The central section, from letter K to N, contains some of the most layered music in the piece. In the sketches this whole section was planned on just two sides of A2 paper, 22 bars in length.[325] The original plan contained only two layers, although the clarinet part is absent. The starting point appears to have been the rhythm, which was arranged additively from durations built from crotchet units.[326] On page 14 of the score there are essentially four layers. However, these are further distorted by staggering between the two orchestras, and by the use of additional stretto entries within each group of parts. The upper strings are divided into two layers: violins 1 to 10 (from page 14: C, B flat, D, etc.), and violins 11 to 15 with violas 1 to 6 (G#, D, G, etc.). The cellos and double basses form a third layer (from letter K: D, A flat, D flat, etc.), and the fourth layer is provided by the harp and clarinet. This principle of layered associations within the strings is continued through to the end of the work, finding its culmination in the section on page 30, which consists of a series of short mobiles. Birtwistle's plan for this section (contained on a single A4 sheet, and transcribed as **App 68, a**)[327] indicates the various pairings of parts: for example, violins 1 to 5 in orchestra one with the violas in the second orchestra, and violins 11 to 15 of the first orchestra with the cellos in orchestra two.

The sketches show that the final section, from letter N, began with the E unisons just before letter O. Once again, workings started with the clarinet and harp line, based on rhythms formed from different combinations of crotchets. The sketches for pages 22

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[325] A2:24 and 25.

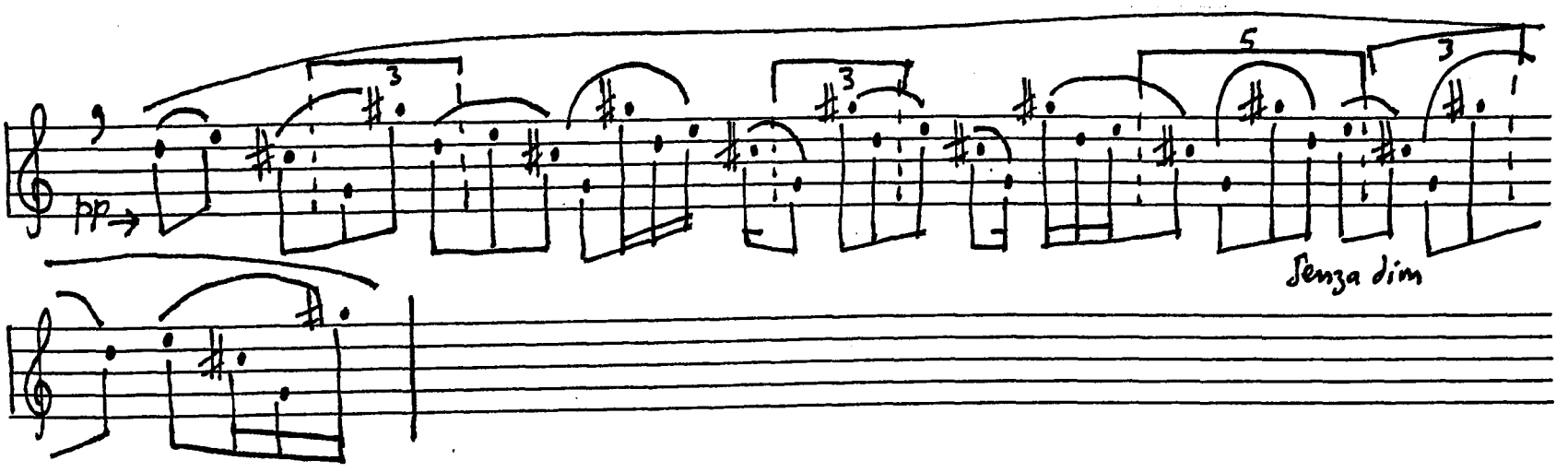
[326] Throughout the work the sketches indicate that the crotchet was the basic durational building-block: for example A4: 6, 9, and 19. Page 9 even lists various combinations of rhythms which are re-arranged in ascending numerical order, according to the number of crotchets in each group.

[327] A4:35.

and 23 of the score[328] suggest that the string parts were secondary to this line, and that they were initially conceived in terms of simple unisons interrupted by bars marked "1", "2", and so on corresponding to the brief tutti bars on these pages. The sketches indicate that this section was originally planned on a much larger scale, stretching across nine A2 sheets.[329] These contain a series of unisons in the strings, alternating from one orchestra to the other, interrupted by chordal blocks. Traces of this plan are discernible on page 24 of the score. The F# in the cellos at letter Q corresponds to the sketch page marked "4" by Birtwistle.[330] In the sketches, this moves to D# at a point approximately relating to the 5/4 bar on page 25. The sketch plan contains a further 26 pitch changes. However, the scheme is highly repetitive, circling around pitches D, E, F and F#. Although the score continues with a different texture from letter R, on page 26, the circularity of the original is a key element of the music in the score, as is the antiphonal movement between the two orchestras, which is also reflected in a simple upward/downward motion in the clarinet.[331] This is followed by one of the most static moments in the score, on page 27.

The final section contains a number of discrete, contrasted ideas and therefore most obviously represents a precedent for the mechanisms of *Carmen*. The simplest mechanism is the repeated use of a five-note figure in the clarinet, on the last page:

Example 19 *Melencolia I* Clarinet line after letter U, on page 32 of the score



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[328] A2:27-29.

[329] A2:27-35.

[330] A2:30.

[331] Whittall describes this moment as possessing a "sense of relative convergence - of positive musical sharing - which makes the eventual, ultimate breakdown of communication the more powerful and poignant." (1999), p.176.

The basic cell [D, E, C#, G, G#] is played seven times, the final instance coinciding with four chords in the harp which halt the process and bring the work to a close. The clarinet figure is absolutely regular in terms of register and pitch, and only the varied rhythm lends the idea a sense of unpredictability.[332] A similar principle is applied on page 27. Here the harp plays a circular idea fixed in pitch and register, with a repeating five-note cell in the right-hand, set against a four-note cell in the left hand (**App 68, b**). Once again, a degree of unpredictability is provided by the varied rhythm. The sustained chord in the double basses, based on stacked fourths and fifths, is the most static element at this moment. Although the clarinet does not contain a repeated element, it has little sense of direction. On the previous page, from letter R, the clarinet seems to be trapped in indecision as it moves up and down, shadowed by antiphony in the strings. The only evidence that the clarinet is actually controlling events and is directed in some way is provided by the sustained notes it plays between the main blocks of material. This moves from C, at the end of page 26, to G, at the end of page 27.

The clarinet's held G leads into the climax of the work, on pages 28 to 29 (letter S). The actual harmonies of the strings here seem much less important than the fact that they play very dense chords, extremely softly. The overall effect is more important than the detail of their structure. Against the string background, which shifts lugubriously, the clarinet lets out its isolated, piercing shrieks, 'as loud as possible'. At this point a sense of

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[332] The idea of perpetual motion implicit in the final section of *Melencolia*, and more obviously in *Silbury Air* and *Carmen*, was a feature which had fascinated Ligeti in his works during the 1970s, and dates back particularly to *Continuum* for harpsichord, composed in 1968. Whilst Ligeti acknowledged the existence of points of contact between this technique and similar ones in works of American minimalism and rock music, a relation Ligeti suggests through the titles to some of his pieces (for example, *San Francisco Polyphony* (1973-4), *Self-portrait with Reich and Riley, und Chopin ist auch dabei* (1976), and *Hungarian Rock* (1978)) Birtwistle admitted no such links. However, only two years before the composition of *Melencolia* and *Silbury Air*, Steve Reich's essay 'Music as a Gradual Process - 1968' was published in his *Writings About Music* (New York: Universal Editions, The Press of the Nova Scola College of Art and Design, Halifax Canada and University Press, 1974). In this essay Reich stated, "What I'm interested in is a compositional process and a sounding music that are one and the same thing. While performing and listening to gradual musical processes one can participate in a particular liberating and impersonal kind of ritual." The idea of process music as a form of ritual is interesting in relation to Birtwistle. It must also be noted that the result of Birtwistle's increased use of pulse and the sense of gradual change in *Melencolia* and *Silbury Air* was closely linked to the development of new forms in his music.

stasis in the strings is matched by a sense of arrival in the clarinet, which outlines an upward movement of a perfect fifth, from E6 to B6. A look at the original ordering of the twelve chromatic pitches, as they were introduced at the start of the work, reveals that the clarinet climax on page 29 is on note 12 of the row.

Silbury Air

Pulse

Birtwistle's prefatory note to *Silbury Air* highlights one of his central concerns: to express a paradoxical situation in which obviously mechanistic processes relate and develop across a piece in a seemingly natural, organic manner. The title provides an analogy for this idea by referring to Silbury Hill, a prehistoric mound in Wiltshire, which "presents itself as an artificial but organic intruder of the landscape." In this sense *Silbury Air* most obviously continues a compositional idea that originated in *An Imaginary Landscape*, where an artificial scheme of structural divisions was used to interrupt continuous textural layers, and where the artificial intrusions signalled changes in texture, of different degrees, which sometimes supported a sense of continuous line and at other times reinforced the sense of division. In *Silbury Air* textural change is once again linked to a durational scheme, but this is taken a step further by being linked to tempo. Changes in tempo offer another means of emphasising difference and similarity, as well as effecting smoother transitions between sections.

The sketch material for *Silbury Air* is fairly extensive, although a great deal of information is missing, including a fair copy and first complete draft of the work. What is extant are four sides of A4 which show figures relating to pulse, as well as rhythmic details. In addition to this there are 75 A2 size sides of sketch and draft material. What most obviously seems to be missing are pages which would explain the derivation of a table which Birtwistle used to preface the score. He calls this table a pulse labyrinth. It consists of four schemes, each one containing five columns with three rows each, arranged in a staggered form with seven rows of boxes with metre and tempo markings (see **App 69**). Each scheme is internally related. The columns preserve the semiquaver pulse, whilst the third and fifth rows preserve the tempo, although the pulse of the quavers changes as

the bar lengths are different. The two rows which preserve the tempo markings must have been conceived first, as the other markings are derived from them. Concerning Birtwistle's use of these tables, Michael Hall believes that it represents "yet another variant of the central organising principle: first establish a logical foundation then act on it illogically." He continues:

> Three times Birtwistle sets out to find his way out of the labyrinth only to find himself back at his starting point. When he does discover the exit, indicated by the four harp chords cutting abruptly across the start of a new cycle, it is purely by chance.[333]

As with Hall's description of the cycles in *Nomos*, it is hard to see what points in the score are being referred to here, apart from the obvious return to the opening unison E at figures 18, 28, and at the end of the piece. However, although the opening pulse (crotchet = 90) is recapitulated at figure 18, the tempo at figure 28 is crotchet = 120, and at the end it is crotchet = 40. Moreover, these moments do not correspond to disjunctions in the routes taken through the labyrinth, since the tempos at figures 18 and 28 are both part of a series of adjacent steps made in scheme III. At the end of the piece, however, the tempi are drawn from scheme IV, and here at least there is a sense of attempting to reach the bottom box, 5/16 = 32, which is the slowest tempo in the entire labyrinth. However, the music only gets as far as 4/16 = 40.5, before the chords (which are a literal quotation from the end of *Melencolia*) bring the work to a halt.

Both Hall and Deadman fail to point out that there are significant links between the four basic pulse schemes. Deadman even argues that, "The tables do not link up, except that the second and fourth have 90 as one of their key numbers ... but no such links can be found between any of the other tables."[334] In fact, there are only seven of the total of 13 different columns that do not appear more than once. Four of the columns in scheme III are used elsewhere; the fifth is almost exactly reproduced. Even more significantly, the last three columns of scheme II appear as the first three columns in IV, which means that these two are, for the most part, identical.

It is not clear from the sketches exactly how Birtwistle decided on the pulses used

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[333] Hall (1984), p.109.

[334] Deadman, 1990, pp.46 to 47.

in *Silbury Air*, although the schemes of the pulse labyrinth chart a progression from the fastest available pulse (266.75) at the top of I, to the slowest (32) at the bottom of IV. Scheme I is the most isolated, whereas III is connected to all of the other schemes, and therefore provides most of the material for the piece, although a pulse of 90 is guaranteed an important role by its dominant presence in III and IV, and this is (perhaps deliberately) also contained in III, 3. This column is the only one to appear in three schemes, and it could be said to represent a generic axis for the whole piece: 3/16 = 120; 4/16 = 90; 5/16 = 72.

The high degree of inter-relatedness within the table offers many opportunities for moving from one scheme to another, hence the description 'pulse labyrinth' in the singular. Tracing Birtwistle's steps then becomes a little easier, and for long stretches he appears to remain within single schemes and this suggests a possible formal interpretation based on the pulse movements alone. This formal plan is presented in **App 70: 1-2**. In the example, capital Roman numerals indicate the scheme (e.g.. II), followed by the column (2), and the row (ii). There are five main sections, plus a short coda. The first, labelled A, is divided between scheme III (from the opening to figure 2) and scheme I (from figure 2 to 4/16 = 120, between figures 5 and 6).[335] At figure 2 it moves, via an axis column, from 5/16 = 96 in III to the same marking in I, followed by 4/16 = 96, then diagonally to 4/16 = 72 (marked in the score as crotchet = 144). At figure 4, a second layer is established based on crotchet = 108. A sketch leaf for this section reveals that this was calculated as a triplet (3:2) relation to the basic pulse of minim = 72.[336]

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[335] Two loose A4 sheets in the sketches (A4:1 and 2) show tempo and bar markings written along a line, which may represent a first version of the tempo moves in section A. The markings are all drawn from scheme III and mainly consist of adjacent steps, although occasionally Birtwistle skipped from one end of a row or column to the other.

[336] This technique of moving to tempi not contained in the scheme but related through simple subdivision is referred to later by Birtwistle in relation to his orchestral work *Exody 23: 59: 59*, written for the Chicago Symphony Orchestra between autumn 1996 and late summer 1997. This piece is based on a 'pulse shuttle' with a similar principle of proportional relation to the one used in *Silbury Air*. Birtwistle notes that, "... the ratios between the tempos are very simple. It's just a question of multiplying or dividing by two or three. By this method I've produced tempos that are not included on the shuttle." (Quoted in Hall (1998), p.143). Regarding this practice, the correspondence collection at the Paul Sacher Foundation contains a letter to Birtwistle, sent by a relation named Christine Birtwistle, which consists of various formulae for changing tempo. However, the letter is undated and does not indicate which piece it relates to. Contained in the letter is a table which shows, at a glance, the tempo relations for nine

Section B, beginning before figure 6, is concerned with scheme IV. Despite the fact that there are six non-adjacent moves, the sequence of adjacent steps from 5/16 = 90 at figure 8 to 3/16 = 90 after figure 9 is persuasive. Most of the moves are also contained in scheme II, owing to the near-identical content of schemes II and IV. This generates a sense of two paths being traced in different places but in parallel (a kind of mirror movement). The break between scheme I at the end of section A and scheme IV at the start of B is highlighted by the marking 4/16 = 108. None of the markings in the scheme which relate proportionally to this tempo (72 and 54, for example) establish an adjacent step between this marking and the ones either side of it.

The central section C is mostly based on scheme III but there are some excursions and non-adjacent movements. The first section, from figure 14, at 4/16 = 72, to figure 16 appears to have been sketched independently and is based on proportional relations rather than adjacent moves through the labyrinth.[337] The sketch indicates that the three tempi used in this section were arranged in order to move proportionally as follows: 3 (72): 4 (96): 5 (120): 3 (72), with 24 as the common number to all three tempi. These tempi are all contained in scheme III and from figures 16 to 24 the music remains in III. Around figure 25, however, where the music begins to move towards the unison E at figure 28, a shift occurs along an axis linking III to IV[338] which lasts until figure 27 where the pulse returns to III. When the music arrives at the unison E the pulse remains in scheme III.

In the transition to section D, the music moves into scheme I, via 4/16 = 120, where it settles on a pulse of 128. Section D, beginning at figure 31, is characterized by up to three different textures which have a degree of freedom but each is related to pulse = 160, from scheme I. From figure 37 the conductor beats crotchet = c.120 (still from scheme I) against a prevailing layer of 160. Section E contains pulses from scheme IV.

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tempi, divided by 2, 3, 4, and multiplied by a quarter, a third and half. Although the tempi written along the top line of the table do not reflect the patterns used in the pulse labyrinth of *Silbury Air*, it could have been used as a supplement to the labyrinth. The letter states, "I hope you have not finished writing the piece already." It is not possible to say for sure whether the table is related to *Silbury Air*, but it may have proved useful when Birtwistle composed the layers of related tempi at the end of the piece.

[337] A4:3.

[338] Moving along the axis from III,3 to IV,2, the pulse changes from 4/16 to 5/16 = 90, and from there to 112.5 in IV,1.

This begins with 3/16 = 120 which is played against two different pulse continuums. The strand from IV progresses downwards from 120 through 72, to 54, to 40.5. From figure 38, however, (section F) the music returns to pulses which relate back to 160, contained in scheme I. An A2 sketch page exists which documents Birtwistle's workings for these final two sections.[339] The page includes a first attempt on one line which, at the end, moves from 3/16 = 90 to 5/16 = 67.5 (the last value is rubbed out). Beneath this the final version is written, which replaces 67.5 with 72, and a group of numbers written at the bottom of the page demonstrate that the subsequent path taken to the bottom of scheme IV actually began in scheme I:

I		160
I	=	120
		90
		72
		54
		40.5

As hinted at above, the form of the changes in pulse often reflects large-scale textural divides. A glance at the score will also reveal that each pulse change, however frequent, is matched by the addition or subtraction of an instrumental layer. This is indicated in the sketches, which also suggest that, although a complete formal plan does not exist in the Sacher collection, Birtwistle had a clear idea of the durations that would be applied to each new pulse and texture. For instance, a sketch for the first page of the score contains numbers, written at the bottom, which correspond to the lengths of the opening of the piece.[340] This begins with 18 bars of 4/16 = 90, which relates to the use of 18 as the basic building block in *Carmen*. Another indication that the pulse changes do correspond to a pre-compositional scheme is provided by the fact that the sketch sheets either show material being developed for a single block in one tempo, or a continuous section which relates (by its ending or beginning) to the formal divisions I have suggested in **App 70: 1-2**.

In the sketches, a form scheme exists for pages 9 to 13 of the score, detailing the

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[339] A2:68.

[340] A2:2.

bar and tempo changes, as well as indicating the instrumental layers across this section.[341] (See **App 71**). This clearly demonstrates the link between instrumentation, metre, duration and tempo. However, the brackets associated with instrumentation move in two layers, one above the line where the bars and tempi are marked, and the other below. Furthermore, there appear to be three positions in each scheme. Comparisons with the score reveal that the brackets above the line refer to a different kind of texture to the ones below. Above the line, the brackets relate at first to irregular, syncopated material, and then to a fast moving, repeated-note texture. Below the line, the brackets refer to a regular, fixed idea, usually involving repeated chords which are reminiscent of the repeated chords at the opening of *Tragoedia*. This texture is a variant of the opening regular pulse and it contrasts with the syncopated and faster moving ideas in the other parts. The purpose of the three positions within each bracketing scheme is not clear, but it often relates to a new variant of the basic texture, and it always indicates a change of instrumentation.

What these sketch pages indicate is that a similar principle of textural division is present in *Silbury Air* as in *Carmen*. However, it suggests that, as in the second half of *An Imaginary Landscape*, an essential feature of this piece is the layering of ideas which means that a distributional analysis of *Silbury Air* would have to consider the vertical coincidences of mechanisms as well as their linear ordering. The sketches also indicate that the formal schemes used actually co-ordinate the mechanisms. The analysis that follows will, after defining the various textural mechanisms in *Silbury Air*, attempt to account for the nature of the relationship between the ideas and their location in the work.

Analysis

An analysis of *Silbury Air* benefits a great deal from the hindsight afforded by examining the procedures in *Carmen*. Whilst, undoubtedly, *Silbury Air* is more continuous than its successor, a closer look reveals the operation of a number of mechanisms which are juxtaposed and characterized in a similar fashion to those in *Carmen*. This accords with Birtwistle's comments on the piece, which in many ways represent the summation of

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[341] A2:17 to 19.

procedures used up to this time:

> I have often alluded to my music of landscape presenting musical ideas through the juxtaposition and repetition of 'static blocks' or, preferable in my terminology, objects. These objects themselves being subjected to a vigorous invented logic via modes of juxtaposition, modes of repetition, modes of change.[342]

The 'vigorous invented logic' that Birtwistle here refers to could simply mean his extremely methodical working practices. These show him meticulously following through every step of his schemes without ever cutting corners, even when the task is merely one of assigning notes to instruments, or to a rhythm, where the actual placements if altered would not adversely affect the overall aural impression. In other words, the pre-compositional workings are often concerned with such low-level aspects that a far less systematic approach might have produced effectively the same result. It is then, inevitably, to the higher-level processes that an analysis should turn if it hopes to say anything substantial about the piece concerned. At the highest level, the use of clearly defined, although related, mechanisms offers a key to establishing a pattern of events. Running across this logic of association, however, is the role of allusions to a basic tone-row ordering which surfaces at moments of structural importance.

The ideas which Birtwistle uses in *Silbury Air* are mechanistic in the sense that they are distinguished from one another according to the different ways in which they process rhythmic or pitch cells using a principle of repetition and circular movement. In one sense, the tempo markings are themselves mechanistic since they rely upon mathematical regularity to sustain them, and the changes are, mostly, related by proportion.[343] Principally, however, the mechanisms in *Silbury Air* are textural. They are equally defined by their pitch and rhythmic content, as they are by their tempo, instrumentation, dynamics, and other textural features (such as use of staccato, string harmonics, punctuating chords, heterophony, and so on). In this way, the textural motives in *Silbury Air* are formed by the interaction of a whole series of factors which are each

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[342] Quoted in Hall (1984), p.177.

[343] According to David Epstein, in his book, *Shaping Time: Music, the Brain, and Performance* (New York: Schirmer, 1995), metre and tempo are mechanisms (see table 1.1, p.11). Metre consists of beats, bars, hyperbars and larger segments, and tempo is comprised of proportional tempo relations, rubato and accelerando.

controlled to different degrees, some of them being more strictly governed than others.

App 72 is a summary of the main formal events in *Silbury Air*. The analysis which follows will begin by examining issues of symmetrical construction in the harmony throughout the work, as revealed by the sketches. This is followed by an analysis of the opening section (the first half of A), followed by sections D and E, and finally the central parts B and C.

Registral Fixity, Harmony and Symmetrical Plans

Of particular relevance to analytical issues is an A2 sheet which appears to represent a first version of the opening of the work (transcribed as **App 73: 1**).[344] The fact that this was intended as the opening of the piece is indicated by the title written in the top left-hand corner: "Fantasia Geometria in Moto Perpetuo." Whilst this relates directly to *Carmen*, the music on the right side of the page actually appears, slightly reworked, at figure 4 of *Silbury Air*. The first thing to note is that this confirms the link in Birtwistle's own mind between the geometrical procedures explored in *Melencolia I* (indicated by Birtwistle's reference to Dürer's engraving of Melencolia as Geometria) and the eventual radical expression (relative to earlier pieces) of the very clearly defined mechanisms in *Carmen*. This lends a degree of consistency of thought to this period as a whole, indicating that basically the same issues that concerned Birtwistle during the composing of *Melencolia* were at the forefront of his mind when composing the two later works.

The second important point which emerges from this sheet concerns the relation between the music on the right-hand side of the page and a sketch of an ascending series of pitches at the bottom of the left-hand side of the page. The pitches are assembled in a literally symmetrical order and they relate to a chord which is sustained, and alluded to from figure 4, on page 5, to page 17 of the score. There appear to have been three stages to this sketch. The first consisted of writing six pitches, in open-head notation, which are eight semitones (a minor sixth) apart. The lowest pitch in the line is B, and the highest is F6. The next step involved adding three groups of four pitches, a major third either side of each of the initial six notes. These are written in filled notation and linked by beams.

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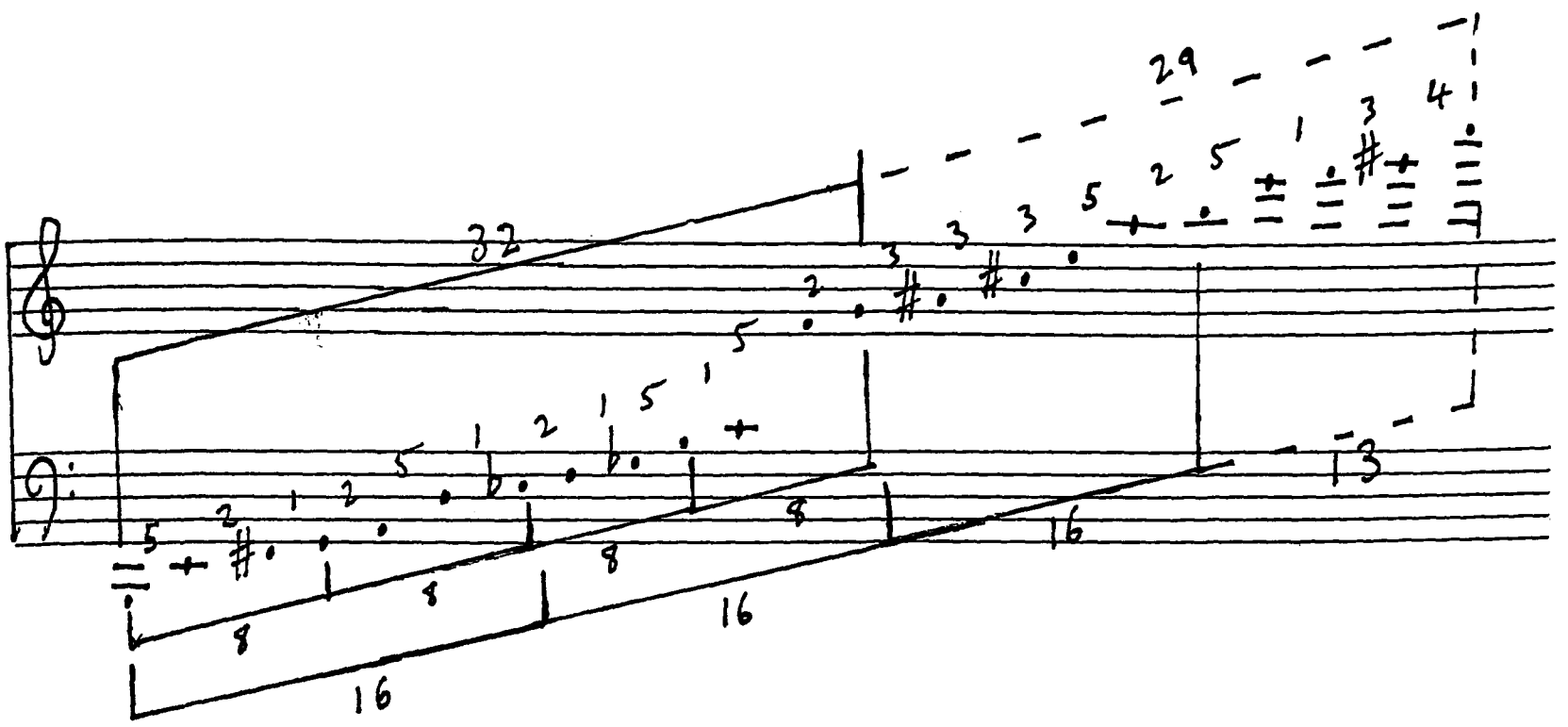
[344] A2:8.

The third and final stage involved writing seven-note chromatic collections arranged symmetrically around the pitches added in stage two.

The significance of this sketch is that it illustrates clearly for the first time a process of registral fixity, allied to a symmetrical chord structure. This is an aspect which I have identified in Birtwistle's music, from the earliest published work onwards. Here the idea receives a more complex treatment and it is sustained across a much wider span than was the case in previous works. In the score, selected notes from stages 1 and 2 are placed in the winds and strings where they form a sustained chord, with occasional deviations, across two and a half pages. This is shown in **App 73: 2**, which also indicates that the literal centre of the selected notes is F#4, rather than D4 in the sketch. F#4 is present at the bottom of the chords in the right-hand of the piano, but its position within a series of clusters renders it inaudible. The piano clusters outline an approximate registral mid-band around which the strings and woodwind carry the sustained chord in soft harmonics. The notes of the chord in the score ascend in an asymmetrical series of intervals: 8, 7, 8, 8, 7, 8, 8; if the lowest pitch in the sketch (G) was present the original symmetry would be in place. The chromatic collections, detailed in the sketches, provide material for fast moving sections which break-up the continuity established by the first appearance of the generic chord. Although texturally these moments contrast with the sustained chord, they actually elaborate the same idea.

From figure 12, the texture consists of a fast moving, repeated-note idea, interrupted by sharp, percussive chords. These chords differ from the generic model discussed above, but a number of them show signs of symmetrical planning, such as the one which appears at figure 13, which is used three times across pages 14 and 15. This is shown below:

Example 20 *Silbury Air* Analysis of the chord at figure 13



Again, interval 8 is important, forming a series of three interval 16 blocks. The potential symmetry is not fulfilled, however, as the upper half of the chord has a boundary of only 29 semitones, rather than 32, and the interval 16 block is divided 9 + 7.

When Birtwistle does not begin with a symmetrical construct like the ones discussed above, the sketches show that the chords are designed to fill-out a limited number of intervallic outlines, in the same way that the mobile-like melodic lines contain only a limited number of intervals. Registral fixity is an important factor here, as well as the use of small cells of pitches, usually chromatic collections which are merely rotated and arranged in vertical form. In these situations, Birtwistle rarely, if ever, begins by privileging a particular vertical interval, although the chords finally entered in the score often contain a generic interval which is played more frequently than the others, as Brian Robison's analysis of *Carmen* suggests. The sketches for the woodwind chords from the end of page 42 to 43 (figure 37), in *Silbury Air*, demonstrate how this occurs (see **App 74, a**).[345] The chords used are based on two pentads: [F, F#, G, G#, A] and [B, C#, D, E flat, E]. The pitches are rotated by number and the resulting line is written out. Beneath this, a second line is added based on regular vertical rotations of intervals 5, 6 and 7.

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[345] A2:64.

However, to effect a privileging of one basic intervallic shape over all others, a third line is created by adding pitches at interval 1 either above or below notes in the existing two lines. This process seems to have been carried through intuitively, and it results in a high number of interval 6 outlines:

Table 14 *Silbury Air* Analysis of the sketches for the woodwind chords from figure 37, pp.42-3

above		1	1 1		
below	1	1		1	
	657	675	765	756	etc.
above			1	1	
below	11	1		1	
span:	668	766	866	666	

The resulting pitches are then distributed between flute, oboe and clarinet by another number scheme, based on vertical rotations of numbers 1 to 3, where 1 = flute, 2 = oboe, and 3 =clarinet.

In most cases, Birtwistle derives harmonies from approximately parallel reproductions of a single line, and once he has decided on the characteristic intervallic content of a section, he is generally not particularly concerned which of the few possible chord forms comes where. For example, the woodwind and string chords on page 28 (after figure 25) are formed as a result of parallel forms of the flute line which move either a semitone or a tone beneath one another (**App 74, b**).[346] The use of a tone or a semitone interval between the parts is determined by a number scheme. An odd number indicates using a pitch a semitone below the line above, and an even number results in a tone. Following this, the resulting pitches are displaced registrally to form the more widely spaced contours that appear in the score.

In his working methods for pieces composed from 1976 onwards, Birtwistle appears to have moved away from the systematic application of contour as a means of generating harmony in a linear fashion, where horizontal steps from one chord to another

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[346] A2:58.

were linked to the intervals between rather than within chords, especially evident in the sketches for *Verses for Ensembles*. However, the principle of approximately parallel linear movement remains important. Although various techniques are used when forming harmonies, Birtwistle is now clearly more interested in fixing elements in order to guarantee a high degree of consistency within each section, and the systems used ensure variety within circumscribed limits. However, these limits, reflected in the choice of basic intervals, are made locally rather than in response to a long-range design, or Schenkerian-style prolongation.

The Tone Row

As the twelve chromatic tones are not all introduced independently there must remain a degree of uncertainty regarding the actual form that should be used when analysing the piece. The ambiguity only concerns the first six pitches. The second to fourth notes (A, B and C) appear as a chord in the brass at figure 1, and the fifth and sixth as a dyad (G in the woodwind and D# in the strings). The ordering of the remaining six pitches, however, is quite certain. **App 75** lists three possible forms of the row. In **App 75**, **a** the highest pitches are given priority over the lower ones. Although this results in a leap of ten semitones between notes 4 and 5 which is not reproduced in the second half, there is a relation between the two halves: notes 1 to 3 are a retrograde inversion of notes 7 to 9. Furthermore, note 6 (D#) is a chromatic neighbour to note 1, and relates to note 12 by a perfect fifth. **App 75**, **b** and **c** show two alternative row forms, based on a re-ordering of pitches in the first half. In both cases, the second half is a contour inversion of the first, with the lowest and highest pitches in each half occurring at the mid- and end-points. In deciding which form to adopt a degree of retrospective judgement has been used. Given the presence of pitches E, D# and A flat at moments of structural importance, and owing to their intervallic relations to one another, and the fact that they form a (0,1,5) collection which is also contained in the first three notes of each half, I have chosen to base my analysis on the row form presented in **App 75**, **a**.

Figures 1 to 7: The Five Basic Mechanisms

The first mechanism, which I have labelled A1, consists of the opening regular pulse on E, at crotchet = 90 (see **App 76: 1, a**). This opens out into a regular pulsating idea (at figure 2) which contains a small number of pitches used in a circling, rotational motion at crotchet = 96. This is labelled A2. Between these two stages there is a brief moment when the opening pulse is obscured by a number of syncopations, at pulse = 120. All subsequent mechanisms are based on one of these three stages: regular pulse and unison pitch; regular pulse and circling pitches; pulse obscured by syncopations.

Mechanism B, at figure 3, sees the pulse developed into an irregular, additive rhythm (at crotchet = 144). The piano part is shown in **App 76: 1, b**. A and B are, however, related through the same circling motion of a few pitches, although the range has now broadened. Mechanism C has two associated forms, related by the fact that they have their own independent tempo of crotchet = 108 (see **App 76: 1, c**, and **76: 2**: C2). C1, in the double bass at figure 4, consists of ten pitches in regular crotchet motion, repeated against a series of sharp, percussive chordal interruptions. It appears in conjunction with constant, jerky piano, harp and percussion chords which may be interpreted as a varied continuation of the previous, B mechanism. This moment, therefore, represents the first use of layering in the piece. C2, in the cello at figure 5, although based on the same crotchet pulse as the double bass mechanism, is characterized by a distinctive syncopated rhythm. Mechanism D, which occurs at the same time as C1, is also characterized by a distinctive rhythm, as well as by its use of parallel fourths and its scoring for brass, which lend it the character of a fanfare (**App 76: 2, d**). Once again, this idea relates back to A through its narrow band of rotating, cellular pitch collections. Finally, mechanism E is a repeated-note idea with staccato notation, interrupted by sharp percussive chords and string harmonics (**App 76: 2, e**). This too relates back to A through its use of a small number of pitches in rotation.

Silbury Air explores the possibilities of overlapping and layering these various mechanisms to a far greater extent than *Carmen*. This is part of the reason why the work seems more continuous; but it merely shifts the focus of contrast from the horizontal to the vertical dimension. Another factor contributing to the sense of continuity in the piece

is the similarity of the various ideas, particularly through the use of narrow registral bands of rotating pitches. There is also the role of the tone row and other recurring gestures. which together project a degree of pitch association across the sequence of different mechanisms.

Figure 28 to the end

Of particular interest during the final section of *Silbury Air* (labelled D and E in **App 72**) is the use of an exchange between mobile ensemble textures and solo woodwind sections. This section traces a movement from the second return of the opening material (at figure 28) to the third (at figure 39). Various key moments in this section are related to earlier parts of the piece through the device of pre-echo. For instance, the return to the opening texture and unison E at figure 28 is anticipated by a smaller, less obtrusive E unison between figures 26 and 27. Later, the four chords in the harp which end the work, quoted from *Melencolia I*, are anticipated by four, slow woodwind chords before figure 39, and even earlier by a five-chord version in the harp at figure 24. This earlier figure signals the beginning of the movement towards a restatement of the opening at figure 28.

At various moments throughout the piece, the texture is punctuated by repeated dyads in the brass which outline a perfect fourth, augmented fourth or perfect fifth. This first occurs at figure 2 where the dyads represent an approximate, abstract symmetrical expansion from the opening unison E4 to the fifth from C5 to G5 (interval 7). At figure 5 the trumpet and horn play C#5 to G5 (interval 6), and either side of these dyads are the two chord structures described earlier, based on a cycle of intervals 8 and 4. The brass dyad returns in the second half of the piece, at figure 32, where it announces the start of a splintering of the texture into different layers, with independent tempi and freer time. (This is marked section D in **App 72**). At figure 32, the brass plays the smallest form of the dyad: pitches D5 and G5 (interval 5).[347]

The brass dyad signal which follows the clarinet's held E, at figure 32, coincides

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[347] Two bars before the brass dyads enter (on page 34) the bassoon, trombone and piano left-hand play notes 11, 2 and 1 of the tone row as a chord, and this is followed by note 1 in the clarinet, held for 4 to 7 seconds.

with the start of a regular quaver continuum in the strings, and is shortly joined by the solo/mobile exchange extending from figures 33 to 39, when the E unison of the opening returns for the third and final time. The device of solo/mobile exchange is familiar from the second half of *Verses for Ensembles* where woodwind solo sections alternate with blocks that are unrelated to the solos, and which resemble fixed mobiles. In *Silbury Air*, however, this idea has developed in several important ways. Most obviously, the two different textures are joined by the continuum which runs continuously throughout the second half of the work. As the music proceeds, more and more parts from the mobiles join the continuum until the mobile/solo distinction is blurred and both the mobiles and the solos assume their most regular, mechanical forms and appear to join the continuum.

There are five mobiles, the last followed by a return of the five-times repeated, interval 5 brass dyad on D and G5, the same pitches that were used when the process was initiated at figure 32. Although the mobiles are unrelated in content, they become progressively simpler and more mechanistic.[348] The sequence of mobiles not only charts a movement towards greater internal repetition and economy of material, but it also provides a series of flashbacks which retrace earlier moments from *Silbury Air* and allude to moments in earlier pieces. The first mobile, at figure 33, lacks repetitive, cyclic processes and is characterized instead by sustained notes, regular pulse being restricted to the percussion (**App 77: 1**). Another defining feature is its use of contour, by which it recalls works written in the late 1960s, such as *Verses for Ensembles* and *Cantata*. A number of varied contour forms are combined which may be summarized as follows:

Four-note		*Three-note*	
piccolo:	<1324>	horn:	<213>
clarinet:	<2431>	trombone:	<132>
bassoon:	<1243>	double bass:	<321>
trumpet:	<1432> or <2431>		

The second mobile, at figure 34, shows clear signs of mechanistic processes (**App 77: 2**). There is a clearer sense of pulse, here based on the crotchet, and two of the parts have only one pitch: the harp repeats the same chords in both hands, and the trumpet,

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[348] There is a sketch plan for this section, on A2:57. Here, the mobiles are represented by empty boxes. The solos are shown as wavy lines linking the mobiles, which may indicate Birtwistle's own realisation of the symbiotic function of line and circle.

apart from its last note, plays only G5, whilst the trombone and horn have only four different pitches each. However, the mobile is not exclusively mechanistic, as demonstrated by the appearance of all twelve chromatic tones in the double bass. This mobile also seems reminiscent of some of the wild, fanfaring moments in *Punch and Judy*, particularly in light of the trumpet's opening rhythm, and the regular pounding motion in the harp and piano.

Leading into the third mobile, the intervening solo section ends with a sustained dyad in the flute and bassoon, consisting of notes 11 and 12 of the row. At figure 35, the third mobile introduces repeating pitch and rhythmic cells. For example, the piano left-hand has a repeating rhythmic cell based on two dotted quavers and a crotchet which is linked to the dyads E flat/D, C/B and A/G. The cow bells also use two rhythmic cells. Although the brass do not use repeating cells, their material is restricted in register and uses a small number of pitches. The fourth mobile, at figure 36, is similar to the third, employing the same mix of repeating cells and more flexible elements. However, the rhythm of the mobile as a whole recalls the additive, syncopated rhythms of mechanism B, and the cow bells recall the moment on page 11 where they supported the repeated-note, staccato mechanism E in its competition with variants of the A mechanism.

From this moment onwards the woodwind solos become more closely linked both to the mobiles and to the continuum, not only through their increasingly mechanistic tendencies, but also through recourse to the tone row. Following the fourth mobile, the woodwind continues with a chord consisting of notes 2, 8 and 11, with note 12 appearing with high frequency across page 41. Mobile five is the shortest and most economical of all, scored purely for brass, each part using small, repeated pitch cells. At figure 37, when the fifth mobile enters, the woodwind sustain a chord which is comprised of notes 8, 9, 10 and 12 (**App 77: 3**). These notes are also contained in the mobile in addition to notes 1 and 11; notes 1 and 10 are also present in the piano.

The brass end on a chord comprising notes 10, 11 and 12 of the row, and this is followed by a transition to rhythmic unison in the woodwind, bringing them ever closer to the continuum texture. There is a high degree of harmonic consistency in the woodwind chords, most forming either (0,1,5) or (0,1,6) collections on page 43, and nearly all forming (0,1,6) across pages 44 to 46. During these pages, the percussion introduces a

new layer which provides aural cues to the conductor as the tempo of the continuum changes and the pulse descends through scheme IV of the labyrinth. The returning brass dyad is joined by a three-chord repeating gesture in the woodwind (based on (0,1,5) and (0,1,6) collections), and at 4/16 = 54 (on page 48) the brass fanfare idea (a variant of mechanism A2) returns. This ends with a (0,1,6) chord, followed by (0,1,6) in the percussion [D, E flat, A flat], the last two notes of which are 6 and 12 from the row. Finally, all the layers come together on crotchet = 40, the woodwind varying but continuing their three-chord repeating gesture now in time with the continuum. The four woodwind chords on page 50 (in the alto flute, cor anglais and clarinet) signal a change, their last chord consisting of notes 8, 5 and 12 of the row, and these are joined by unison E4s in the brass which herald the return of the opening material at figure 39. Mechanism A only gets as far as the intermediate, syncopated stage between A1 and A2, before the four harp chords from *Melencolia I* bring it to a sudden end. However, a distant reminder of the E4 unison is provided, discretely, by the clarinet at the very end.

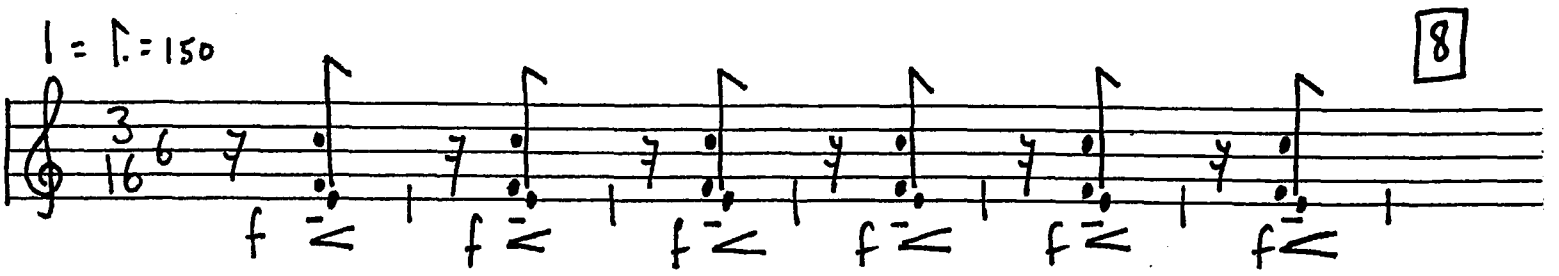
Figures 7 to 28

The central part of *Silbury Air* may be divided into three sections (see **App 72**). As a whole, the music traces a symmetrical movement away from the opening, which introduced the five basic elements, towards a central section, at figures 17 to 22, from which point the music begins to move back towards a restatement of the opening material at figure 28. During this section the music restates the opening mechanisms in varied forms and in pairs, often dovetailing one pairing into another. The only clear textural breaks occur between figures 16 and 17, at 17, and at the beginning of page 24, between figures 21 and 22. The divisions around figure 17, where section B begins, both involve block juxtapositions of two contrasting textures, although the second is slightly mitigated by the lack of a change in pulse, and the regular quaver movement in both sections. The break before figure 22, however, is supported by a quaver rest. The new section (section C) follows six *ffff* D4 unisons, and it begins quietly, almost Webern-like in its openness and its use of melodic fragments, each consisting of only three or four notes.

In the music leading to the first of these textural divisions, figures 7 to 16, the

textures seem secondary to pulse and the function of the section as a whole appears to be to extend the opening and to lead away from the impressions made by the first page. The whole section might be described as transitional in feel and characterized by a sense of continual change. The music constantly fails to "arrive" at a more stable point, although it manages to sustain the promise of arrival, despite or perhaps because of the constant shifts in pulse and texture.[349] The pulse changes are placed clearly in the foreground as a result of Birtwistle's use of emphatic, repeated-note gestures at moments of transition, such as the brass chords one bar before figure 8:

Example 21 *Silbury Air* Trumpet, horn and trombone chords, one bar before figure 8, p.9



Across pages 8 to 15 there is a continual procession of variants of mechanisms A, E, B and D. Despite this, there are still moments when pitch classes may be picked out of the shifting surface. For instance, at figure 9, a sustained G5 (note 5 of the row) in the oboe is supported by G unisons in the strings, marimba and piano, and unison E4s are

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[349] There is a link here back to *Melencolia I* and the use of pulse in transitional moments, as well as the sense of impelling change which is merely the other side of stasis. This view was also expressed by Klee in Chapter 4 of the *Pedagogical Sketchbook*, during a section titled 'The Arrow', in a passage which might even be an address by Klee to Orpheus:

> The Father of the arrow is the thought: how do I expand my reach? Over this river? This lake? That mountain? The contrast between man's ideological capacity to move at random through material and metaphysical spaces and his physical limitations, is the origin of all human tragedy. It is this contrast between power and prostration that implies the duality of human existence. Half-winged - half imprisoned, this is man! Thought is the mediary between earth and world. The broader the magnitude of his reach, the more painful man's tragic imitation. To be impelled toward motion and not to be the motor! Action bears this out. How does the arrow overcome the hindering friction? Never quite to get where motion is interminate. Revelation: that nothing that has a start can have infinity. Consolation: a bit farther than customary! - than possible? Be winged arrows, aiming at fulfilment and goal, even though you will tire without having reached the mark.

introduced in the piano, harp and marimba at the start of page 13 (between figures 11 and 12).

An expanded variant of mechanism E is presented on pages 14 and 15. The staccato, repeated-note idea constantly moves between mostly upper register parts, whilst the sharp, punctuating chords (derived from a symmetrical sketch plan, on A2:38, discussed below) have been registrally expanded, and are presented as large, tutti statements. Across this section pitch is largely irrelevant, although E (note 1) is audibly held in the flute seven bars into page 15.

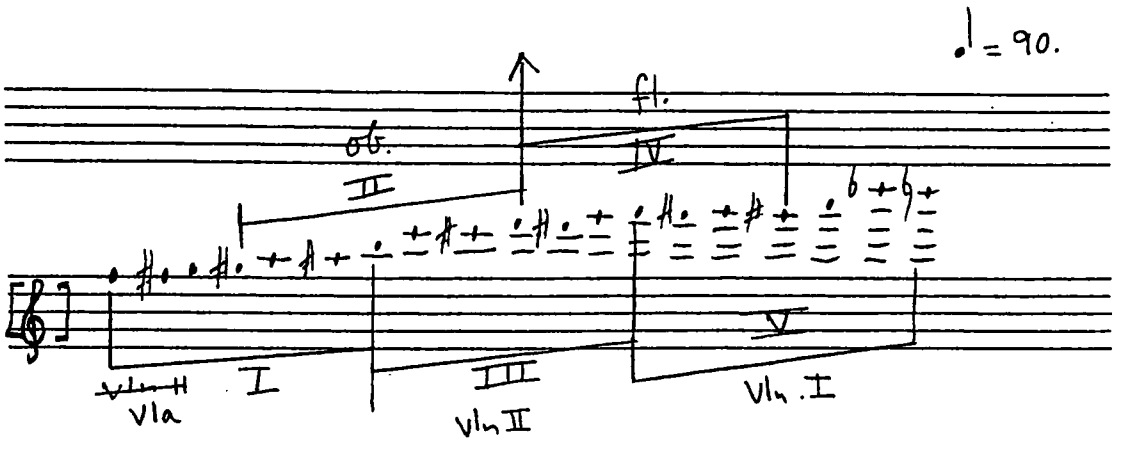
At figure 14, the start of section C, the music slows noticeably from pulse = 90 to 76, and the texture changes to a variant of B. Introduced into this texture is the brass fanfare idea, although its first presentation at figure 15 sounds more like a variant of A2 owing to its regular rhythm. The cello and double bass sustained notes (1 and 10) are held through into the next section where they are joined by bass clarinet and contrabassoon which together present a composite line based on all twelve chromatic tones (beginning on notes 12 and 1 and ending on note 1). At figure 17 mechanism E returns, and this dovetails into a variant of A1 which is combined with the cello and double bass who play a duet that combines elements of C1 and C2.

The section from figures 18 to 22 is one of the most complex passages in the work, as the texture divides into four layers (see **App 78**). Whilst the upper strings and woodwinds play a continuous variant of A2, which shifts into double and triple time at various moments signalled by bell-like chords in the piano and harp, the bass parts present two different lines, moving in complementary rhythm, and the brass intervene with fragments of mechanism D. Although the bass lines do not represent a variation of any earlier mechanisms, and therefore do not obviously relate to the other elements on the page, they do have a circular motion which is concentrated around small groups of pitches derived from segments of the tone row. For example, on page 20 the contrabassoon, piano left-hand and double bass circle around notes 9 to 12, whilst the bass clarinet, trombone and cello, on page 21, circle around notes 5 to 10.

Another important aspect of this section is explained by the sketches, which reveal that the upper winds and strings represent a free interpretation of a literally symmetrical scheme. In his sketches for these chords, Birtwistle began with a registrally fixed, literally

symmetrical idea which he wrote at the top of the page, shown below:

Example 22 *Silbury Air* Transcription of the symmetrical pitch/instrumentation scheme on A2:38, realized on pages 19-23 of the score



Beneath this, the pitches which actually appear in the score are written out, and these indicate several changes to the original scheme. For example, the pitch collections are given to different instruments. Collection I is played by the oboe, II by the viola, III violin 2, IV violin 1, and V piccolo (actually flute in the score). There are even alterations to the pitch scheme which result in a slight distortion of the symmetry. For instance, the flute (collection V) extends upwards by a semitone to C7 and its lowest pitch is G6, a tone above the one given in the plan, and the viola part (collection II) extends a semitone upwards from G#5 to A5. However, these changes do not adversely effect the sense of symmetry around D5, as marked by an arrow in the sketch plan, and it emerges that the section as a whole has been designed to prepare the arrival of unison D4s at the end of page 23, played 'ffff' to a repeated, six-note A1 variant which is used several times throughout the piece to signal closure.

Directly following the repeated Ds, section C begins as the texture thins out completely and the pulse slows from 90 to 76. At first, it is not clear which mechanisms are being alluded to. The fragmented melodies do not, in fact, relate back to earlier moments, although they are themselves reworked in the first mobile during the final section, at figure 33. In retrospect, the melodic fragments may be interpreted as an anticipation of the mobiles in the final section, as the same melodic line is used four times

in the woodwind and three times in the strings. This repetitive scheme is also linked to a telescoping process, whereby the fragments occupy ever shorter lengths of time. Linked to the fragments are short, brass chords which, it emerges, are actually derived from the E mechanism. This becomes evident as the staccato notes in the piano, harp and percussion become more dense on page 25, developing into a variant of the repeated-note element of the E mechanism (**App 79**). As the texture becomes more dense, and the chords sound closer together, the music appears to gather momentum.

However, the situation from figure 23 to the return of the opening material at figure 28, is confused by a series of textural changes allied to a host of gestures which all appear to signal arrival at a point of stability, but which, paradoxically, are followed by further contrasts. This process starts on page 26 where the music briefly returns to the circling, A variant figures in the upper winds and strings from pages 19 to 23, and this is matched by a move to pulse = 54, resulting in a slowing down. Immediately following this Birtwistle deploys a series of cadential gestures and the process of signalling the return to the opening material at figure 28 is accompanied by audible references to the tone row. For example, at figure 24, a cadential brass chord, containing notes 1, 4 and 12 of the row, is joined by five chords in the harp which anticipate the ending of the work. Following this, an apparently new idea in the bassoon (which may be a variant of B) drops, cadentially, on to D flat forming a sustained dyad with the cello which consists of notes 11 and 12 of the row, and the double bass imitates the falling motion of the bassoon. After another apparently new section (based on the bassoon's B-variant idea), the woodwind form a chord after figure 25 on notes 1, 2 and 3 of the row. A five-chord section interrupts this process, on page 28, but the sense of movement towards E (note 1) is resumed by the piano, harp and marimba on page 29. The progression seems quite protracted, and yet another signal of imminent change is provided in the form of an *ffff* unison woodwind line on page 30, which resembles the contour-derived figures used in *Verses for Ensembles* (the line even begins with notes 12 and 1 of the tone row, and ends on 6 and 5). Elsewhere in the piece, anticipation of change or closure is also provided by a repeated, six-note figure, usually played by the brass. Anticipation is another form of allusion, and this device plays a crucial role in *Silbury Air* as, in respect of pulse, the principal mechanisms all allude to the pulse-centred opening.

Conclusion

Three Sonatas for Nine Instruments

> In spite of being a composer from the first generation of British composers to take seriously the continental move towards serialism, Birtwistle has never been a serialist. Calculation and self-consciousness have seldom played much of a part in his music. When they have, he has been the first to spot them ('fake Darmstadt'), and the piece has bitten the dust.[349]

In the light of the evidence provided by the surviving manuscript of *Three Sonatas for Nine Instruments* (dated November 1958), the position outlined above has, I believe, to be modified. The exercise of composing *Three Sonatas* represented an early attempt at using a tone row; not, perhaps, in a strictly 'serialist' sense but, as Ford suggests, in a calculated and self-conscious manner. The ramifications of this, however, are then displayed in works throughout the period from 1957 to 1977. Throughout the majority of works from this period, there are frequent references to twelve chromatic pitches in the order in which they are revealed at the opening of each piece. This suggests that the experiment of *Three Sonatas*, although rejected at the time, did in fact possess implications for later works.

It is possible that Birtwistle rejected *Three Sonatas* on the basis that its sound world too closely resembled the neo-Webernian pieces being composed on the continent, which were commonly heard in Darmstadt in the late 1950s. It may also owe its failure, in Birtwistle's mind, to the extent to which the music faithfully reproduces the tone row throughout the work as a whole. However, the alignment of tone row and literally symmetrical chord structures, particularly at moments of transition, is a feature which is reflected in many of Birtwistle's subsequent works, within the period under discussion. *Three Sonatas* also importantly represents the earliest use of the terms 'cantus' and 'choralis' (in the original title to the work, contained in the surviving draft). The representation of this pair in terms of simple block juxtapositions of linear, melodic material and chordal, essentially harmonic sections is an important precedent for the

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[349] Andrew Ford, *Composer to Composer* (London: Quartet Books, 1993), p.53, written here with specific reference to Birtwistle's withdrawl of his *Three Sonatas for Nine Instruments* after listening to it at a rehearsal for its first scheduled performance.

verse/refrain structures which prevail throughout Birtwistle's music to the present day. The rather strict way in which these distinctions are held, particularly in the first movement, may have provided further reasons for Birtwistle's dissatisfaction, although even in this early work analysis has located moments of ambivalence, sections which break down these solid distinctions.

Andrew Ford's claim that "calculation and self-consciousness" have seldom played much of a part in Birtwistle's music also needs to be questioned. This is precisely the kind of characterization that reinscribes a narrative of autonomy which places Birtwistle in isolation: a composer in contact with nothing save his own creative thought processes, rather than active and responsive to historical developments around him.[350] An account of Birtwistle's earliest influences, along with obvious links to Stravinsky, must also include reference to the avant garde. For instance, significant ties exist between Birtwistle's way of conceiving musical forms and those of French composers such as Varèse, Messiaen and Boulez. A sketch page in one of several A4 manuscript pads containing ideas for *The Mask of Orpheus* also suggests that in Birtwistle's own mind the link to French musical thought extends back further still, to Satie and Debussy.[351] Birtwistle's development of a greater sense of timbral interest during the 1970s relates to this lineage as much as it embraces similar features in works by Stockhausen. Perpetual motion and the notion of mechanistic, repetitive features also relates to the work of Ligeti, and once more indicates Birtwistle's sensitivity to music on the continent.

To my mind, the British spin on these ideas is evident in the continual role of ambiguity between the plans and processes in the sketches, and the ideas finally entered into the score. It is also present in the sense of line and of journeying. Also, by the 1970s Birtwistle's forms have become his own. They are both more rugged and more supple, in opposition to the more intricate yet obviously cyclic forms of the earliest pieces, which developed through sophisticated networks of association and difference. Although still

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[350] Even Birtwistle acknowledges this: "we all come from somewhere: we don't invent it for ourselves; we don't come from the moon." Ford (1993), p.54.

[351] The page concerned is located in the second of six folders containing loose A4 size sheets and A4 size notepads. Here Birtwistle has drafted a talk on his own music, in which he lists these composers under the title "influences". This may have been designed to be presented to students either at Swarthmore College, Pennsylvania, or Buffalo University, New York, where he was teaching in the mid-1970s and where work began on *The Mask of Orpheus*.

reliant upon verse and refrain-like structures, the later pieces are overlaid by a stronger sense of continuous motion towards a point of arrival which contributes to the sense of their being more through-composed.

The Sketches

In a recent article on Birtwistle's sketching practice, Michael Taylor summarized a number of important issues regarding the sketch material in general. Taylor's remarks relate specifically to a single sketch sheet from *Endless Parade,* written for trumpet solo and orchestra in 1986-7, which details the workings for a string texture that appears between rehearsal numbers 32 and 33. According to Taylor the sketch:

> ... encapsulates Birtwistle's way of working to implement a broad compositional decision taken in the context of the work as a whole. The particular processes he employs, while in themselves arbitrary, are informed and delimited by the overriding demands of the high-level decision.

He concludes:

> Given the centrifugal nature of these procedures, which are essentially mechanisms designed to produce results in response to specific compositional problems, much depends upon the strength of the musical idea (and the clarity of its technical realization). While there do not appear to be any sketches which address the larger-scale shaping of *Endless Parade*, it is apparent from the earliest notations that certain harmonic, motivic, and rhythmic formations had already crystallized out in the composer's thought, and were shaping his first hesitant attempts to commit them to paper. Once that had begun, the sureness with which the sketching and drafting took place argues for a very clear understanding of what was being sought.[352]

The distinction between high- and low-level decisions which Taylor raises is an essential one. No matter how intricate schemes in the sketches may be, the result is often the simple manipulation of notes within a much broader area (in the example described above, this means the decision to compose a ten-part string section in which all voices are

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[352] 'Harrison Birtwistle: *Endless Parade* (1986-87) in Felix Meyer (ed.), *Settling New Scores* (Mainz: Scott, 1998), p.42.

equal). These high-level decisions appear generally to go unrecorded in the sketches. Taylor rightly draws attention to this fact when he points out that "certain harmonic, motivic, and rhythmic formations had already crystallized out in the composer's thought, and were shaping his first hesitant steps to commit them to paper." Without a clear idea of the extent of these thoughts it may seem that the sketches are only able to provide half a picture of the creative process. At first sight, this may appear to pose a fundamental problem to sketch study of Birtwistle's music: what use are the sketches if they do not document the really important, high-level decisions? As Joseph Kerman pointed out,[353] the fact that, in general, sketches only offer a page by page account divorces ideas from their context, and the overriding demands of the higher-level ideas must also be sought in the score.

One of the main questions I raised at the start of Chapter 3 was what value, if any, the sketches might hold for analysts interested in Birtwistle's methods of composing. A key area which the sketches help to explain concerns the relationship between intuition and system. It has been consistently demonstrated that Birtwistle's written workings are highly systematic, and that his sketches frequently show symmetrical, or otherwise highly-ordered structures. Birtwistle himself appears to identify this stage in his working methods with the mechanical, as suggested by his description of the sketching practices of Klee.[354] As Chapter Five has shown, during the 1970s, these mechanistic elements appear more obviously in the score.

However, do the compositional systems survive: does Geometria endure, as Hall seems to imply?[355] Hall has observed that:

> ... absolutely fundamental to Birtwistle ... is the conviction that he is an inventor, someone who constructs .... What survives is not man but the systems man invents. The tighter, the more rigorous the system, the more likely it is to

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[353] See the discussion on page 9, including footnote 22.

[354] "... the transformation from the mechanical to the magical is there in front of you", Birtwistle quoted in Hall (1984), pp.95-96.

[355] Hall (1984), p.103, where he asks whether the systems used when composing *...agm...* could "survive the ravages of time, or are the events too idiosyncratic to be reconstructed?"

endure.[356]

To this, Arnold Whittall has commented:

> But that sounds more like the formalist gospel according to Milton Babbitt than anything relevant to the British love of paradox and compromise. It could even be said in response that the ability to think and feel beyond system is the decisive step out of melancholy and the best way to celebrate a properly modernist plurality. That is not to dismiss system, but to locate it in either superstructure or substructure: not - classically - in both.[357]

The most interesting demonstration, or testing-ground, for these issues is, I feel, provided by the discussion of *Carmen Arcadiae Mechanicae Perpetuum*. Without access to the sketches, analysts were shown to have been fairly successful at recovering certain basic, pattern-based, elements of the compositional process. But without knowing the full extent of Birtwistle's plans (especially the schemes for register, instrumentation and dynamics) I feel that the existing analyses, as revealing as they are, fail to account fully for the degrees of ambiguity and spontaneity in the score. A simple, but effective, demonstration of this occurs when the pre-compositional plan is followed whilst listening to a performance of the score. Difficulties arise from the repetitions of certain mechanisms, which highlight the contrast between Birtwistle's originally purely abstract conception of time in the plan (where one unit = a quaver) and the real time of the performance (with repeats and tempo changes). The location of the fermata notes also pose real problems. Sometimes they appear at the ends of mechanisms, but at other times (such as from A3 to E4) the mechanisms follow on immediately, with no form of transition. Certain mechanisms have two different sounding halves (such as A) which are the result of changes in the dynamic and registral schemes, as well as more intuitive additions such as introducing a melodic line, or, in the case of E, a descending scale. These intuitive decisions are often responses to alterations thrown up by the registral and dynamic schemes. Therefore, although they blur or disfigure the original scheme, they

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[356] *Ibid.*, p.97.

[357] 'Modernist aesthetics: some analytical perspectives', in Baker, James *et al* (eds) *Music Theory in Concept and Practice* (Rochester: University of Rochester Press, 1997), p.174. A more extreme position is adopted by Andrew Ford, however, who has argued that, "[Birtwistle's] compositional procedures are so personal, so intuitive that there really are no words for what he does", in *Composer to Composer* (London: Quartet Books, 1993).

nonetheless arise in response to the plan.

The sketches therefore hold much value for analysts, I believe. In particular, not only through their ability to raise new questions, but more precisely in their failure to answer them.[358] New issues and queries have arisen from the sketch studies which analysis has then been called upon to answer. In this respect, the manuscripts may be seen to re-open analytical debate, not least because they have claims of their own which may contradict those of the score.

Analyses of the Earliest Works in Relation to Sketch Studies of Later Pieces

To what extent do the sketches support the analytical techniques adopted in the earlier part of this thesis? As far as indications in the sketches regarding the co-ordination of networks of intervallic relations, such as the ones discussed in Chapter 2 using Jonathan Bernard's graphing technique, are concerned, there is little evidence in the scores to support such theorising, except in the sketches for works in the 1970s which become more concerned with matters of vertical spacing and distribution of parts. As outlined in my introduction, however, this does not undermine the use of such a technique, especially as more general notions of intervallic motion may have simply been kept in Birtwistle's mind when composing, and not committed to paper.

The use of tone rows similarly finds no direct support in the sketches, other than occasional indications in sketches for *Nomos* that the original cantus line had been altered at certain moments of transition in order to bring notes from the row into focus. Again, it may be argued that it would have been possible for Birtwistle to retain the original form of the row in his head throughout the act of composing, calling elements of it into place where necessary (usually at structurally important moments) by means of mental recall. It is, however, strange that no tone row sketches exist, not even jottings which may have been scribbled in margins to remind himself of the original ordering. The evidence, I believe, is there in the scores, however, and the lack of support for this theory in the sketches is not enough to dissuade me of its relevance to Birtwistle study.

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[358] See the discussion in Chapter 5, where I argued that while the sketches are often good at saying how and when events happen, they are not always so useful at explaining why.

On the other hand, clear evidence exists which points to the use of contour, as a demonstration of Birtwistle's desire to 'view objects from as many different perspectives as possible', and this was an essential component in works composed from 1968 to 1971. After this Birtwistle seems to drop the idea, or at least its presence is less systematically expressed in the sketches than it is in the workings for *Verses for Ensembles* or *Nenia: the death of Orpheus*. The most extreme demonstration of Birtwistle's calculation is contained in the 'modual book', with its tables of contours related according to serial principles of permutation. However, despite its structural pretensions, these charts are often characterized by intuitive, highly idiosyncratic methods of ordering. They can be seen as another demonstration of Birtwistle's desire to move beyond or around system.

The evidence regarding the use of moment form is not conclusive, but the sketches, especially those for *Medusa*, do highlight Birtwistle's practice of developing ideas in isolation, subsequently fitting them in where required. The formal plans, particularly the one for *Verses for Ensembles*, also point to the separation of material. The integrative elements, it seems, are added later, often literally stringing boxes of information together. The reverse, however, is the case in *An Imaginary Landscape* where objects (chords) are inserted into long stretches of through-composed music.

Finally, the reference to certain ideas of Paul Klee and D'Arcy Thompson has offered useful analogies to Birtwistle's own interest in perspective - his notion of viewing an object in many different ways. Klee's discussion of cause and effect has also led to a closer consideration of the exact nature of events and their relation to one another. In Chapter 2, I asked if it was possible to find a musical equivalent to cause and effect. The conclusion must be that a continuum of causality exists. The most obviously causal links are those brought about through the presence of the tone row. At the other end of the continuum events appear to have been 'pasted' in, in a manner which relates to Stockhausen's concept of moment form: at these times there is a conflict between the ideas of Klee and Stockhausen. Between these two positions is a space where certain moments, or objects, react or respond to earlier events in a manner which suggests a high degree of calculation on Birtwistle's part. When examined closely, some of these reactions, or effects, are co-ordinated by a complex network of allusion and reinterpretation which, in order to discuss it more clearly, benefits from the application of the terms and

vocabulary generated by Stockhausen's moment form. But this understanding of causality is as much about provoking contradictions as it is with forging links.[359]

What I have tried to uncover, throughout my analyses, are the dynamics of Birtwistle's music, the considerations which I feel the composer may have been weighing in his mind when moving on to the next page, in the light of events on the previous page. Even when events are pasted in there are, as a rule, ramifications. The decisions which control this process are the ones I have tried to account for.

New Directions in Birtwistle Criticism

The real value of sketch material from the perspective of this thesis has been its ability to suggest new ways forward when analysing Birtwistle's scores. It is less clear, however, what value sketches possess when it comes to broadening the discussion into more contextual, interdisciplinary fields of enquiry. Where possible, I have attempted to open the discussion to include historical perspective and to introduce ideas and thoughts from other disciplines, a move which may be fruitful so long as the character of the music and the composer remain the subject of the discussion - the risk being that the newly introduced discipline may take centre stage. The signs are that Birtwistle scholarship is moving further in this direction.[360] The challenge, however, is perfectly summarized by Arnold Whittall:

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[359] A similar idea is expressed in relation to the music of Elliott Carter in an article by Arnold Whittall, 'Autonomy/heteronomy: The contexts of musicology', in *Rethinking Music*, eds Nicholas Cook and Mark Everist (Oxford: Oxford University Press, 1999) (see p.97). This discussion touches on Carter's own concern for causality in *Scrivo in vento*. Carter reported, in an interview with Andrew Ford, that because in his work "you have the flute playing something very slow and quiet in the low register and then you have some high notes ... it was important to suggest what the reason is that this suddenly happens this way." In Carter's words he is a composer that is "very concerned with causality" (quoted on p.93).

[360] Most notably Arnold Whittall, 'Modernist aesthetics, modernist music: Some analytical perspectives' in Baker *et al* (eds) (Rochester: Rochester University Press, 1997), Jonathan Cross, 'Birtwistle and the idea of the pastoral', conference paper delivered at Surrey University in 1998, and Robert Adlington, 'Heard mentality: on really listening to the music of Harrison Birtwistle', conference paper delivered at Surrey University in 1999, at the 3rd Triennial British Musicological Societies' Conference.

> The aim is to complement a technical discussion which itself acknowledges music's inherent multivalence with a contextual perspective that incorporates as many factors as the analyst's single mind regards as relevant and pertinent. Such a properly modern analysis should recognize the incompleteness of any one methodology (however all-embracing in itself): yet it should not push its embrace of the fragmentary to the point where the ultimate effect of the analysis is simply incoherent. This aspiration to an overall coherence is risky, but only seriously so if it is confused with that lingering coercive desire to say the last, definitive word on what matters about a composition: a desire every interpretative musicologist must acknowledge - and resist.[361]

One of the strengths of sketch based study of Birtwistle may be its inability to say the last definitive word about compositions. It is hoped, however, that the issues they raise may be related to more contextual approaches. One area where this may be more possible is a consideration of the operatic works, which inevitably contain more links to the 'outside world.' Birtwistle produced vast numbers of sketch pages relating to each of his important music dramas. Therefore, the potential to develop more contextual approaches in conjunction with source studies is strong in this field.

Future work on Birtwistle should continue to trace and recreate the spontaneity of the composing process, bearing in mind that analysis is itself a performative act. In this sense future analytical work may reflect on Nicholas Cook's argument that:

> ... there is an evolving consensus in what might be called a 'performative epistemology' of music theory - the idea, to put it in a nutshell, that one should make analysis *through*, rather than true *to*, experience.[362]

A similar argument was expressed, slightly differently, over fifty years earlier, by Susanne K. Langer:

> The imagination that responds to music is personal and associative and logical, tinged with affect, tinged with bodily rhythm, tinged with dream, but *concerned* with a wealth of formulations for its wealth of wordless knowledge, its whole knowledge of emotional and organic experience, of vital impulse, balance, conflict,

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[361] 'Autonomy/heteronomy: The contexts of musicology', in *Rethinking Music*, eds Nicholas Cook and Mark Everist (Oxford: Oxford University Press, 1999), p.100.

[362] 'Analysing performance, performing analysis', in *Rethinking Music*, eds Nicholas Cook and Mark Everist (Oxford: Oxford University Press, 1999), p.252.

the *ways* of living and dying and feeling. Because no assignment of meaning is conventional, none is permanent beyond the sound that passes; yet the brief association was a flash of understanding.[363]

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[363] 'On significance in music', in *Philosophy in a New Key. A Study in the Symbolism of Reason, Rite, and Art* (Cambridge, Massachusetts: Harvard University Press, 1942; Third Edition, 1978), p.244.

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