MORE THAN A SATISFYING CONTINUITY: A COMPARISON OF COMPOSITIONAL PROCESSES IN TWO ORCHESTRAL WORKS BY TŌRU TAKEMITSU (1930–1996)

by

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Abstract

Part one of this study presents and compares two original analyses of orchestral works by the Japanese composer, Tōru Takemitsu (1930–96), with the aim of identifying common compositional techniques rather than stylistic characteristics. *Spirit Garden* (1994) and *Dreamtime* (1981) are examined in terms of form, pitch manipulation, thematic and motivic variation and transformation, as well as extramusical influences. It is suggested that some of the compositional processes employed in both pieces are similar but seem to have been developed and refined over the intervening thirteen-year period. It is also suggested that a number of the identified processes are conceptually related, reflecting Takemitsu's interest in word games such as crosswords and anagrams etc. The brevity of this study does not allow for an exhaustive study of the composer's technical toolkit, representing as it does only two isolated moments in Takemitsu's substantial output, but various avenues for further research are indicated in the concluding chapter. Part two consists of a brief commentary and analysis of the work submitted in the accompanying composition portfolio.

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Abbreviations and Conventions

1. Modes and Pitch Collections

All pitch-class set names used in this dissertation correspond to the list on pages 179–81 of Allen Forte's book, *The Structure of Atonal Music* (1973).

Messiaen's modes of limited transposition other than the whole-tone and octatonic scales are abbreviated to MLTIII, MLTIV, MLTV, MLTVI and MLTVII. The three transpositions of the octatonic mode are labelled as follows: OCT1 [0,2,3,5,6,8,9,11], OCT2 [1,3,4,6,7,9,10,0] and OCT3 [2,4,5,7,8,10,11,1].

The set 7-33, or whole-tone scale with one added note, is referred to as WT+1. The twelve possible transpositions of this set are identified by the pitch class of the added note in parentheses. For example, WT+1(3) is the whole-tone scale [0,2,4,6,8,10] plus pitch class 3, giving the set 7-33 [0,2,3,4,6,8,10]. The same system can be applied to MLTVI, which consists of a whole-tone scale with an added tritone. Again, only one number is required to identify any of the six transpositions of this collection, the lower of the two pitch classes of the added tritone. For example, WT+2(5) is the whole-tone scales plus the tritone [5,11], giving the set 8-26 [0,2,4,5,6,8,10,11].

When required, the transpositions and inversions of pc sets are given as (I) T*n*, where *n* is the transposition. For example, the collection [4,6,7] may be labelled as follows: 3-2(I)T7.

2. Chord Voicing

In view of the homophonic nature of much of Takemitsu's music, the complexity of the vertical arrangement of his harmonic language and its proximity to jazz, the conventions of big band scoring to describe chord voicing have been adopted throughout this study.

All voicings are considered from the top note downwards. A *closed* voicing (C) has all of the harmony notes within one octave below the top note. The harmony notes are numbered from '2' onwards while the top note is called the *lead*. *Open* voicings have harmony notes that appear more than an octave below the top note but are missing in the first octave below the lead. In this case these notes are said to be *dropped* (D), thus if a voicing contains dropped notes, it is consequently also open. For example, the voicing of the chord (top to bottom) A, E, B, G, F is called a dropped 2&3 voicing (D2&3). Occasionally a voice other than the highest is recognised as carrying the *lead*, then the voices above that are said to be *raised* (R). For example, if the lead note is known to be D-flat, the voicing of the following chord (top to bottom) A-flat, D-flat, C, F is described as R3. When the top note also appears one octave lower within the voicing it is called a *double-lead* voicing. For example, the complete voicing of the chord A, E, D, B, A, F is said to be in a *five-voice, dropped 2, double-lead* formation.

PART ONE

Chapter 1

Introduction

> Perhaps I am one of those who try to see the invisible, to hear the inaudible (Takemitsu 1993: 142).

The present study sets out to demonstrate how several of the compositional techniques discernible in the music of the Japanese composer Tōru Takemitsu (1930–96) may be perceived as a group of related processes, governing much of the inner working of his compositions. It will also attempt to show that these processes reflect the composer's interest in word games and ciphers as well as his love of Japanese stroll gardens, and that they are applied to a variety of levels reaching from the detailed handling of pitch material to the formation of large-scale structures.

In this introductory chapter, a brief discussion of how Takemitsu's approach to form has been addressed by people who knew him personally gives rise to the two research questions addressed here. There then follows a short review of the main English language literature. Chapter two gives an overview of the various methodologies that will be used in this study, while chapters three and four examine, in turn, the compositional processes of two orchestral works by Takemitsu. Chapter five draws various conclusions by making comparisons between the processes common to both works, and finally suggests areas of further study.

1.1 *A Satisfying Continuity?*

In a radio interview in 2007, the late Oliver Knussen, a personal friend of the composer, described many of Takemitsu's larger compositions, somewhat offhandedly, as

‘collection[s] of small pieces he places next to each other to make what he thought of as a satisfying continuity’ (Hall 2007). With these words, Knussen unwittingly reduces form in the music of Takemitsu to a mere succession of unrelated fragments that are somehow thrown together by the composer on no more than a whim, and while this is possibly a harsh but fair description of the initial impression of much of his music, it in no way recognises any deeper interrelationship between the various sections of his extended compositions. The fact that such a comment can be made at all raises two questions, the first of which can be phrased as follows:

1. For Takemitsu, does the inclusion of a passage within a larger composition really need no more justification than a personal whim, or is there a pre-existing set of principles that guide his choice, encompassing and differentiating the structural components of each individual work more systematically?

Roger Reynolds, another close friend of Takemitsu, asks a very similar question: ‘Is structure something the composer evolves or discovers as he creates in response to an inborn call of habitual cast, or does it require forethought, the welcoming of principle that will precede and thus constrain the world of choice within which he exists?’ (1987: 277). Here, however, Reynolds asks only if the composer himself should create pre-compositional plans for the formal design of his works, implying that, although not simply improvised as the composer writes, they are still the composer’s own original schemes devised specifically for each piece. While this may apply to some of Takemitsu’s work, the present study intends to find more generally applicable principles that can be identified in a number of works rather than simply examining form and internal structure on a piece-by-piece basis. If this were the music of say Beethoven or Mozart, the answer to the first research question would have to be that there is a widely accepted set of underlying principles, which are often grouped under the label of

'common practice', but in Takemitsu's case we are faced with a music that appears differently on the outside than on the inside: it is music with a surface level characterised by fragmented isolation yet somehow imbued with an inner sense of coherence and unity.

Bernard Rands suggests that it is Takemitsu's 'elegant craftsmanship' that affords 'an inescapable, undeniable yet baffling sense of formal coherence'. Rands also finds that, while Takemitsu's music 'conforms to the fundamental principles [of Western practices], its nuances and flavour are a unique blend of the idiomatic and the idiosyncratic', and expands on this blend very briefly by identifying Takemitsu's indifference to 'historical precedent' and his 'avoidance of the brash egocentricity of the self-conscious pioneer'. Rands largely avoids the technical complexities of the music (probably due to column space) and confines his appraisal to historical, biographical and aesthetic commentary. However, one of Rands' observation does pinpoint an important technical feature of Takemitsu's music: the 'deployment and pacing of timbre, texture and silence as primary components'. Rands generalises rather speculatively that 'the ever-increasing sound spectrum available for musical purposes has made composers abandon historical formulae in favour of appropriately authentic formal principles', and notes that 'in this area, Takemitsu possesses a rare combination of sophisticated technical finesse, cultural perspective and an intuitive "knowing" which together amount to a unique musical intelligence' (1987: 477–80). It is this rare combination that the present study sets out to explore with the intention of revealing something more of this 'unique musical intelligence'.

Returning to Knussen's comment, we are also forced to ask why these 'collection[s] of smaller pieces' are not considered just that. One problem facing analysts of music is that of the description of relationships between contrasting materials within a single work. Even in classical sonata form (more notably so in the

nineteenth century) the first and second thematic groups may appear to be so independent as to be considered a juxtaposition of 'smaller pieces', with key relationship forming the only tentative connection between them. Roger Reynolds maintains that in Sonata form 'thematic groups contrast in character and sound at differing tonal levels' and later, 'in the closing recapitulation, they are brought into a new harmony; both are presented in the tonic key, ending up in consoling, even triumphant resolution' (1987: 283). In the same paragraph Reynolds offers his explanation for the modernist rejection of 'confrontational' forms such as the Sonata in societal terms, saying that 'such a formal ideal was a creditable norm in an era when conflicts actually were won or lost' and that 'ours is an era of disengagement and compromise, only very rarely manifesting the satisfactions of unambiguous outcome'. However as someone who had lived through the horrors of World War II in Japan, and the aftermath of a nation struggling to redefine its cultural identity in the face of defeat, Takemitsu was obviously no stranger to unambiguously resolved conflict. His reaction, along with that of many other Japanese artists, was to reject the hegemony of Japanese culture and to turn squarely to the West for models and inspiration. On discovering the music of Roy Harris, Aaron Copland, Walter Piston and Roger Sessions, Takemitsu recalled, 'for me, after having tasted the bitter, miserable experiences of the war years, this music seemed full of hope' (1989: 200). While Takemitsu feels no need to reconcile the contrasts between components of his compositions in terms of a 'triumphant resolution', he at least feels comfortable juxtaposing them to create larger musical structures – the 'satisfying continuities' of which Knussen speaks. This gives rise to the second of my research questions:

> 2. What are the observable features that may have led Takemitsu to consider certain juxtapositions as satisfying continuities?

While it is possible to find formal features in Takemitsu's music that resemble those of traditional Western musical form such as recurrences of material, long-range organisation of focal pitches and dramatic dynamic curves, any sense of form they may engender is very often undermined by its fragmentary surface level. The aim of this dissertation, therefor, is to go beneath the surface level and identify the elements, if any, that bind these seemingly isolated fragments into a whole. It is hoped that this study will begin to uncover some of the underlying principles behind that fragmented façade, and ultimately to afford a more holistic listening approach to Takemitsu's music.

1.2 *A Divided Literature*

While Takemitsu's music has been extensively analysed over the twenty-two years since his death, the majority of the available literature acknowledges a deep mystery somehow rooted in the disjunction between the music's surface-level similarity with Western twentieth-century repertory (especially Debussy, Messiaen and, to a lesser extent, Boulez and Webern) and the influences of traditional Japanese music, culture and philosophy. The most popular methods of approaching Takemitsu are through one or other of these prisms, which are often seen in terms of contrasts reflecting East or West, strict or free compositional thinking, etc. Writers who chose these paths either dwell on the Japanese aspects of Takemitsu's music or produce pitch-based traditional Western analyses, but rarely combine both perspectives into any more than a piecemeal offering.

In the available English-language literature on the life and work of Tōru Takemitsu, including that translated from Japanese, there is also a clear division between those writers adopting a positivistic approach and those who deal with Takemitsu's music using analytical models based in aesthetic evaluations or Japanese cultural references. The reason for this divide is briefly identified at the opening of

Bernard Rand's short article 'I Sing Only for Myself', where the author's initial reaction to the surface level of Takemitsu's music is to 'assume that modes of analysis conventionally applied to Western art music would serve to reveal his compositional structure and idea'. He soon discovers, however, that on examining its 'temporal continuity and the quality of its soundworld, […] certain assumptions […] feel less certain' (1987: 477). This impasse is largely reflected in the clear division in the current literature on the subject with a few remarkable exceptions such as chapter 8 of Mark A. Hutchinson's doctoral thesis, *Redefining Coherence: Interaction and Experience in New Music 1985–1995*. Hutchinson presents a three-tier analysis of *How Slow the Wind* (1991), giving a convincing reason for his approach:

> the solution adopted here is based on a 'ground-up' approach to analysis which is intended to ensure that larger generalisations all stem from the immediacy of a listening experience: the discussion begins with the momentary and slowly 'zooms out' to consider broader issues of connection and cohesion (2012: 191).

It is clear that Hutchinson understands the need for a microscopic examination of 'single events' and an organic expansion of the analysis that will eventually include the entire structure of the work. He, too, recognises the divide in the literature as one 'between closely theoretical and more broadly contextual approaches', and comments that, 'in general, the emphasis is squarely upon compositional technique, and the experience of listening is rather side-lined' (2012: 48).

Widely accepted as the definitive English-language text on the life and work of Takemitsu is Peter Burt's revised edition of his 1998 doctoral thesis, *The Music of Tōru Takemitsu: Influences, Confluences and Status*, published as *The Music of Tōru Takemitsu* in 2001. In the 2001 edition, the original thesis, which contains a wealth of detailed analysis of Takemitsu's style and compositional processes (rather in the manner

of Messiaen's *Technique de mon langage musical*, as Burt points out), is updated to include more biographical material and a clearer appraisal of the current public reception of the composer's work. While dealing largely with short, easily digestible excerpts from a wide range of works (mostly chosen in order to examine extremely local handling of pitch content), Burt also examines form and structure in terms of repetition, and variation. His analytical approach is very much in the Western tradition but appropriate references are made to Takemitsu's extramusical influences.

A number of theses dealing with either single works or a small group of similar works exist, many of which dissect Takemitsu's handling of pitch materials such as Timothy Koozin's *The Solo Piano Works of Tōru Takemitsu: A Linear/Set-theoretical Analysis* (1988); Hideaki Onishi's *Tōru Takemitsu's Japanese Gardens: An Application of Superset/Subset Networks to the Analysis of Three Orchestral Compositions* (2004); Yoko Nakatani's *November Steps and Autumn: A Comparative Analysis of Two Orchestral Works* (2005) and Mari Abe Evans's *Octatonicism in Rocking Mirror Daybreak* (2007). The above dissertations rely to a large extent on a positivistic approach, which, while revealing much interconnectivity between the individual components of the works in question, remains conspicuously mute with regard to their aural effect.

On the other hand, several dissertations deal with aesthetic issues in Takemitsu such as Japanese cultural influences as in Scott Meek's *Traditional Japanese Aesthetic Within a Modern Frame: Japanese Literary Sources in Relation to Tōru Takemitsu's Rain Tree Sketches* (2012), which makes continuous reference to specific Japanese aesthetic principles and values. Dana Richard Wilson's *The Role of Texture in Selected Works of Tōru Takemitsu* (1982) deals with the aural experience through an examination of orchestral and instrumental textures. Whee Been Koh's *East and West: The Aesthetics and Musical Time of Tōru Takemitsu* (1998) draws the many threads of

Takemitsu's cultural and psychological background together to form a detailed picture of his complex personal aesthetic. While presenting a rather subjective image of Takemitsu's world, these works nonetheless contribute greatly to the understanding of the underlying motivation of his music.

Copious biographical material on Takemitsu appears in nearly all of the dedicated texts but by far the most comprehensive English-language source is James Siddons' 2001 publication, *Tōru Takemitsu: A Bio-bibliography*, while the second chapter, 'Music and "Pre-Music": Takemitsu's Early Years', in Peter Burt's *The Music of Tōru Takemitsu*, presents a concise summary of the biographical material in Siddons.

Many articles have appeared in academic journals examining various aspects of Takemitsu's life and music. Besides the articles by Takemitsu himself, those by the personal friend of the composer, Roger Reynolds, are possibly the most revealing of his personality and spirit, while articles by Timothy Koozin have explored spiritual aspects as well as presenting detailed analyses.

It should be noted that Takemitsu himself was a prolific writer, producing many articles and books about his music, his ideas about the world and society, Japanese culture and its traditional music and his eternal concern for a single but diverse world music – a musical ocean where there is neither East, nor West. Typically, his writings on his own music are of an extremely subjective and aesthetic nature with only the very occasional hint at his compositional processes. The much-quoted magic square used to devise the harmonic fields in *A Flock Descends into the Pentagonal Garden* (1967), appearing in his 1987 essay, *Dream and Number*, supplies one of these rare examples.

Chapter 2

A Unifying Methodology

In the concluding chapter of his book *The Music of Tōru Takemitsu*, a large portion of which consists of analytical discussion, Peter Burt admits that 'Takemitsu's music is clearly not written for the gratification of future analysts' (2001: 250), and in his doctoral thesis upon which the book is based he had previously warned that 'the analyst who would attempt to offer exhaustive explanations for Takemitsu's compositional choices on grounds purely of technical exigency will inevitably be doomed to disappointment' (1998: 376). Burt's words may have been intended to dissuade those who would approach the music of Tōru Takemitsu with traditional Western analytical tools, but his comments seem to have provoked a determination to do just that, rather than provide an impetus to devise 'alternative methodologies appropriate for mapping' the extensive uncharted *residuum* of Takemitsu's output. Burt cites two English-language dissertations that eschew traditional Western methods for more radical forms of analysis,[1] but this baton has not been eagerly taken up since then. On the contrary, a number of analyses using pitch-class set theory have since appeared,[2] seemingly hell-bent on unravelling the last threads of the composer's veil in terms of pitch content and set relationships. Clearly it is impossible to describe the complete process of artistic creation in purely positivistic terms and equally impossible to make a meaningful analysis of an artwork without some objective referential terminology, and so any such investigation must take into account both empirical and theoretical approaches. It is also important to realise that these are merely two ends of a wide spectrum of interpretive

[1] Ting-Lien Wu (1987) and Jeong Woo Jin (1987)
[2] Hideaki Onishi (2004) and Belinda Takahashi (2001)

perspectives, and that any object of analysis should be examined according to its own specific requirements. It is only possible to determine what these are through exhaustive analyses and a subsequent blending of both the empirical and the theoretical.

This study presents original analyses of two orchestral works by Tōru Takemitsu in an attempt to show, with regard to Takemitsu, not only that an equilibrium can be struck between various methodologies, but also that they are complementary and, in isolation, insufficient to describe satisfactorily the workings of Takemitsu's later compositional procedures as a whole. These analyses cover a range of aspects of the compositional process, from the microscopic manipulation of pitch content and set relations of individual and neighbouring vertical situations, to the middle-ground connectivity of thematic and motivic transformations, to the large-scale formal structures of repetition and proportion, and finally to the relationship with the composer's extramusical inspirations such as Japanese stroll gardens, dreams, wind and water. A mixture of these approaches is presented as integrated examinations of one of Takemitsu's last orchestral works, *Spirit Garden* (1994) in chapter three, and an earlier orchestral work, *Dreamtime* (1981), in chapter four. In these analyses, attempts are made to connect the technical business of the compositions' construction with the general aesthetic views of the composer as expressed in his own extensive writings.

Takemitsu's late works are composed for essentially Western classical instrumental ensembles with only a few exceptions such as the inclusion of Sho (a traditional Japanese wind instrument capable of playing complex chords) in *An Autumn Ode* (1992). However, much of his sensibility is deeply rooted not only in traditional Japanese music but also in certain aspects of the social residue of Japan's history, which included two and a half centuries of oppressive feudal rule under the Tokugawa Shogunate (1603–1867). As Tio Ee Ming explains, the literature and consequently the popular music of that period was infused with a sense of 'gloomy pessimism, far

removed from [what was perceived as] the cheerful expression of Western music', nevertheless, this 'hopelessness may sometimes be defined as frail beauty' (2000: 241). Takemitsu expresses his feeling that 'the joy of music, ultimately, seems connected with sadness', and continues with the paradoxical observation that 'the more you are filled with the pure happiness of music making, the deeper the sadness is' (Takemitsu (1974) 1992: 45). Tio Ee Ming also identifies several other aspects of the Japanese cultural tradition as relevant to the study of Takemitsu's music, including an 'affinity with nature and a fondness for the sounds of nature'; an 'appreciation of the noise-like quality of sound known as *sawari*' i.e. the transient acoustic characteristics of single notes; a 'fondness for restrained beauty and tension, and the appreciation of silence known as *ma*' (Tio Ee Ming 2000: 230). Also appropriate to this study is the Japanese appreciation of the minute and delicate things in nature rather than recognition of any large-scale grandeur – 'even when a grand landscape is appreciated, it is not the awesome scale of the scene, but rather its composition compressed into a compact design that is praised' (2000: 237). Finally, Tio Ee Ming recognises an inclination of the Japanese to 'think in terms that are not absolute', often blurring the independence of seemingly distinct objects into a Buddhistic paradoxical relationship of 'neither connected nor separate' (*fusoki-furi*). Thus, one finds the juxtaposition of disparate elements to be one of the main characteristics of traditional Japanese music (2000: 238). These last two traits become clear in the fastidious orchestration and juxtaposition of terse finite unities in Takemitsu's scores, and seem to be reflected in the 'pointillistic' character of much of his music.

As well as retaining several traditional Japanese elements in his music, Takemitsu was just as much a product of the Western musical tradition. By his own account, his first interests in music were the results of listening to French and American recordings and radio broadcasts, and his personal study of the scores of Debussy was to have a

lasting impact on his compositional thinking. He was enthralled by Western and especially French music to the extent that he was to describe Debussy as his 'great mentor' (1995: 110), and to revere the works and writings[3] of Messiaen to the point where a good deal of his harmonic language can be considered to be largely a loose application of Messiaen's system of modes of limited transposition. Takemitsu was later to describe Messiaen as his 'true spiritual mentor' (1995: 141). In this respect, the analysis of Takemitsu's music at the extremely local level must, to some extent, involve an examination of the application of Messiaen's modes. Much has already been written on Takemitsu's use of whole-tone-related and octatonic collections and their intermodulation,[4] and this study partially draws on the work of Timothy Koozin as a source of available material concerning the technical and spiritual connections between Messiaen and Takemitsu.

Another aspect of Takemitsu's harmonic characteristics is the interplay between specific harmonies. Many phrases consist of homophonic 'chorale'-style writing made up of only two or three chords, and while this is by no means a new concept, Takemitsu's choice of chords and their consistent application comprises much of the aural character of his music. A major problem in the study of this aspect of Takemitsu's work is in trying to ascertain the extent to which these chords are the result of the composer's early study of a copy of George Russell's *Lydian Chromatic Concept of Tonal Organisation*, which was lent to him by the bassist David Wheat while on tour in Japan (Burt 2002: 73–4). In an interview in the popular Japanese jazz magazine *Swing Journal* Takemitsu declared that '*The Lydian Chromatic Concept* is one of the two most splendid books about music; the other is *My Musical Language*, by Messiaen... I've been strongly influenced by the Lydian Concept, which is not simply a musical

[3] Kishio Hirao translated Messiaen's *Technique de mon langage musical* into Japanese in 1954.
[4] Koozin, T. (2002)

method—we might call it a philosophy of music, we might call it poetry' (cited in Kenagy 2009: 45). The possibility that Takemitsu was influenced fundamentally by his reading of Russell's book is rather entertainingly examined in Peter Burt's article, 'Takemitsu and the Lydian Chromatic Concept of George Russell'. While it is easy to find flaws with Russell's loose pseudo-academic approach and to perceive his style as arrogant and, at times, even jingoistic, it must be remembered that he was a product of an American cultural zeitgeist in which modern jazz musicians were seeking recognition for their art as 'serious' music in an atmosphere of black activism and social protest. Nevertheless, Burt presents a convincing case that much of the melodic material in Takemitsu's *Dorian Horizon* (1966) displays similarities to Russell's methods of linear generation, i.e. deriving a systematic series of chromatically enhanced scales, covering all twelve pitches, from a single (ecclesiastical) mode (2002: 73–109).

From the above, one gets the impression that Takemitsu was a voracious reader as well as a listener, absorbing and assimilating not only whatever new music but also any theoretical writings that came his way. It is abundantly clear from his music for the cinema that he was a consummate pastiche artist in jazz and light music genres to the extent that it seems unlikely that his knowledge was merely empirical. His claim in an interview with Tania Cronin and Hilary Tann that he was almost completely self-taught (1989: 207) should not be taken to imply that his technical skills were somehow innate. On the contrary, Takemitsu appears to have busied himself with scores, recordings and writings on music at every opportunity, while his continuous interaction with his contemporary artists, poets, and fellow composers certainly acted as a catalyst for his talents (Siddons 2001: 5–6). In any case, it is beyond the scope of this study to speculate on the exact derivation of Takemitsu's typical chord qualities but their similarities with other musical vocabularies will be touched upon as necessary.

It can be assumed merely from the titles of many of the works of Takemitsu that much of his music is descriptive or even pictorial in nature, and as such it may be analysed in terms of gestures and impressions. The composer himself has written copiously on the derivations of certain extramusical aspects such as stroll gardens and the sea, and there are also brief explanations of certain pre-compositional processes of a quite abstract mathematical nature, for example his description of the harmonic fields for *A Flock Descends into the Pentagonal Garden* (1967) found in his essay 'Dream and Number'. Several of these extramusical references will also be addressed here.

The processes of motivic and thematic transformation are approached in a more traditional analytical manner. The formal structures resulting from their interactions such as repetition and development are compared to classical schemata, pointing up the differences and similarities to standard forms.

For the sake of this study, the Japanese cultural aspects will be limited to the juxtaposition of disparate elements, restrained beauty, love of nature, melancholy and the Japanese notion of temporality or *ma*. The representation of natural physical elements such as water, wind, trees etc., and manufactured artefacts such as gardens and scroll paintings will be discussed, inasmuch as it relates to identifiable sections within the compositions. The notion of musically coded references to objects such as Takemitsu's famous S-E-A motif, despite not being a musical gesture representative of the phenomenon itself, will also be included. Brief mention of the Golden Section will also be made where it is clearly discernible in Takemitsu's work. Structural and phrasal analysis in terms of thematic and motivic transformations and interconnectivity will appear as a more traditional analytical means through which larger formal structures are revealed, while appropriate cross-referencing to the representational and cultural elements will hopefully unify the thinking behind some of the planning of Takemitsu's music. Lastly a detailed analysis of the workings of Takemitsu's harmonic language on

a microscopic level is incorporated into this study, allowing the reader to find an almost fractal approach to the magnification and re-magnification of certain proportional systems which seem to pervade entire works.

Chapters three and four each examine in depth a major orchestral work of Takemitsu, while the concluding chapter attempts to summarise the similarities in the compositional processes identified over the course of the analyses. The concluding chapter also goes on to suggest further research that might substantiate the idea of a set of possible analytical techniques applicable to the main body of his output.

Chapter 3

Spirit Garden

This chapter opens with a few general observations about Takemitsu's music and his views on form. Section 3.1 discusses the composer's ideas on the relationship between sound and silence and then looks at the way he thinks about repeated material in terms of topological markers. These observations are followed by a series of analyses of various formal, thematic and motivic elements in *Spirit Garden*, likening them to real garden objects such as trees, rocks, bonsai, etc. Their positions in the score are then transferred onto a map of a hypothetical garden in an attempt to discover how literal Takemitsu's description of his formal processes might be. The Japanese musicologist, Miyuki Shiraishi, explains that Takemitsu 'composed this work with the concept of the optical illusion in mind, more specifically the idea of an assembly of identical objects whose quantity appears to vary depending on the angle from which one views them'.[5] In the same liner notes Takemitsu himself writes that 'the "objects" of sound placed about the garden change their forms through the changes in the angle of viewing which result from moving around the garden'.[6] In section 3.6, two systems of relating varied musical material within a composition are identified and analysed. The first is an additive melodic process while the second is an entirely positivistic approach to pitch content. Finally, conclusions are drawn about the many formal aspects of *Spirit Garden* that point to a careful pre-compositional plan and the complex interconnectivity between the work's parts that raise it beyond merely a juxtaposition of smaller pieces in a satisfying continuity.

[5] From the liner notes for the 1995 CD, Tōru Takemitsu: *Gémeaux* (Denon Japan CO-78944).
[6] Ibid.

3.1 *General Observations*

3.1.1 *Sound and Silence – A Universal Dualism*

Takemitsu's philosophy is one of binary contrasts; East and West, sound and silence, time and the suspension of time, tradition and modernism, and so on (Ohtake 1990: 49). Throughout his writings, the idea of a very real confrontation between sound and silence is continually stressed. 'Music is either sound or silence', Takemitsu declares, and while this is very much a platitude, he does expand by explaining that he considers 'sound as something to confront a silence' (1985: 5). In other words, his choice of sounds is strongly governed by their relationship with silence. However, this does not mean that each musical idea in Takemitsu is actually proceeded and followed by silence (although many are), but rather it implies a sense of subtle projection of material out of (and a subsequent recession into) a 'flat' background of potential silence, somewhat similar to the characters on a bas-relief frieze.

Binary contrasts are also found on several other structural levels in his music. Takemitsu's choices of musical form, especially in his early career, exploit bipartite structures with two contrasting groups of material such as simple ternary form (A–B–A). *Requiem* for string orchestra (1957) is a good example of this formal approach and its structure is examined in the following section. On a smaller scale, certain aspects of Takemitsu's harmonic language also display binary characteristics. Often two chord-qualities (sometimes in different inversions and dispositions) alternate to create chorale-like passages such as that found in bar 3 of *Spirit Garden* (1994), which will be examined in detail later in this chapter. While dualistic devices (such as the tonic-dominant relationship, dynamic contrast, alternating fast and slow movements, etc.) have formed a major part of the mainstay of musical form for centuries, Takemitsu's

engagement with sound and silence brings a refreshing perspective to the idea of form constructed through contrasting elements.

3.1.2 *Repetition as a Topological Marker*

The formal structures of Takemitsu's works are often defined by exact recurrences of material (Burt 1998: 56). In *Requiem*, for example, while the score is entirely written-out with no repeats, form is constituted through exact repetitions of material. In its most compact form Requiem appears as a ternary movement with the contrasting middle B section divided into two sections B^1 and B^2, each with their own repeats, resulting in an ABA pattern (Whee Been Koh 1986: 117–18). The first A and each of the B sections are followed by a two-bar *codetta*, while the work is rounded off by a three-bar coda and bars 8–14 are omitted on the da capo, but these minor deviations detract little, if anything, from the listener's sense of the piece's compact structure (Fig. 3.1). Indeed, the respite afforded by the two-bar *codettas* serves to strengthen and clarify the identity of each individual section (Burt 2001: 56–57).

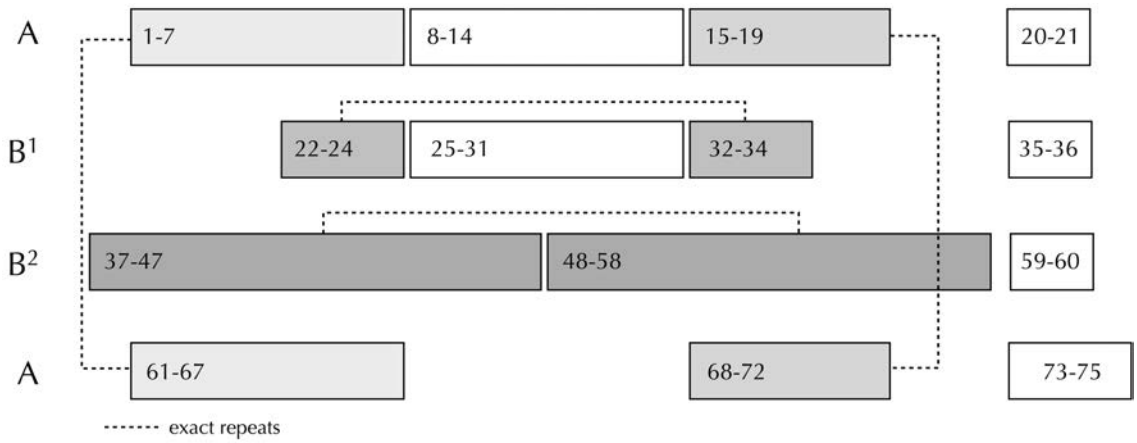


Fig. 3.1 Structure through literal repeats in *Requiem*

In the first movement of *Uninterrupted Rest* (1952–9) for solo piano, there are also reprises of sizeable segments of material (in proportion to the piece) either at the

original pitch (the end of line 4 to the middle of line 6 is an exact repeat of the opening) or transposed (the end of line 6 and the beginning of line 7 is a repeat of the passage from the middle of line 1 and the start of line 2 transposed up a semitone). However, this wholesale 'copy/paste' reuse of material is not considered by Takemitsu to reflect the formal principles of recapitulation as found in sonata form, i.e. to restructure thematic material to serve a tonal resolution but rather simply as the return of earlier material or, more precisely in line with Takemitsu's own writings, the return of the listener to the material.

> In my music there is no constant development as in the sonata; instead, imaginary soundscapes appear. A single element is never emphasised with development through contrast. The listener need not understand the different operations discussed here. Actually, I have my own theories of structure and systematic procedure, but I wish to avoid overemphasising these. My music is composed as if fragments were thrown together unstructured, as in dreams. You go to a far place and suddenly find yourself back home without having noticed the return (1995: 106).

That is to say, the recurrences of previous material in much of Takemitsu's music can generally be considered as topological markers on a virtual journey through an unfamiliar landscape rather than the goal-orientated device of recapitulation to which the music had previously been striving. This results in an alleviation of the formal constrictions of classical Western idioms, which Takemitsu seems to have rejected to a certain extent. One might be tempted to call this an 'anti-Schenkerian' technique inasmuch as the recurrences are not the consequences of a tonal or thematic argument, but representations of objects in a hypothetical Japanese stroll garden, side-stepping both the ideas of classical formalism and 'absolute' music. From a formal perspective, Takemitsu's similarity to Debussy here is highlighted by the use of coloristic reworkings of thematic material rather than the dogged exhaustive transformations of

short motives typical of the Austro-German tradition. In *Spirit Garden*, Takemitsu has no heroic resolution, the music is quite literally a walk in the park, albeit a very exciting and surprising one.

3.2 *Spirit Garden – a Horticultural Metaphor*

Spirit Garden was commissioned by the Hida-Furukawa International Music Festival and was premiered in Tokyo on July 14, 1994 by the Tokyo Metropolitan Symphony Orchestra under the direction of Hiroshi Wakasugi. Takemitsu describes his experience at the annual festival in the town of Furukawa as captivating and recalls the sonorous booming of the great drum as something he will never forget (Schnell 1991: 286). There is very little of the raucous character of the original festivities in the score but the bass drum strokes marked *deep!* are intended as a tribute to the huge ceremonial taiko drum struck during the festival's opening and closing ceremonies. While it may be that other elements of *Spirit Garden* relate directly to the Furukawa festival, the liner notes mentioned above indicate that in its composition, Takemitsu relied heavily on the stroll garden metaphor and the idea of 'viewing objects from different angles', and it is this metaphor that will be examined in the following sections.

3.2.1 *Signal and Miniaturisation – Large-scale Form*

While there are exact recurrences of material in *Spirit Garden*, the proportion of these sections to the entire work is smaller in comparison to those found in the *Requiem* and *Uninterrupted Rests* above. The largest repeated sections, those reflecting to a certain extent these earlier examples are the passages from bar 31 to 53, which is repeated note-for-note at bars 172–94, and a shorter passage from bar 21 to 26, which is repeated exactly at bars 123–28. It may seem natural to assume that this might give some impression of classical structure, however, these reappearances are part of a fluid

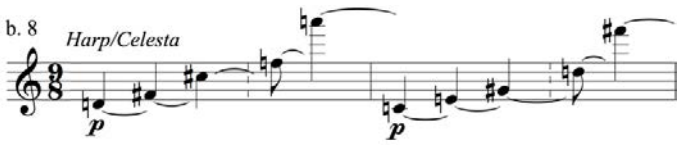
collage of what Takemitsu calls ‘coloristic variations’ (Onishi 2004: 75–80) of themes and motivic fragments, and may easily be missed by the listener as formally important.

More appropriate to the structure of *Spirit Garden* than the repetition of material is the natural division of the piece into four large sections: S.1, bars 1–53; S.2, bars 54–110; S.3, bars 111–61 and S.4, bars 162–214 (Table 3.1).

Table 3.1 The four large sections of Spirit Garden

Section	Bar range	Number of bars	Duration	Rehearsal letters
S.1	1-53	53	3'15"	A,B,C
S.2	54-110	50	3'57"	D,E,F,G,H,J,K
S.3	111-161	56	3'42"	L,N,M,O
S.4	162-214	52	4'02"	P,R,S,T

Each of these sections present approximately one quarter of the work, dividing the work into four parts, roughly equal in both the number of bars and their durations (with regard to the reference recording). [7] Taken together, sections S.1 and S.2 form approximately the first half of the work while S.3 and S.4 form the second half. In relation to the idea of a stroll garden, this division may represent an outgoing and returning walk. Several features of the work support this representation such as the literal repetitions mentioned above, and the positioning of thematic materials and their variations. Important to this narrative framework are the recurrences of the rising figure that first appears in bars 8 and 9 (Ex. 3.1).



Ex. 3.1 *Spirit Garden*, bars 8–9, the bell signal

[7] The reference recording used for *Spirit Garden* is from the CD, Marin Alsop and The Bournemouth Symphony Orchestra, ‘Takemitsu: Orchestra Works’, Naxos 8.557760. The timings are measured from the beginning of the piece rather than from the beginning of the track which includes four seconds of silence.

Takemitsu appears to mark the beginning, mid-point and end of his stroll garden with this characteristic repeated rising figure of five notes which will be referred to here as the *bell signal*. Belinda Takahashi notes that the appearances of this figure provide a kind of framework similar to rocks in a garden around which other objects such as plants, bushes, trees, paths and lawns are organised (2004: 24). In its original form, the bell signal appears at the three marker positions: start, mid-point and end (Fig. 3.2).

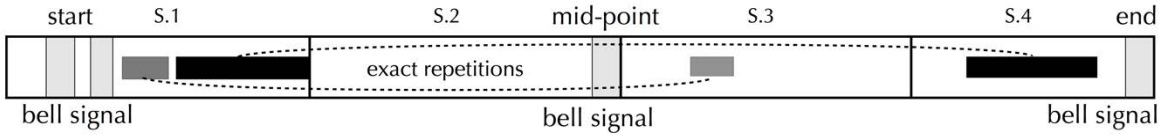
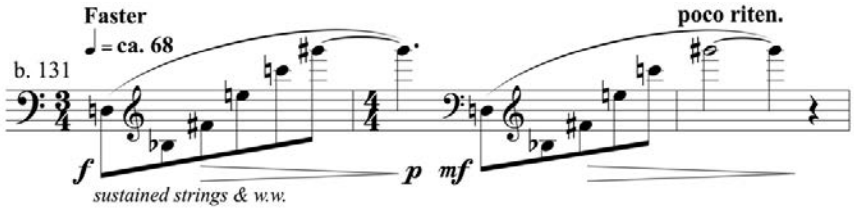


Fig. 3.2 Overview of complete form by repeats, large sections and the bell signal

However, within S.3 a variation of the bell signal (Ex. 3.2) can be found three times at bars 118–19, 131–3 and 142–3, again acting as start, mid-point and end markers that circumscribe a pair of coloristic variations of the main theme (described below). The A–B–A–B–A arrangement of material from bar 118–43 seems to echo the form of the entire work in microcosm, a kind of bonsai version of the *Spirit Garden*.



Ex. 3.2 *Spirit Garden*, bars 131–3, variant of the bell signal

One remarkable feature of this bonsai version (Fig. 3.3) is that its midpoint at bar 132 is situated at the Major Golden Section of the entire work. [8] Mark Hutchinson's examinations of *Quotation of Dream* and *How Slow the Wind* both support the idea that

[8] For an interesting and convincing exploration of how the Golden Section can be applied to musical form, see: Howat (1981).

the composer consciously used this specific proportion in other works,[9] so it comes as no surprise that one of the focal points in *Spirit Garden* is found in this position.

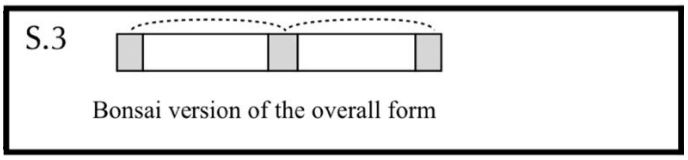


Fig. 3.3 Bonsai version of the overall form within S.3

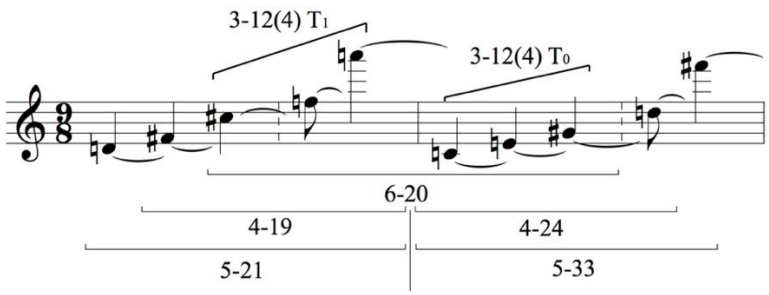
The principle of outer and inner gardens is a frequent feature in the architecture of Japanese tea gardens and it is not improbable that Takemitsu consciously creates an inner garden in bars 118–43 by using these condensed variations of the bell signal to circumscribe the section.

> Stroll gardens often recreate and miniaturise natural views or scenic places of interest such as sacred mountains, rivers, or ponds. Reduction in scale is adopted in Zen gardens through the use of abstract symbols. Small mounds may represent large mountains, and wave patterns in the sand express miniaturised seas. Tea gardens, *naka niwa* interior gardens and bonsai are miniaturised and idealised versions of nature.[10]

The bell signal can also be analysed using set theory to show two aspects that permeate the entire work on many levels. The first of these aspects reflects the idea of a journey of two halves retracing its steps after the half-way point, as mentioned above in the discussion of the overall form of the piece. Despite the outward appearance of a simple sequential repeat of five notes, pitch-class analysis reveals a quasi-symmetrical *mirror image* arrangement of the ten pitches spanning outwards from the middle of the figure. The second aspect found in the bell signal is the division of material based on its relation to one of two sets. Again, spanning outwards from the middle of the ten-note

[9] Hutchinson (2012) and (2014)
[10] Mehta, G. and Tada, K. (2008: 17)

figure we find that the first half contains the set 4-19 (essentially an augmented triad with one added note a semitone away from one of the chord members), and that the second half contains the set 4-24 (an augmented triad with one added note a whole-tone away from one of the chord members). This may seem, at first, like a trifling issue but the whole-tone reference of 5-33 contrasts strongly with the semitone-laden 5-21 (Ex. 3.3).



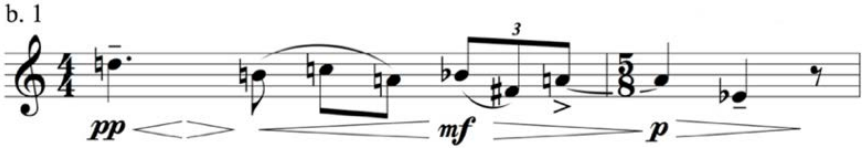
Ex. 3.3 *Spirit Garden*, bars 8–9, a pitch-class set analysis of the bell signal

The fact that the contrast is softened on the surface-level by the repeated five-note structure seems to point to the Japanese aesthetic principle of restrained beauty. Finally, it should be noted that the bell signal lies within the ambit of Messiaen's third mode of limited transposition (MLTIII), and that the following chord in bar 13 contains a B flat, which completes the entire mode. The completion of certain referential pitch collections such as the modes of limited transposition or key sets by placing the final pitch within the first chord of the following measure is a recurring feature in Takemitsu –Timothy Koozin describes two such instances in *Rain Tree Sketch* (1982) (1991: 137).

Many of the principles of Japanese garden design are, it seems, intrinsic to the structure of *Spirit Garden*, but the objects Takemitsu uses are simply of an acoustic rather than a horticultural nature. The following sections will examine a number of these acoustic objects, paying particular attention to the possibility that they may represent quite real 'garden' objects.

3.2.2 *The Staircase*

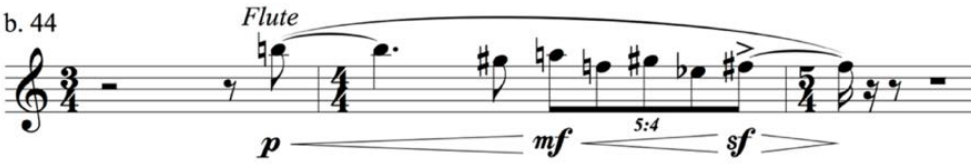
To some extent, the opening seven bars of *Spirit Garden* can be considered as an introduction or prologue to the work, with the bell signal at bar 8 signifying the formal beginning of the stroll. These seven bars perhaps represent eight steps such as those leading to the entrance at the Honen-In temple garden in Kyoto, since the first of these ideas presents a staircase-like phrase of eight notes (Ex. 3.4).



Ex. 3.4 *Spirit Garden*, bars 1–2, opening phrase

The first bars also present an exposition of thematic and harmonic material used throughout the work. From a thematic perspective, the opening presents two ideas: the melodic 'staircase' of the opening phrase above and the homophonic chordal motif, which will be explored after a thematic examination of the staircase.

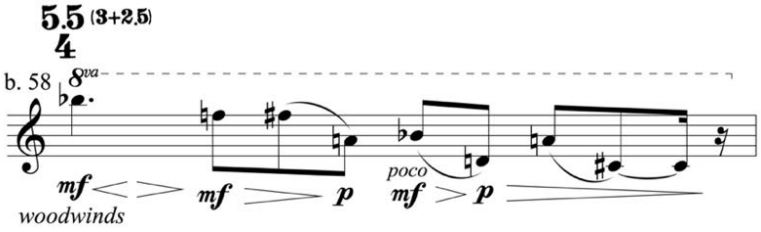
On the basis of harmony and orchestration, the opening melodic phrase can be seen as consisting of two groups of four notes. However, the supple rhythmic progression and dynamic sweep towards the fifth note disguise its binary nature, giving the overall aural impression of a continuous flowing phrase of eight notes, despite the subtle orchestral change of colour on the second group of four notes (solo strings become *tutti*, and lower woodwind instruments are added). The appearance of a similar figure at the upbeat to bar 45 (Ex. 3.5) – the closest thematic reference to the eight-note opening phrase in the entire piece – supports the view that the first eight notes constitute a single phrase.



Ex. 3.5 *Spirit Garden*, bars 44–6, variation of the opening phrase

At the upbeat to bar 45, for the first time in the piece, the musical texture is clearly separated into accompanying chords and a rhythmically independent single-line melody. Up until this point, each motive has been, to a large extent, homophonic. Here, however, a clear distinction between melody and accompaniment can be observed. This separation is apparent not only from a textural perspective, but also from the point of view of pitch content within each element. The melodic line in the solo flute contains pitches not present in the accompaniment, and taken by itself, can be considered as exclusively octatonic in origin, consisting as does of one of Takemitsu's favourite octatonic subsets, 6-Z26.

A more clear-cut thematic transformation occurs in bar 58 (Ex. 3.6) where a fragmented variant of the opening phrase is sounded over sustained string chords.[11]



Ex. 3.6 *Spirit Garden*, bar 58, variant of the opening phrase

The thirds and fourths of the original now become sixths with the semitones remaining unaltered. In terms of pitch content, this version varies dramatically from both the original and the second transformation found in bars 44-6 inasmuch as it may be

[11] Onishi (2004) misses this variant completely – possibly because he is more focused on identifying pitch-class relationships than thematic transformations.

interpreted as deriving from the C-sharp augmented scale <1, 3, 1, 3, 1, 3>, a truncation of Messiaen's third mode of limited transposition (MLTIII), whereas the other two versions so far discussed have tighter chromatic groupings with clear octatonic characteristics. That is to say, both the original opening theme and the variant at bar 44 consist of a five-note subset of the same octatonic set plus one foreign pitch, relating them to Messiaen's second mode of limited transposition (MLTII). While the original version of the opening theme in bar 1 and the variant at bar 44 may be two cases of the same 'object' viewed from different vantage points, the transformation at bar 58, with regard to the garden metaphor at least, seems too far removed from the original statement to be just another 'view' of it – something more has happened. The classical thematic transformations found in Berlioz's *Symphonie fantastique* or Liszt's *Les Préludes*, for example, are emotionally differentiated, not merely dry reviews of thematic material, not just the same object viewed from another angle, but representations of some physical or psychological change in the objects themselves. In Takemitsu's essay 'Mirror and Egg' one remark about an earlier work also belonging to his 'Garden Series', *Arc* (1963), clearly points to one feasible explanation for such a radical transformation as that is found at bar 58 of *Spirit Garden*:

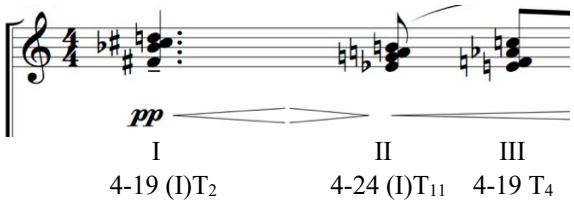
> In the same way that plants and sand exist in a given space in their own time, changing with the climate and season, and that the entire garden is affected by the change from day to night, so do musical aspects change in this piece (1995: 95).

It may be that S.2 presents a metaphorical view of the *Spirit Garden* at dusk with the elongated intervals somehow reflecting the lengthening shadows cast by evening sunlight. It is interesting that earlier, in bar 38, the direction *lontano (as shadow)* appears in the first horn part, indicating that Takemitsu was clearly thinking pictorially in terms of light and shade as he composed *Spirit Garden*. In the liner notes to the

work's premiere recording, the listener is also alerted to the idea that the composition, to a large extent, concerns observing the same object from various points of view – again clearly stressing the work's representational aspects.

As was mentioned above, the original opening phrase can be seen as consisting of two groups of four notes in terms of orchestration. This division is also inherent in the harmony of the passage, but in order to understand fully how this harmony works, and how the compositional process behind it then extends to other material in the piece, some technical explanation is required.

A common method of constructing a twelve-tone rows is to select a tetrachord, then to make a transformation of it in such a way that the two have no common pitches; the remaining four pitches consequently form a third tetrachord, which is then inserted between the other two.[12] This A-B-A arrangement of tetrachords is to be found in the opening three chords of *Spirit Garden* – there, chords I and III are both forms of set 4-19, [1,2,6,10] and [4,5,8,0], while chord II is a form of set 4-24, [7,9,11,3] (Ex. 3.7).



Ex. 3.7 *Spirit Garden*, first three chords

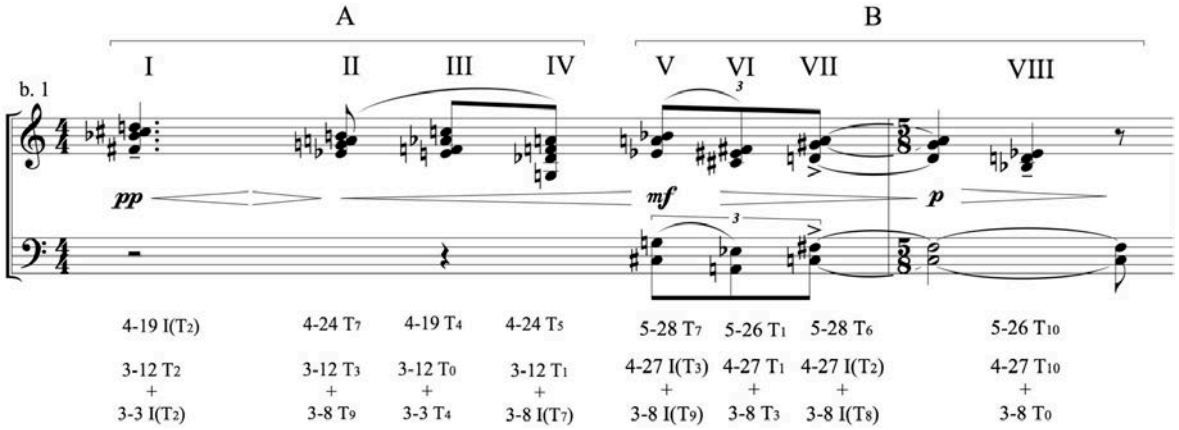
One method of pitch-organisation discernible in Takemitsu's music is the formation of pitch-collections by combining members of a limited group of smaller sets (subsets) in various ways. These subsets are transformed independently of each other using

[12] An example of such a row occurs at the start of Anton Webern's *Variations op. 30* (1941) where three tetrachords are played one after the other on double bass, oboe and lastly trombone. In terms of pc sets the first and third tetrachords both constitute forms of the set 4-3 while the second tetrachord is a form of the set 4-17 (Reid, 1973: 344–5). Later in the same work at bars 21–31, the accompaniment consists of the same three tetrachords played now as repeated chords again with distinct timbres for each one – brass for the first chord, woodwind for the second and strings for the third.

combinations of inversion and transposition and are then recombined, resulting in an array of pitch-collections all of which not only contain forms of the subsets but can also be perceived and interpreted as single structures. Hideaki Onishi presents a systematic approach to the analysis of these arrays which he labels Superset/Subset Harmonic Networks (2004: 111). In an attempt to show formal coherence in the works he is analysing, Onishi generally ascribes more importance to the medium-sized members of these networks than he does to the smaller core-group sets. In *Spirit Garden* it seems that a small group of sets define the underlying structural harmonic functionality and that the complete chord-qualities of the larger array members are more akin to 'colouring' (such as added ninths, thirteenths, etc.). This leads to the notion that local harmonic function is determined by a core group of smaller sets and that the more extended harmonies are effectively added colour. Onishi assumes these medium-sized sonorities to be the most important structural element for his analyses of Takemitsu. This is very much in line with the view that Takemitsu derives structure from colour, be it textural, orchestral or in terms of extended set sonorities. It was stated earlier that one of the aims of this study is to show that the principle of binary contrasts governs the compositional process even on the microscopic level. The idea of subset combinations provides an excellent opportunity to explore this possibility.

From their prime forms (in square brackets) it can be seen that set 4-19 [0,1,4,8] and set 4-24 [0,2,4,8] have a common subset of 3-12 [0,4,8], the augmented triad. The augmented triad is the first member of the core-group of sets that generates structural harmonic function in *Spirit Garden*. The fourth chord (IV in Ex. 3.8) is a form of 4-24 and as such also contains the augmented triad. The inclusion of the augmented triad in all four chords binds them together harmonically while the oscillation between the sonorities of 4-19 and 2-24 assumes a decorative role, adding an alternating variety to the augmented triads.

Looking now at the set analysis of second set of four chords in the opening phrase (under bracket B in Ex. 3.8), a clear harmonic distinction from the first set of four chords can be observed.



Ex. 3.8 *Spirit Garden*, bars 1–2, harmonic contrast in the opening phrase

These chords each have five notes, and all include subsets 4-27 and 3-8 combined in various ways. The series of independent transformations and new combinations of these subsets are shown on clock-face diagrams on the following page (Fig.3.4). The first column of Fig. 4.3 shows the 4-27 component of chord V and the subsequent transformation needed to produce the 4-27 components of chords VI–VIII with the preceding chord in light grey and the resulting chord in a darker shade, the second column shows the same process for the 3-8 component, while the third column shows the resulting pitch-collections. Once again, chords V–VIII alternate in terms of the final pitch collection in the same way as chords I–IV. From this, it should be apparent that the same kind of binary fluctuation is taking place here as took place in the first set of four chords (under bracket A in Ex. 3.8).

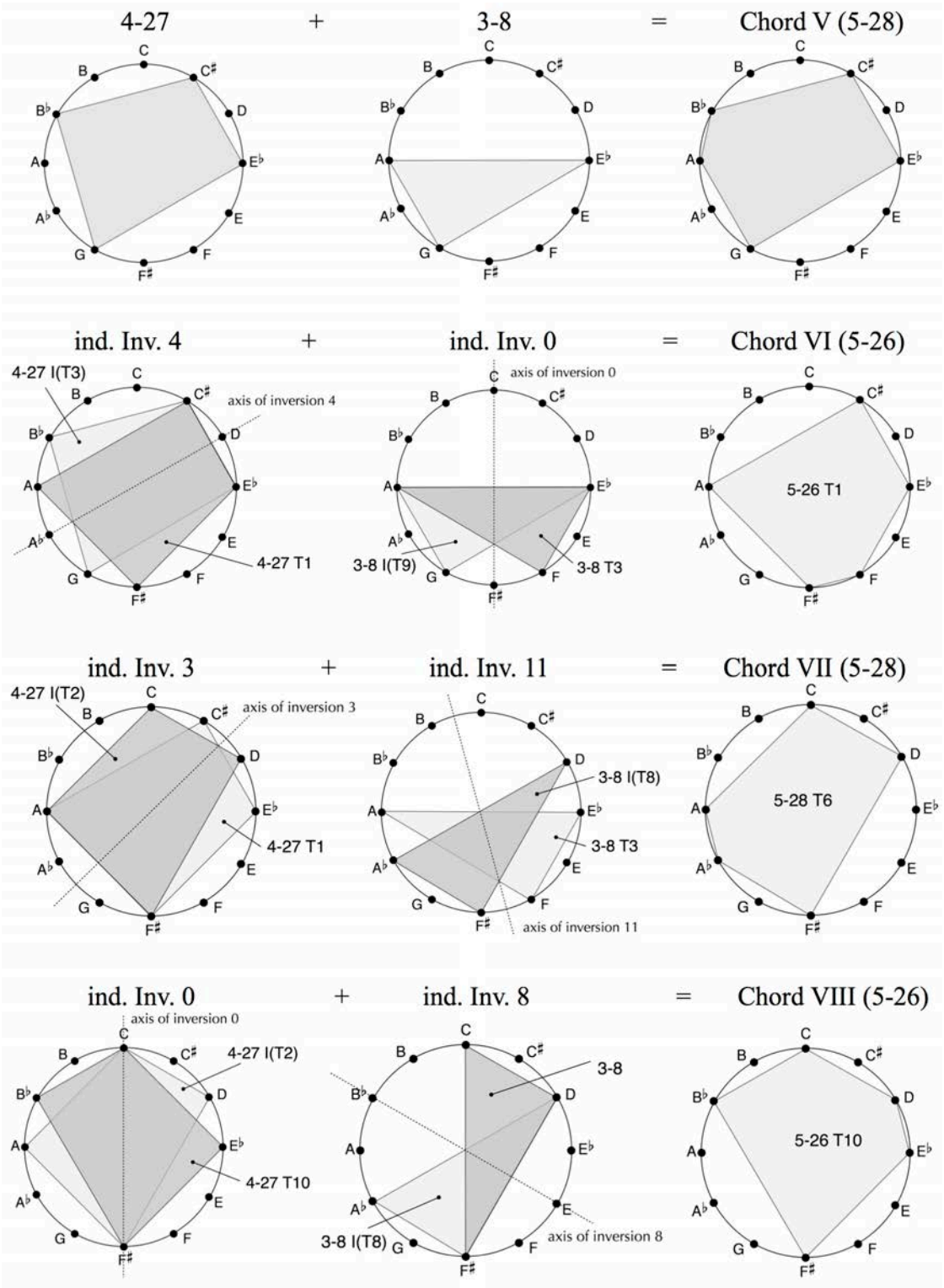
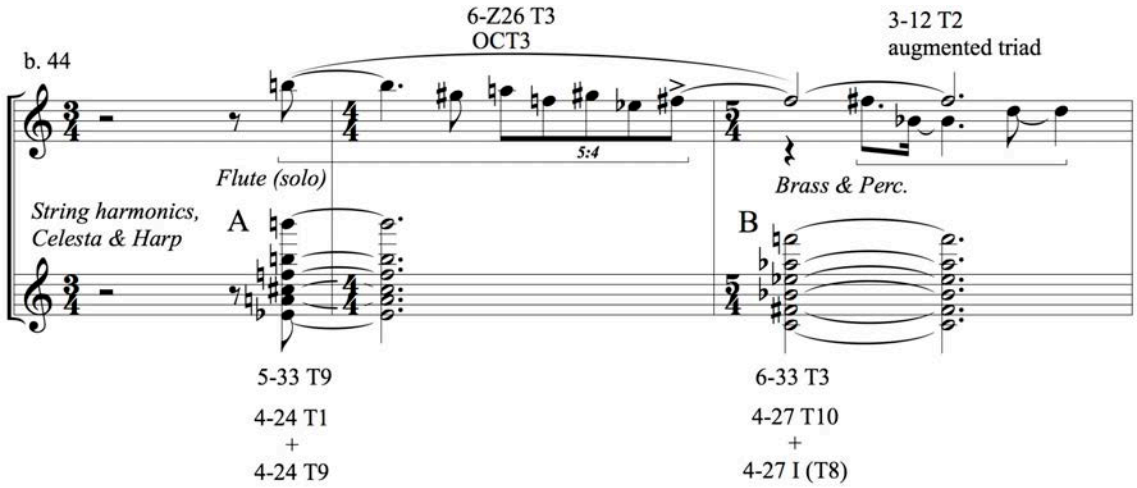


Fig. 3.4 The transformation sequences of subsets 4-27 and 3-8 in chords V–VIII

The inverted form of 4-27 is identical to the dominant seventh, and thus creates certain expectations for the listener. The fifth chord of Spirit Garden could also be described as

E flat$^{7, \#11}$, a variant of the submediant chord in G minor, while the seventh and eighth chords can be seen as extended dominant harmonies in G minor, i.e. D$^{7, \#11}$ and D$^{7, \flat 9, \flat 13}$ respectively. This reference to G minor is a contributing factor to the perceived coherence of the passage. Another factor is the pitch content of the melodic line itself and the way it snakes down a major seventh from D to E flat through notes drawn directly from major and minor modes on G. From the combinations of pairs of subsets to the alternating A–B–A–B series of set sonorities, to the juxtaposition of two groups of four chords, and in the zig-zag motion of the opening theme and its variations, there is clear evidence of the fundamental dualistic nature of Takemitsu's personal philosophy. The subtlety and detail of the above manipulations seem to reflect Nijame Nakamura's implication that to 'treasure minute and delicate things' can be seen as a 'culturally significant trait' of the Japanese people (1964: 356).

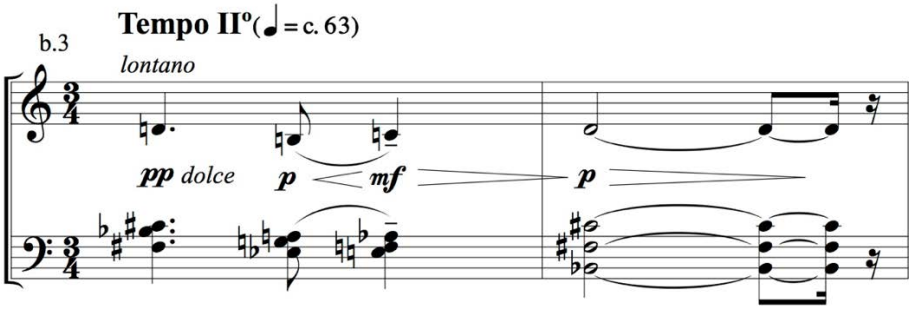
Harmonic divisions also occur in the two variations of the opening phrase. The first variation, which begins on the upbeats to bar 45 (and at bar 185) is accompanied by two chords on string harmonics supported by celesta and harp. Despite being almost an exact transposition of the first chord, the second chord differs in a way that closely relates them both to the harmony of the original statement in bar 1. The first chord is entirely within the whole-tone scale and contains an augmented triad. The second chord does not contain the augmented triad but rather has two forms of the set 4-27 embedded within it. This subtle change of chord sonority is strangely contradicted in the melodic material above it where the flute outlines the set 6-Z26, using notes from the 4-27-rich octatonic scale (specifically OCT3), and, over the second chord, an augmented triad is sounded by pointillistic orchestration in the brass and percussion (Ex. 3.9).



Ex. 3.9 *Spirit Garden*, bars 44–6, p-c sets in a variation of the opening phrase

3.2.3 *Trees*

While the staircase-like opening theme and its two variants are somewhat rare objects in *Spirit Garden*, the homophonic chordal motif at bar 3 (Ex. 3.10) forms one of the principal elements of the entire work. Coloristic variations of it appear so ubiquitously that they possibly represent some feature common throughout the garden.



Ex. 3.10 *Spirit Garden*, bars 3–4, homophonic chordal motif

In their photographic study of Kyoto's temple gardens, Judith Clancy and Ben Simmons state that 'the abundance of fertile land and variety of climates host a rich diversity of trees: pine, cedar, cypress, beech, juniper, yew, paulownia, cryptomeria, elm, magnolia, mountain cherry, camphor, mountain azalea, maple, oak, ilex, hackberry, chinquapin, andromeda, ash and walnut' (2015: 7). It is notable that Takemitsu provides almost as

many coloristic variations of the homophonic chordal motif over the course of *Spirit Garden*. Noriko Ohtake, citing Takemitsu's 'For Escaping from All the Conventionalism', points out a similar parallel when discussing *Eucalyptus* (1970) inasmuch as the fragmentary character of that work apparently reflects the many subspecies of Eucalyptus tree:

> Takemitsu's short phrases do not set each other apart. Just as subspecific forms of the [Eucalyptus] tree appear differently but have the same origin, these musical components exist independently as well as equally. In Takemitsu's view, this concept fundamentally separates him from Western formal aspects (1990: 45).

It therefor seems reasonable to assume that the homophonic chordal motif (Ex. 3.5) and its many coloristic variations may serve a similar role to that of trees in a Japanese stroll garden. In traditional Japanese culture, trees are envisioned as links between the world of the gods and the earthly realm (Keane 2002: 66). The tree is also used to symbolise pining for a person or a god (Clancy 2014: 67). It is not surprising, then, that in a work titled *Spirit Garden* such a wealth of these spiritual references is to be found.

In view of the brevity of the homophonic chordal motif and its structural importance to the work, it will be referred to here as 'Motivic Idea 1' (abbr. MI 1). The supporting harmony of MI 1 is modelled on the first three chords of the opening phrase, and although there is a total of fifteen coloristic variations of MI 1 scattered throughout the work, the supporting harmony mostly remains unaltered. Table 3.2 (following page) presents a list of the variations of MI 1 showing the orchestration, dynamic range, tempo, starting pitch and the voicing of each chord in each variation, while the large sections (S1, S2, etc.) are indicated in the left margin.

Table 3.2 Appearances of MI 1 and its coloristic variations

	variation	Bar	Orchestration	Dynamic range	Tempo bpm	Pitch	Voicing
S1	0	3-4	flutes, bassoons doubled by horns	*p mf*	63	D	C-C-C-D3
	1	5-6	upper woodwinds doubled by divisi violins (trem.)	*p mf*	90	D-flat	D3-D3-D3-D3
	2	27-28	flutes, bassoons doubled by horns	*pp p*	45	D	C-C-C-D3
	3	32-33	oboes, clarinet, horn doubled by upper strings (trills and tremolando)	*pp mf*	80	D-flat	C-C-C-D3
	4/5	40-42	piccolo, flute, oboes doubled by vln. 2, vla., celesta/ brass doubled by divisi celli (tremolando)	*pp f*	80	F-sharp/ A	D2-D2-D2-D2 C-D2-C-C
S2	6	67-69	piccolo, flutes doubled by vln. 1, piano, celesta	*f ff*	114	F-sharp	C-C-C-C only aug. triads
	7	82-83	horns, doubled by strings (w/Cb)	*pp mf*	57	D	C-C-C-D3
	8	90-91	lead 8va: trumpets, 4th horn, oboe, cor anglais, 1st vln. off-beat harmony: Horns	*f ff*	52	C	C-C-C-C
	9	99-100	4th voice 8va: steel drum, harp, vibraphone, celesta, horns. off-beat upper voices: harp, vibraphone, celesta, trumpets	*p mf*	52	D	C-C-C-C double lead
S3	10	129-130	oboe, oboe d'amore, cor anglais, strings	*pp mf*	45	D	D3-D3-D3-D3 one added pitch
	11	148	divisi violas, celli	*pp mf*	135	D	D3-D2&3-D3-D3 two added pitches
S4	12	165-166	brass, strings	*pp mf*	54	A-flat	R4-R4-R4(+D1)-R4
	13	173-174	oboes, clarinet, horn doubled by upper strings (trills and tremolando)	*pp mf*	80	D-flat	C-C-C-D3
	14/15	186-187	piccolo, flute, oboes doubled by vln. 2, vla., celesta/ brass doubled by divisi celli (tremolando)	*pp f*	80	F-sharp/ A	D2-D2-D2-D2 C-D2-C-C

The grey shading represents exact repeats, thus variations 3, 4 and 5 have counterparts of variations 13, 14 and 15 respectively. Many of the other variations, although not exact repeats, also form similar pairings. Variations 2 and 10 are very similar as are variations 7 and 12. These two pairs in relation to each other also seem to be arranged symmetrically about the mid-point of the work. Other pairs such as variations 6 and 11 (a pair by virtue of their tempo and supporting role) and variations 8 and 9 also appear to be roughly symmetrically placed within the work. Figure 3.5 shows the pairings along with the appearances of the bell signal (excluding the bonsai version). This quasi-symmetry has clear implications for the formal structure of *Spirit Garden*.

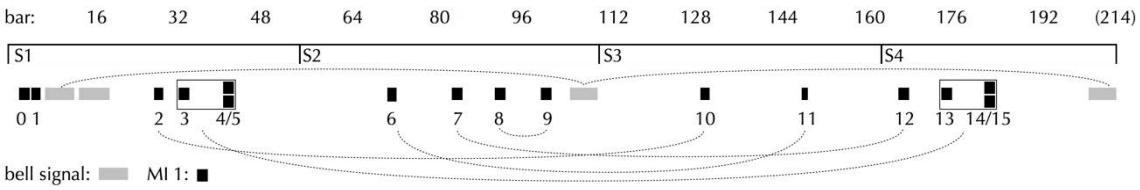
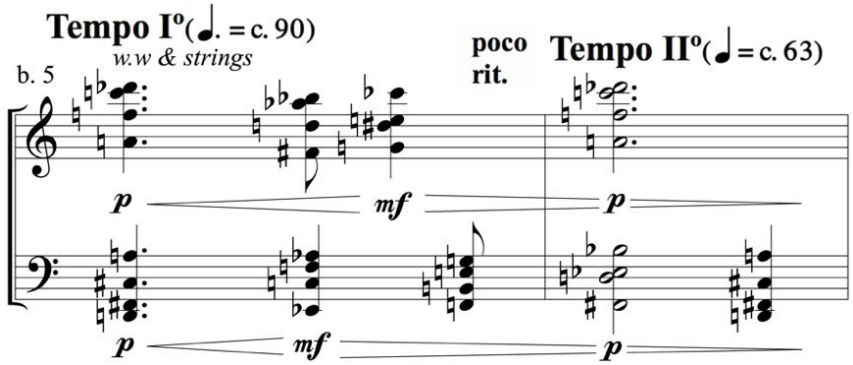


Fig. 3.5 Quasi-symmetrical arrangement of groups and pairs of MI 1 variations

In variations 9 and 10, the supporting harmony has added notes, while in variation 6 the harmony is reduced to bare augmented triads; in variation 8 the fourth chord is slightly altered in that its transpositional relation to the original is not the same as that applied to the other three chords; and in variation 12 – the most complex from the perspective of voicing – the harmony of each chord seems not to follow the original design at all. Besides these few minor exceptions, the harmony of each variation reproduces that of the original in bars 3–4. In terms of chord-voicing (the exact vertical arrangement of each chord), a number of octave displacements and doublings of individual chord members provide more variation. It is interesting that, in general, the types of voicing are different in each of the four large sections. S1 contains a mixture of closed and open voicing; the appearances of MI 1 within S2 are all characterised by closed voicing; S3 contains only variations with enriched harmony in open voicing,

while S4 houses the only variation where an inner voice is raised to melody status. MI 1 is characterised by a dynamic swell and recession typically to the third chord, however the scale of this crescendo/diminuendo varies and occasionally the peak is on the second chord. Most variations begin either at piano or pianissimo with a peak of mezzo-forte or forte; only in S2 are there two louder variations (6 and 8), both beginning at forte and reaching a fortissimo peak. Variations appear in a wide range of tempos and are occasionally rewritten in various rhythmic and metrical guises. In variation 2, for instance, the dynamic peak occurs on the second chord, bowing slightly to the prevailing 6/8 time-signature, and in variation 6, at a much faster tempo, the second chord is once again the dynamic peak. In the pair of variations 8 and 9 the chordal rhythm is smoothed to a regular crotchet accommodating the syncopation in the supporting harmony.

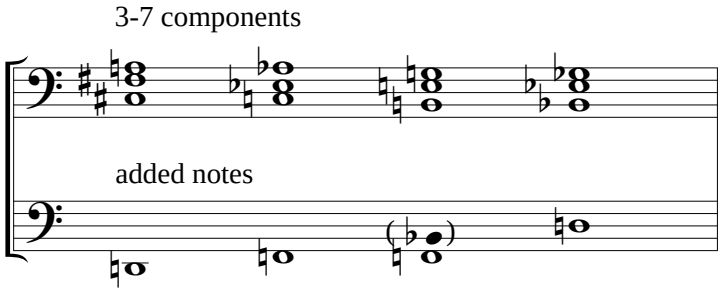
In variation 1, the upper woodwind and upper strings present MI 1 with its original harmony in an open 'drop 3' voicing (D3), while another independent series of chords appears in the lower instruments (Ex. 3.11).



Ex. 3.11 *Spirit Garden*, bars 5–6, coloristic variation 1 of MI 1

All four chords on the lower staff of Ex. 3.11 have a common subset of 3-7 in much the same way that the two groups of four chords in the opening phrase each have subsets of 3-12 and 4-27. The first three of these tetrachords, [1,2,6,9], [0,3,5,8] and [4,5,7,11],

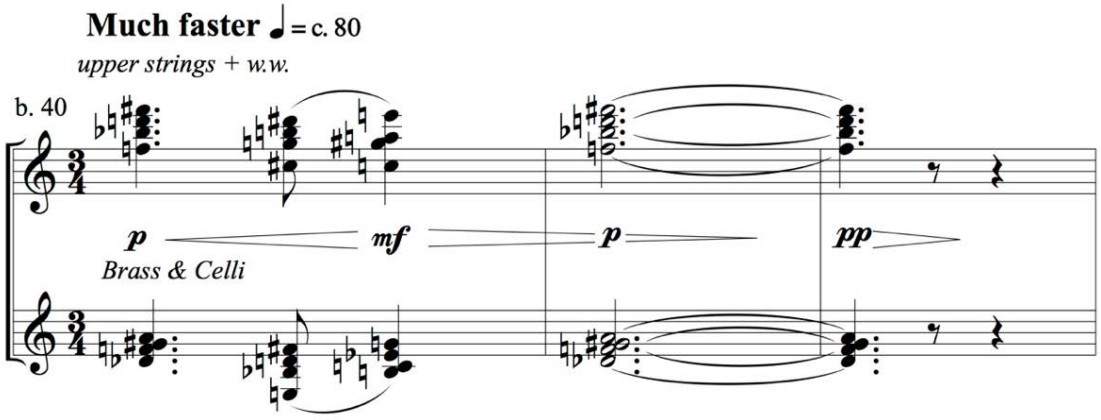
(Ex. 3.12) almost present a twelve-tone row, with a construction similar to the first three chords of the opening phrase. (The F in the third tetrachord may possibly have been a B-flat in the original sketch, subsequently replaced by Takemitsu on grounds of personal taste).



Ex. 3.12 *Spirit Garden*, bar 5, 3-7 subsets of the lower chords

A blurring of both the rhythm and harmony occurs through the addition of this low 'counterpoint' in open four-part chords. The listener is thus presented with two 'objects' that have similar but not identical structures, as if she were looking at two different species of tree one behind the other, unable to distinguish the background tree in any great detail – a remarkable piece of musical imagery.

In bars 40–2 two versions of MI 1 are presented simultaneously at transpositions of a major third and a perfect fifth simultaneously (Ex. 3.13).



Ex. 3.13 *Spirit Garden*, bars 40–2, simultaneous variations of MI 1

To clarify the principle of defining pairs of statements of MI 1 as two views of the same object, a pair, variations 2 and 10 for example, can be compared in terms of their similarities and differences. In terms of tempo and rhythm, variations 2 and 10 are identical. However, the clear differentiations in orchestration – the switch from mostly closed position horn quartet chords to more open position chords (drop 3) on *tutti* strings, the more subtle switch from flute and bassoon doubling to oboe family and bassoon doubling, and removal of the tam-tam strike – all mark significant changes in colour between the two variations and therefor seem related to the idea of changing views, perhaps one in cloudy conditions and the other in evening sunlight. Also, the fact that three of the four chords in variation 10 are five-note chords adds slightly to the richness of the new look at this object.

At the level of the garden metaphor, an alternative approach to the layout of the pairs of variations may help support the idea that they represent trees viewed from different angles or distances over the course of a stroll. From the information about the positioning within the work of certain trees (MI 1 and its variations); the steps (opening phrase and its variations); the bell signal, and the bonsai version, it is now possible to draw up a tentative plan view of the actual garden, upon which the work is based, as it may have been envisaged by Takemitsu either in his imagination or during a visit to a real garden (Fig. 3.6 on the following page).

The following section examines another recurring element of the work, which also supports the stroll garden structure and Takemitsu's idea of objects changing 'their forms through the changes in the angle of viewing which result from moving around the garden'.[13]

[13] From Shiraishi's liner notes for the 1995 CD, Tōru Takemitsu: Gémeaux (Denon Japan CO-78944).

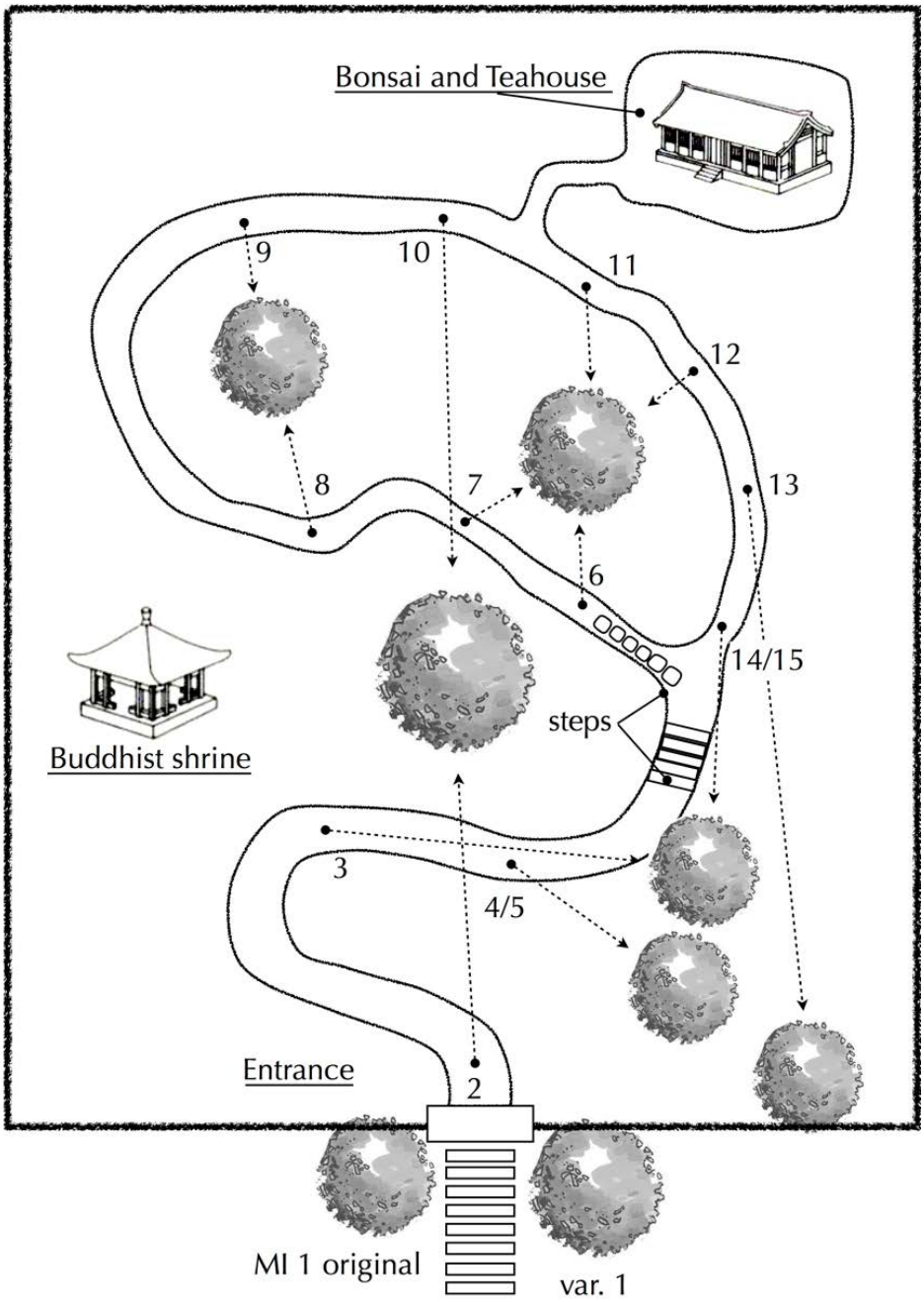
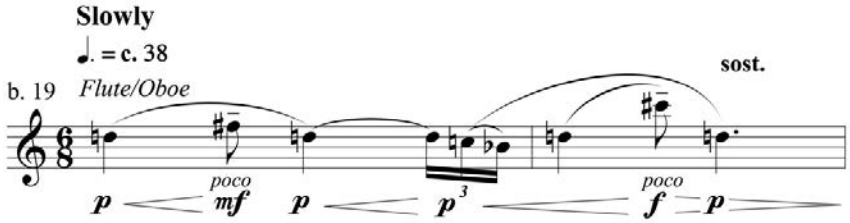


Fig. 3.6 A Japanese stroll garden with M 1 statements as a tree metaphor

3.2.4 *Rocks*

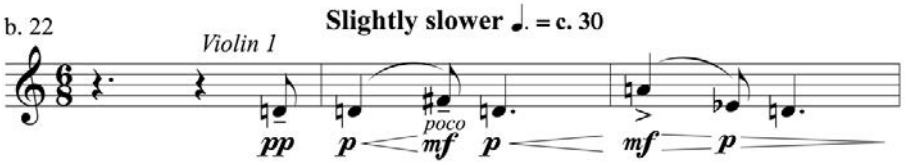
Shortly after entering the *Spirit Garden*, past the Buddhist shrine – the source of the bell signal – the visitor encounters a carefully arranged formation of objects, possibly rocks, which he will view from two different angles, one on entering the garden and the other on the way out. Similar formations occur throughout the garden and, again, each is

viewed from two different perspectives. As with the ‘trees’ of MI 1, the ‘rocks’ are arranged in a quasi-symmetrical pattern centred roughly around the half-way point of the entire work. In musical terms, each of the rocks of the first formation is represented by a two-bar thematic segment which, taken together, form what will be called the ‘Main Thematic Group’ (MTG). Supporting the notion of an underlying dualism, the components of MTG fall into two distinct groups, MTG-A and MTG-B. The first group contains three forms: MTG-A, MTG-A' and MTG-A". MTG-A (Ex.3.14) begins with a loping skip of a major third from D up to F sharp and back again.



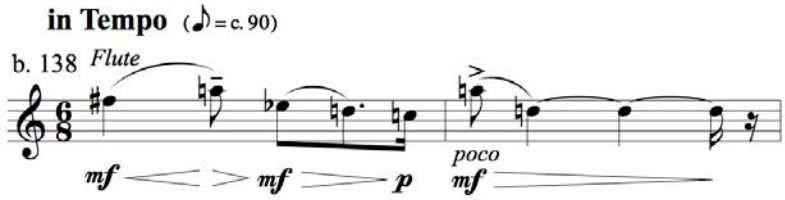
Ex. 3.14 *Spirit Garden*, bars 19–20, MTG-A

The skip is then extended in the second bar as far as a major seventh using the same rhythm. The two bars are connected by a short whole-tone scalar dip hinting at an inversion of the skip up on the third quaver. Once again, this contrast between the first skip and the dip hint subtly at Takemitsu’s binary ideologies. From a harmonic perspective, while the note D accounts for more than three quarters of MTG-A, the skip and dip excursions outline a D major seventh chord and the augmented triad – both characteristic elements of the harmonic language of the entire work. MTG-A' (Ex. 3.15), first appearing at the upbeat to bar 23, also contains the major third skip of MTG-A while the second skip is now replaced with the downward swoop A, E flat, D.



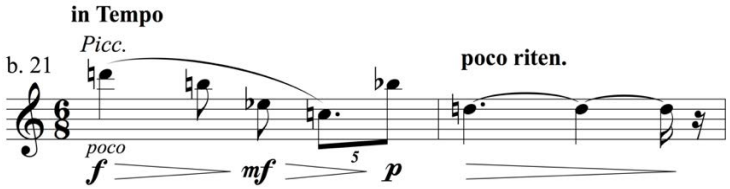
Ex. 3.15 *Spirit Garden*, bars 22–4, MTG-A'

One interesting feature of MTG-A and MTG-A' is that their penultimate notes are a semitone above and below D, respectively. The use of neighbouring semitones to emphasise focal pitches has already been pointed out as a structural feature of Takemitsu's work (Fukuchi 1998: 147–8). There is one more form of the MTG-A series which only appears in bar 138–9 – this will be labelled MTG-A" (Ex. 3.16).



Ex. 3.16 *Spirit Garden*, bars 138–9, MTG-A"

The second component of the Main Thematic Group, MTG-B consists of an initial descent, D, B, E-flat and C, followed by a cadence-like drop from B–flat to D (Ex. 3.17).



Ex. 3.17 *Spirit Garden*, bars 21–2, MTG-B

The intervallic arrangement of the four-note descent in MTG-B, <-3, -6, -3>, also forms part of several other melodic elements found in *Spirit Garden*, and it will be shown below that this specific arrangement becomes a unifying characteristic of otherwise seemingly unrelated material.

Takemitsu appears to be uninterested in motivic development in the Austro-Germanic manner, where permutations of motivic subdivisions of theme are employed as a vehicle for harmonic exploration. His primary task seems rather to be the formation of a collage of subtle coloristic variations of themes and motives, which operates as a metaphorical narrative for some situation or activity – in this case, a stroll around the

Spirit Garden. The notion of a subtractive (the breaking down of a theme into reusable motivic cells) rather than an additive (the progressive prosthesis of notes before and after core material) thematic process in Takemitsu's overtly metaphorical music seems inappropriate. As Knussen's statement implies, his music continuously presents fresh material, or at least revisions of existing material, in already fully formed and self-contained statements. Short motives and themes are juxtaposed, generating longer sentences rather than longer sentences with symmetry, repetition, proportion, deliberate contrasts, etc., being subsequently broken up into shorter motivic periods and cells. The cells found in Takemitsu's music seem to be substantially more self-sufficient entities than their classical counterparts, and the apparent arrangement of coloristic variations of these cells into sentences seems to emerge as a result of this additive process. This prosthetic mechanism also points to much of what recalls Debussy in the work of Takemitsu beyond the obvious impressionistic orchestral devices and octatonic and whole-tone scale choices, since the same principle can be observed throughout the French master's more pictorial works such as *Jeux*, *La mer*, *l'Après-midi d'un faune* and *Images*. Dana Richard Wilson explicitly identifies this in Takemitsu when mentioning 'sectional forms' and 'phrase structure' in his examination of textures in Takemitsu:

> "non-functional" harmony, layering of melodic ideas, sectional forms, and role of orchestral families [are all] found in his [Debussy's] works. All of these are fundamental to the music of Takemitsu. In fact, *Green* was apparently composed as a direct result of studying *Prelude à L'Après-midi d'un Faune*, and similarities abound particularly with regard to sonorities and phrase structure. (1982: 28)

When discussing his early influences in an interview with Tania Cronin and Hilary Tann, Takemitsu singles out *Images* as a piece that attracted him very much in terms of Debussy's orchestration (1998: 207). *Images* was seen by Debussy himself as overtly

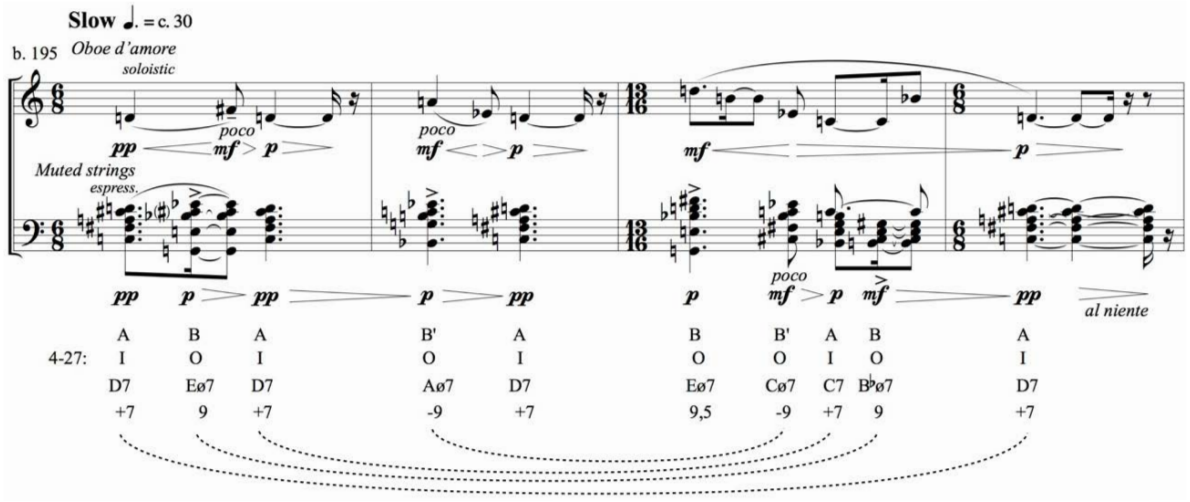
pictorial, making remarks about this and *Estampes*, to which David Code ascribes the subsequent neglect and doubt as to the value of the work felt among Debussy scholars.

> Debussy gave startlingly literal emphasis after one rehearsal to precise representational qualities: 'a water-melon seller, and whistling urchins … I see it all quite clearly.' This absurdly specific claim implicitly raises a question about whether the *Images* carry any deeper, subtextual implications along the lines of those discernible in other orchestral works. Recalling Debussy's flippant remark about the similarly folkloric *Estampes* – 'when one cannot afford to pay for travels …' – the relative neglect of the Images within Debussyan historiography might be partly attributed to their simpler, 'postcard' level of musical evocation by comparison with the *Prélude*, the *Nocturnes* or *La Mer*. (2010: 139)

While this is not the place to re-evaluate the work of Debussy, the fact that he showed no reticence in describing at least some of his most finely orchestrated works pictorially on a 'postcard level' may, to some extent, historically legitimise Takemitsu's – or any other composer's – approach of using a musical metaphor as a template for formal structure rather than using a classical formal structure as a 'pegboard' for programmatic themes and their transformations the way Berlioz and Wagner did.

Hideaki Onishi's consideration of MTG-A followed by MTG-B as 'the main theme of *Spirit Garden*', and MTG-A' followed by MTG-B to be 'a variant of the main theme' seems to bear out the notion of thematic independence rather than interdependence (2004: 263–5). While the segments MTG-A, MTG-B, MTG-A' and MTG-B are arranged into a unified musical sentence a total of three times over the course of the piece (bars 19–26, 120–8, 134–41), they are also to be found frequently either in pairs (bars 84–8, 143–7 and 195–8) or in isolation, as in the case of MTG-A (bars 49–1, 54–6 and 190–2) and MTG-B (bars 71-72), not as parts of some developmental argument, but rather as coloristic variations. The most compelling case for interdependence between MTG-A and MTG-B is the symmetry of the chord

qualities found in their final appearance in bars 195–8 (Ex. 3.18). Each chord contains set 4-27 either in its original or inverted form alternately. Moreover, the systematic arrangement of the pitches added to these 4-27 sets is also impressive – not only are ninths and sevenths added alternately but the specific type (i.e. major seventh, major or minor ninth) is arranged symmetrically across the four bars.



Ex. 3.18 *Spirit Garden*, bars 195–8, symmetrical harmonic arrangement

It is hard to believe that this is the result of mere aesthetic intuition and not, to some extent, the execution of some pre-compositional plan. If the generalisation of that plan had been devised decades before and then become, over time, second nature to the composer, then it may be raised to the level of a stylistic characteristic that should be traceable to varying extents in some of Takemitsu's other works.

Table 3.3 shows the appearances of the MTG elements in relation to the large sections S1–S4, and also indicates the literal repeats of appearances 1 and 2 as 6 and 9 respectively. Takemitsu sees rocks as 'unchanging except as they appear from different viewpoints', and while discussing the orchestral work *Arc* (1963) he describes his compositional approach of depicting rocks as 'stable forms' of which only timbral variations are made (1995: 96). The implication of the remark about timbral variations here is that the pitch of the rock elements is constant. The constancy of the pitch at

which all but one (appearance No. 4 begins on the note C rather than D) of the MTG statements appear is the basis for the assumption that the group possibly represent rocks.

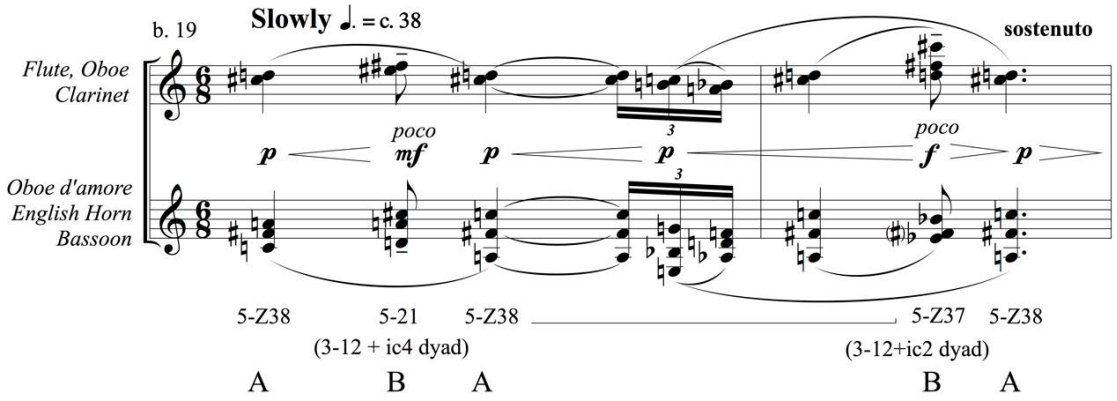
Table 3.3 Appearances of MTG elements and coloristic variations

	Appearance	Bar	Tempo	Pitch	Form
S1	1	19-26	38-30	D	A–B–A'–B
	2	49-51	40	D	A incomplete
S2	3	54-56	38	D	A
	4	71-72	57	C	B
	5	84-88	42-52	D	A–B
S3	6	120-128	36-30	D	A–B–A'–B
	7	134-141	30	D	A–B–A"–B
	8	143-147	28	D	A'–B
S4	9	190-192	40	D	A incomplete
	10	195-198	30	D	A'–B

While these assumptions about representation (trees, rocks, etc.) may seem somewhat speculative or even naïve, they come as a response to the many occasions on which Takemitsu employs the stroll garden metaphor as a specific formal map rather than merely as an aesthetic impression. For example, while discussing *Garden Rain* (1962) Peter Burt observes 'that this rather nebulous-sounding metaphorical comparison to a garden is actually realised musically with a certain degree of precision' and continues by pointing out that 'Takemitsu was using the elements of a Japanese garden as metaphors for various kinds of spatially and texturally differentiated musics which, in combination, could produce an overall pan-focal texture' (2001: 103), while Dana

Richard Wilson adds that Takemitsu had explicitly stated that the formal structure of *Garden Rain* is, in fact, 'that of a Japanese rock garden' (1982: 6).

Earlier, mention was made of Takemitsu's use of alternating chord-qualities as an expression of his dualistic philosophy. A typical example of this process is clearly visible in the first appearance of MTG-A at bar 19 (Ex. 3.19). The pitch-class set 5-Z38 dominates the harmonic colour of MTG-A to the extent that Onishi designates it as the 'Spirit Garden Pentad' (2004: 262). However, the harmonic impression left after listening to *Spirit Garden* seems to point towards some augmented triad-based collection such as Messiaen's third mode, of which 5-Z38 is a subset, but without including any of the three augmented triads inherent in MLTIII. What seems to characterise both the use of 5-Z38 and the chords of the opening theme is the blurring of the melodic line by the almost consistent addition of a semitone below it. That said, MTG-A at bar 19 displays firstly an alternation between chord qualities and secondly the semitone blur on all but one note.



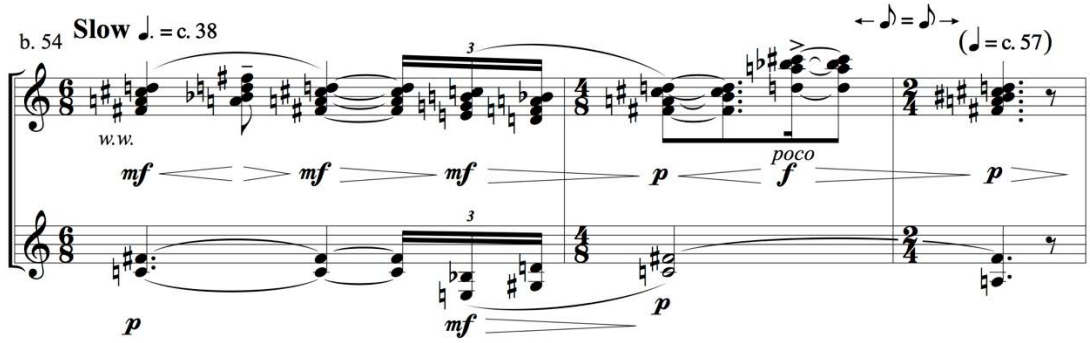
Ex. 3.19 *Spirit Garden*, bars 19–20, alternating chord qualities

The second and seventh chords in the woodwind passage both contain augmented triads, while all the other chords are all forms of 5-Z38 which does not contain an augmented triad. The additions to the augmented triads in the second and seventh

chords are both dyads drawn from the whole-tone scale, ic4 and ic2 respectively (Ex. 3.19).

As has been mentioned, combinations of a small group of basic sets seems to be at the heart of the generative process for much of the more complex harmonic and melodic material in Takemitsu. A further example of the addition of ic2 and ic4 to a common set as a compositional process will be examined below, in the following section on interconnectivity.

The second complete appearance of MTG-A in bars 54–6 (Ex. 3.20) shows several deviations from the original statement at bar 19.



Ex. 3.20 *Spirit Garden*, bars 54–6, MTG-A

The most obvious deviation is the rhythmic alteration of the second bar of MTG-A where the notes D and C sharp in bar 55 cover five and three semiquavers respectively compared to the two and one semiquavers in bar 20. Speculation may be made as to whether the ratios 2:1 and 5:3 represent consecutive members of the Fibonacci series and thus an increasingly refined approximation to the 'Golden Section', since it has been indicated that at least one other work of this period, *Quotation of Dream – Say sea, take me!* (1991) displays this geometrical proportion (Hutchinson 2014: 442). It may seem rather far-fetched to suggest that the second bar of a phrase recurring at quite a distance from the original statement should have anything other than a visual significance (i.e. with regard only to the printed score), but Takemitsu's

sensitivity to such almost imperceptible changes relates directly to the Japanese aesthetic principles of restrained beauty and fastidious attention to the minutest detail. The orchestration at bar 56 varies from that at bar 19 again only in slight details, the omission of the English horn, and the bassoons entering in rising diminished fifths at the semiquaver triplet being the most audible changes. Harmonically, too, there are only slight alterations: the replacement of the F natural with B flat in the second chord and the replacement of the E-flat with an A in the penultimate chord.

It is now possible to display the above pairings on a linear diagram that shows their symmetrical positioning across the duration of the work as in Figure 3.7. Clear relationships can be seen between the several variations of MTG A and B, and that groups consistently have counterparts elsewhere in the piece.

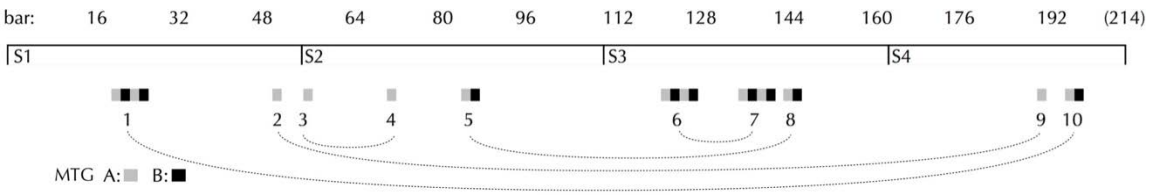


Fig. 3.7 Quasi-symmetrical arrangement of MTG pairs

This may be yet another example of Takemitsu's idea of viewing the same object from different perspectives, but the reason for this specific arrangement only becomes clear when the positions are mapped out in the same way as the 'tree' motivic idea was above. It is possible to add these pairings of the various appearances of MTG elements to the hypothetical plan of the garden. Once again, most of the formations are viewed form two angles as the stroller walks around the garden. Figure 3.8 shows the same garden layout as above with the trees included but this time the lines of sight are indicated for the various rock formations. Other material in *Spirit Garden* might also fall into this plan but an examination of that possibility must inevitably be postponed for a later, more comprehensive study.

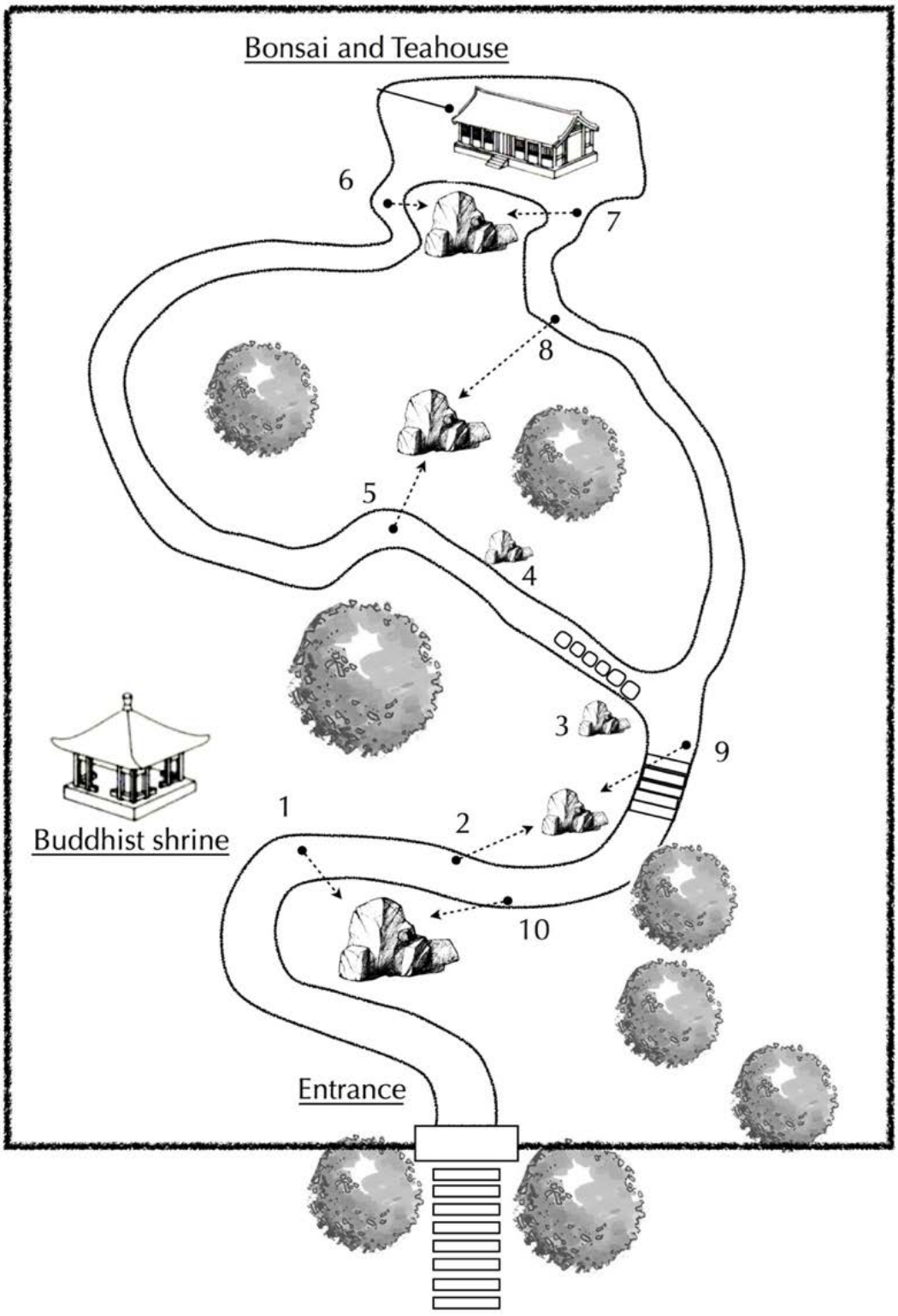


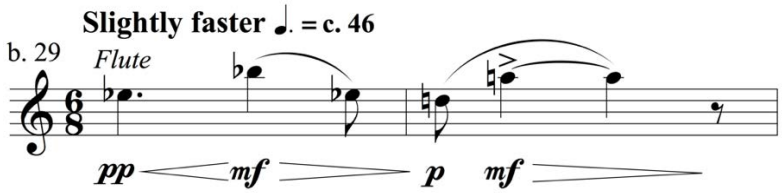
Fig. 3.8 Arrangement of MTG statements as rock metaphors

There now follows a short examination of two of the ways that certain material in *Spirit Garden* seems to be interconnected.

3.3 *Two Types of Interconnectivity*

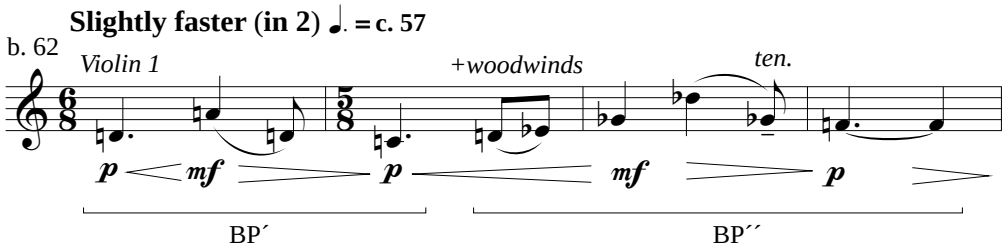
3.3.1 *The Word-ladder*

At bars 29–30, another short phrase makes its first appearance. Although another two-bar phrase in six-eight time, the bridge phrase (BP), as it will be called, does differ significantly from the MTG elements in that it neither begins nor ends on the note D, and while it is may seem related to the MTG elements, it seems to function more as a bridge between thematic groups, at bars 43–4 for example, rather than belonging to one group (Ex. 3.21).



Ex. 3.21 *Spirit Garden*, bars 29–30, the bridge phrase

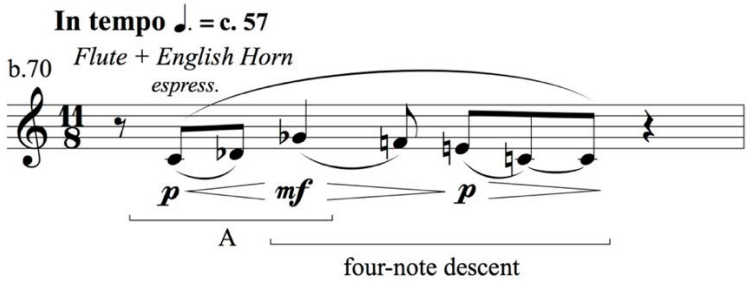
The bridge phrase is later developed and transformed in a rather more classical than coloristic manner in the next section S.2, which will be examined below. At bars 62–5 the references to the bridge phrase are clear. Notes are added or omitted and intervals are slightly altered. At bar 62 a variant of the bridge phrase appears in the strings followed by a sequential repetition a minor third higher, which is strengthened by the addition of upper woodwinds (Ex. 3.22).



Ex. 3.22 *Spirit Garden*, bars 62–5, variants of the bridge phrase BP′ and BP′′

The repetition is proceeded by a two-quaver upbeat which partially serves to unify the four bars into one broad sweep. The brackets in Ex. 3.21 show the new variant of the bridge phrase BP′ with a truncation of the last note and a slight alteration to the interval between the third and fourth pitches while the remainder of the example will be considered as a second variant BP′′. The added upbeat of two quavers to bar 64, leading into the repetition, will become significant in the subsequent series of transformations where each alteration, in turn, becomes the focal point of new material. But before going on to examine this process, the relevant material must first be identified in the score.

After a dramatic orchestral crescendo, the opening of the low woodwind phrase in bar 70 seems to be loosely derived from the two-quaver upbeat of variant BP′′ (Ex. 3.23).



Ex. 3.23 *Spirit Garden*, bar, 70, variant of the bridge phrase BP′′′

The four-note descent in BP′′′, however, represents a marked departure from the other variants of the bridge phrase, and will become an important feature of the *soloistic* material which appears seven bars later, in bar 77. These four notes seem to hold a certain significance for Takemitsu since similar melodic passages can also be found in other works of the late period such as *Archipelago S.* (1994) in the flute part at bar 50. It is now possible to follow one possible evolutionary path of the material leading from the bridge phrase through to the soloistic passage at bar 77 (Fig. 3.9).

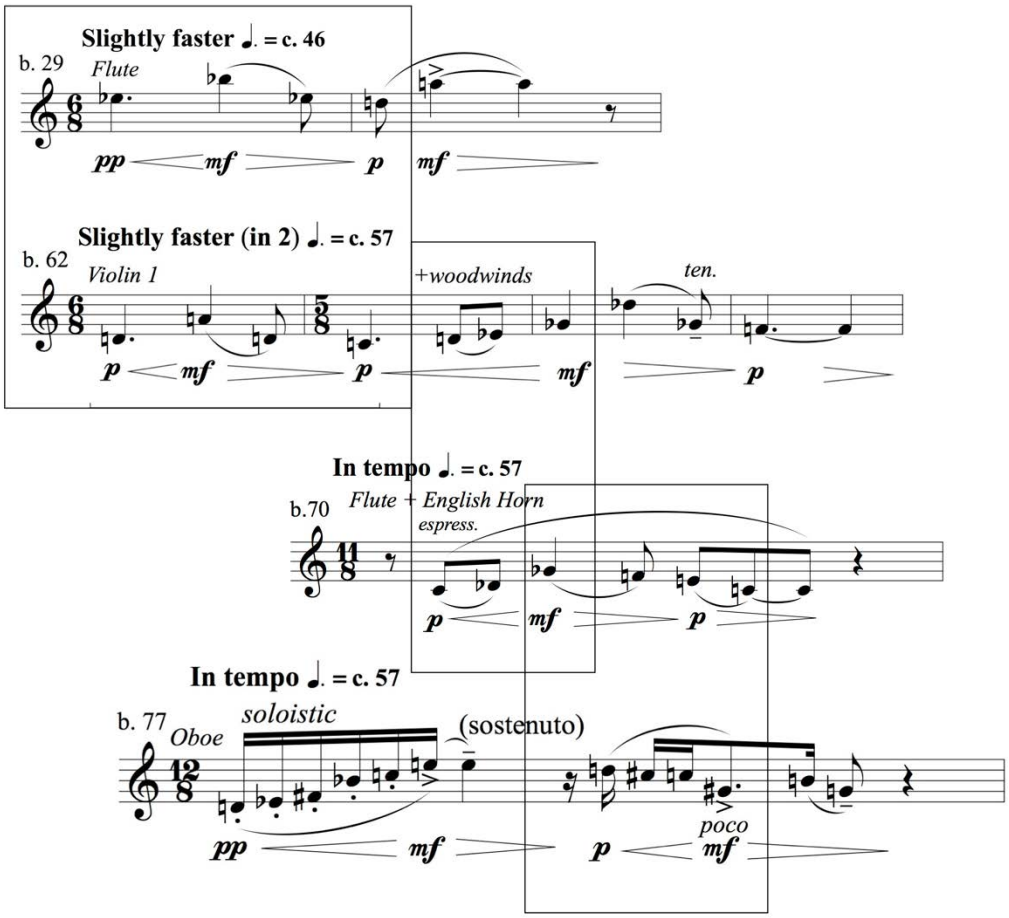


Fig. 3.9 A possible evolution of thematic material

The process of reaching seemingly unrelated material as the result of the gradual change of smaller elements recalls the games *Word ladder* or *Laddergram* where single letters of a starting word are changed, forming, at each step, another word and finally ending with a word with no letters in common with the first word. It is known that Takemitsu had a penchant for word games (Reynolds 1987: 483) – the titles of his works, alone, testify to this – however, the Japanese poetic form *haikai no renga* or 'link-poem' also has a similar structural feature in that each new stanza begins with the final line of the previous one. Takemitsu collaborated extensively with the poet Shuzo Takiguchi (co-founder of *Jikken Kobo*, the artists' collective of which Takemitsu was a member during the 1950s) whose close relationship with the European Surrealists, especially Joan Mirò, and translation into Japanese of André Breton's *Surrealism and Painting* would have

certainly introduced him to the Surrealists' own favourite word-game known as *The Exquisite Cadaver*. Kenny Wheeler's *Opening Pt. 1* on the CD *Music for Large and Small Ensembles* (1990) also follows this 'link poetry' form as each new phrase begins with the last few notes of the previous one. The impression in *Spirit Garden* is not so distinct as in Wheeler's *Opening Pt. 1*, since the variants are not immediately juxtaposed, nor are they as clear as the other types of *laddergram* structures above, but nevertheless a sense of continuity between quite varied thematic elements is achieved in this way. In her examination of the thematic interrelationships between thematic variants in *Requiem*, Hwee Been Koh describes a similar process (1998: 143-147).

3.3.2 *Subset Combinations*

In the interview mentioned above, Oliver Knussen implicitly recognises the mosaic nature of Takemitsu's works.

> What I think is very interesting about what he brought from Japanese thinking is a formal thing, which is not at all obvious […]. Basically, each piece is a collection of small pieces (not fragments because they are rounded – they have beginnings and ends) […] between fifteen seconds and couple of minutes long, and he places them next to each other to make […] what he thought of as a satisfying continuity.[14]

This observation highlights a structural feature evident in *Spirit Garden*. The closed nature and independent integrity of certain elements do somehow lend them a kind of isolation – indeed, many of them are set apart by moments of respite before and after. In terms of continuity, *Spirit Garden* does not present a tonal argument, but rather a rhapsody of coloristic discourse with interruptions, comments, varied melodic material and unified motivic figures. It is the last of these, the use of unified motivic figures,

[14] Transcribed from 'Enter the Garden', first broadcast 22 April 2007, BBC Radio 3, produced by Alan Hall

which is perhaps the most intriguing of Takemitsu's apparently freely inspired melodic devices. In the discussion of MTG-B above, it was noted that a series of intervals, a pair of minor thirds separated by a minor sixth <-3, -6, -3>, becomes a unifying characteristic of otherwise seemingly unrelated material. Figure 3.10 below shows four cases where this arrangement of intervals occurs, along with a schematic reduction of the pitches themselves.

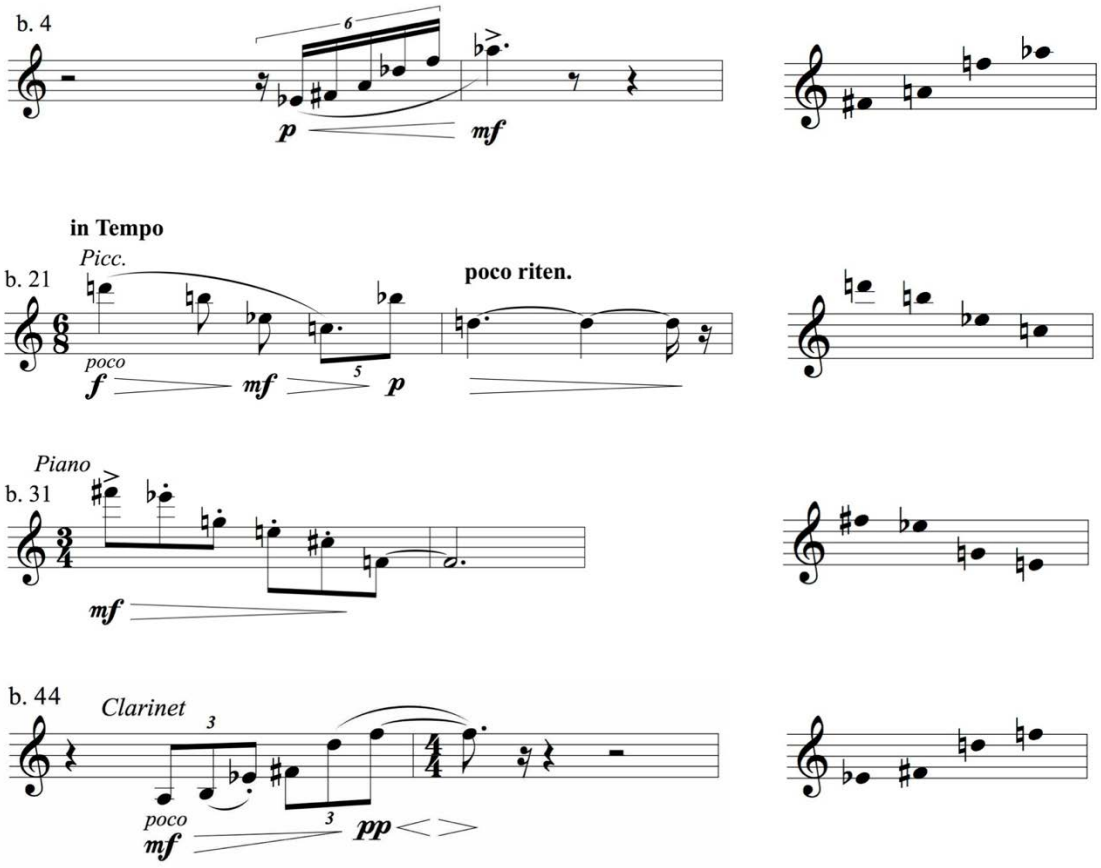


Fig. 3.10 Recurring interval arrangement schemata found in S.1

Here, the exact dispositions of the four-note schemata seem to indicates the reuse of a specific intervallic arrangement and order rather than a mere recycling of the pitch classes. These schemata are incorporated into arpeggiated motives of which, in terms of harmony, it is the remaining notes that establish the exact chord type. It is interesting to note that all four examples are six notes in length, thus introducing two more notes into each figure (note that, in the second example one of the 'added' notes, the D natural,

also occurs within its related schema resulting in only five discrete pitch classes). It is possible to describe the pitch content of both the first and fourth examples as the sum of two intervallic structures. The first structure is the four-note schema described above, while the remaining two notes form a second structure, an ic2 dyad. The relationship between the two examples can be described as a recombination of these two structures after two independent transformations. Taking the first schema above as the starting point, the fourth schema can be described as its transposition at T9 (down a minor third), while the relationship between the added dyads of these examples may be described as a transposition of T8 (down a major third).

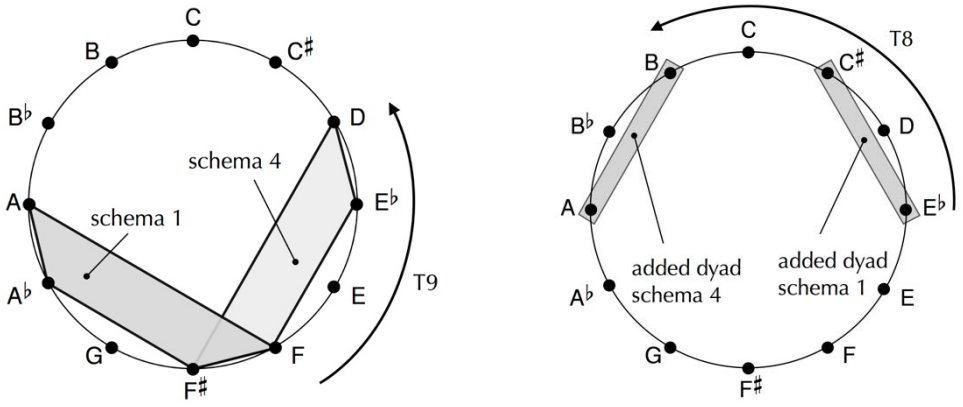


Fig. 3.11 Components of schemata 1 and 4 in Fig. 3.10

Interestingly, the inversions of these two independent transformations, T3 (up a minor third) and T4 (up a major third), accurately describe the relationship between the added dyads and schemata from the second and third examples (Fig. 3.12). It also appears that the second and third examples are employed in a distinctly thematic manner while the first and fourth examples have a more motivic nature. While it may seem possible that these two types of combination are consciously differentiated on the basis of their thematic or motivic assignment, and that their final structures were reached perhaps as a process of adaptation to pre-compositional ideals, the motivic and

thematic assignment is not maintained in later occurrences of this construct.

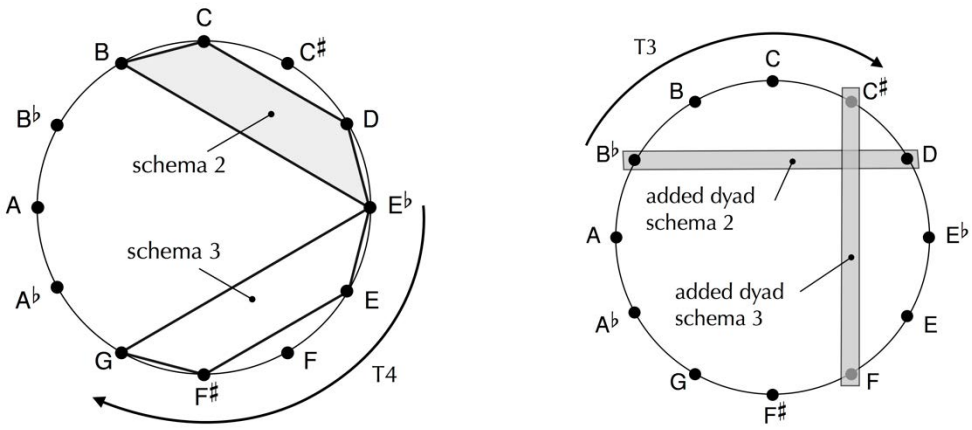


Fig. 3.12 Components of schemata 2 and 3 in Fig. 3.10

For example, the flourish in clarinets, harp and vibraphone in bar 67, examined below, follows the second form of construction – that associated with descending thematic lines above – while its character is that of the rising motivic lines of the first and fourth examples in Fig. 3.11.

It seems that much of the thematic material used in S.1 displays a more integrated internal relationship with regard to pitch content than is initially perceived, but that integration is neither absolute nor immutable in terms of thematic and motivic usage.

3.4 *Conclusions*

While Takemitsu's 1994 composition *Spirit Garden* appears, on the surface level, to be a freely constructed rhapsodic mosaic of coloristic variations, a detailed examination of certain structural aspects reveals a strict extramusical hierarchy governing the position and order of musical events throughout the work. The almost symmetrical appearances of similar material, albeit in coloristic variation, seem to echo the composer's own writings on his attempts to express the Japanese stroll garden in musical terms. One can go as far as to say that the formal structure of the work is more than a mere musical expression of a stroll garden, and borders on pragmatic representationalism.

Beyond the large-scale formal perspective, there is a consistent reliance on dualistic, or binary logic in terms of pitch choices and adjacent chord qualities. The exploitation of the variety of possible combinations of a small number of elements such as pitch sets or melodic units adds to the overall sense of continuity of the work. In contrast to the widespread impression that Takemitsu works instinctively and intuitively with little or no regard for form, it appears that much pre-compositional planning and the organisation of a detailed microcosm of pitch manipulation lie at the heart of Takemitsu's work. However, one analysis can hardly demonstrate a compositional principle on its own and thus to complete this short study, a second work will be examined, with the hypothesis that the same structural principles, or types of principles, should be evident there too, at least to an extent beyond that of chance. To that end, the following chapter examines various technical aspects of the construction of another orchestral piece written thirteen year earlier, *Dreamtime* (1981).

Chapter 4

Dreamtime

> Just as a dream, for all its vividness of detail, points to an unanticipated, unreal whole, so in this work short episodes hang suspended in seeming incoherency to form a musical whole.[15]

Takemitsu's choice of the words 'seeming incoherency' hints at the possibility of some hidden order behind the construction of *Dreamtime*. Indeed, while discussing in more general terms his approach to dreams as an extramusical source, the composer claims to have his 'own theories of structure and systematic procedure' and goes on to state that his 'music is composed as if fragments were thrown together somewhat unstructured, as in dreams' (1985: 106), the words 'as if' again suggesting some method in the apparent chaos. Peter Burt suggests that Takemitsu's decision to name *Dreamtime* after the Aboriginal myth was no more than an acknowledgement of a method of construction that had already informed his music for many years (2001: 190). Burt further suggests that Takemitsu's interaction with the surrealist artist and poet Shuzo Takiguchi had perhaps influenced his consideration of dreams as an aesthetic source. It was mentioned in the previous chapter that Takiguchi's influence may have had an impact on Takemitsu's formal thinking in terms of certain poetic structures, and here Burt indicates the possibility of influence in terms of content. It is interesting that one of Takiguchi's pen and ink works from around 1961 titled 'I-02' (Fig. 4.1 *a*.) bears a striking resemblance to Takemitsu's own sketch (Fig. 4.1 *b*.) with which he explains the dream that had inspired *A Flock Descends into the Pentagonal Garden* (1967). It is possible that the photograph of Marcel Duchamp's shaven head mentioned in

[15] From the liner note of the CD, Marin Alsop and The Bournemouth Symphony Orchestra, 'Takemitsu: Orchestra Works', Naxos 8.557760.

Takemitsu's own explanation (1995: 97) may have triggered a recollection of Takiguchi's work; nevertheless, the page Takemitsu presents is a representation of part of his pre-compositional planning, and it seems more informed by Takiguchi than by Man Ray's photograph (Fig. 4.1 *c*.).

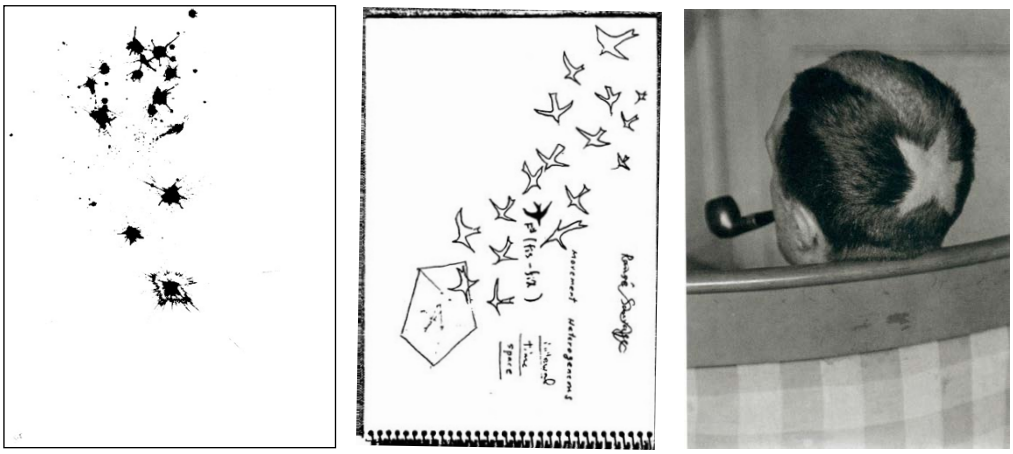


Fig. 4.1 *a*. Takiguchi *b*. Takemitsu *c*. Man Ray

Dreamtime was originally conceived at a gathering of Australian aboriginal dancers, musicians, singers and storytellers on the island of Groot Eylandt organised by Czech choreographer Jiří Kylián, who subsequently choreographed the work. Kylián writes that Takemitsu had described his method of composing as being like a walk in a Japanese stroll garden. According to Kylian, Takemitsu explained his idea for the composition of *Dreamtime* as follows:

> … this garden might not be very large, but very deep and very high…! In that garden is perhaps a fragile Japanese tree, but what is hidden from your sight are its complex and powerful roots which spread under a large area. You see a stone… but it is not clear if is the top of a huge underground mountain or just a pebble… [16]

Kylián continues by stating that 'we [Takemitsu and himself] have created a work in which the invisible is just as important as the visible', and indeed much of the following

[16] Cited from the internet page: www.jirikylian.com/creations/theatre/dream_time/info

analysis is aimed at uncovering the invisible roots of that fragile tree and to what extent they pervade the entire work. It is also interesting that Noriko Ohtake talks of Takemitsu's engagement with numbers by saying that it is as if the listener has been given a secret code to analyse. While working through many of the linear passages in *Dreamtime*, it often seems as if layers of encryption are being stripped away, with the veiled promise of a glimpse of some deeper meaning hidden at the heart of some ingenious puzzle.

For Takemitsu, dreams are always hinting at some unified meaning, and in the case of *Dreamtime*, unity would, to echo the quotation from Knussen in the introductory chapter, be achieved through the initially incomprehensible juxtaposition of short episodes. Consequently, any analysis of that unity would necessarily try to rationalise these juxtapositions, perhaps uncovering some of Takemitsu's 'own theories of structure'. In this chapter, then, an attempt is made, through pitch-class set analysis of motivic, melodic and harmonic material, to reveal something of Takemitsu's 'systematic procedures' and, following an examination of the form of *Dreamtime*, to speculate as to what his 'theories of structure' might entail.

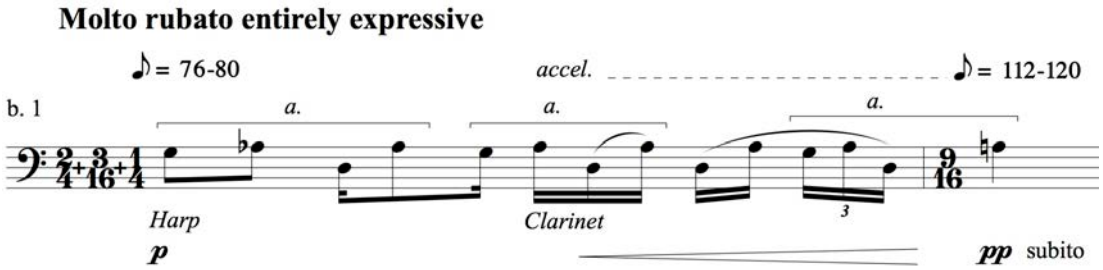
As far as I can tell, this constitutes the first in depth analysis of *Dreamtime*.

4.1 *Small-scale Structures*

The following sections looks at the pitch material of *Dreamtime*, beginning with an examination of the basic motivic cells and how they are combined. A detailed exploration of Takemitsu's serial-like ostinatos is made before moving on to the formation of melodic lines. Lastly, an investigation into the harmonic features of *Dreamtime* reveals a variety of systematic processes including the use of common pitches in modal transition and the persistent recurrence of the two *all interval tetrachords* (4-Z29 and 4-Z15) within many extended harmonic passages.

4.1.1 *Motivic Cells*

In the first bar of *Dreamtime*, a short three-note figure (bracketed a. in Ex. 4.1) forms one of the motivic cells which permeates much of the work.



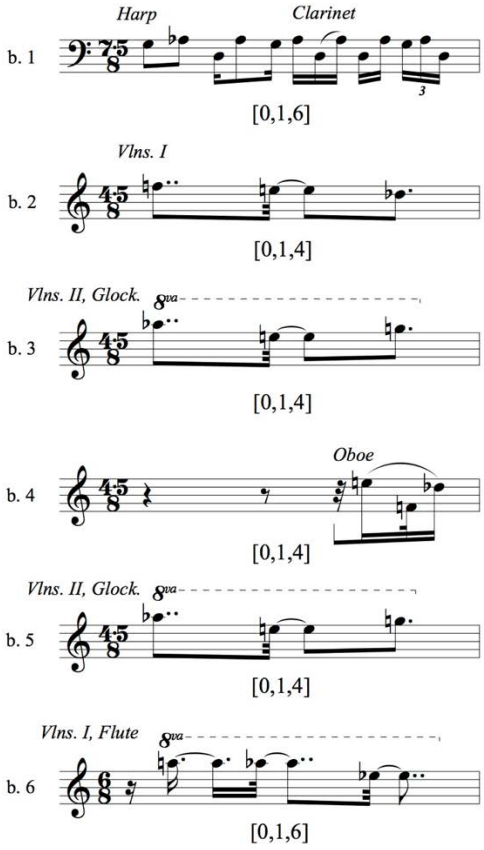
Ex. 4.1 *Dreamtime*, bar 1, reiteration of the [0,1,6] SEA collection

The pitch content of this figure forms an inverted transposition of Takemitsu's famous SEA motive: E flat (Es in German), E, A. An extension of the original SEA motive is given in Takemitsu's essay 'Dream and Number', constructed by adding rising thirds, which result in overlapping major triads on A and D flat. A transposition of the extended six-note collection becomes one of the generative pitch sources for *Dreamtime*. The division of this collection in *Dreamtime*, however, does not exactly match the linear derivation of the extended SEA motive but rather breaks it into two smaller sets that are then treated as independent elements. The first of these elements [0,1,6], as seen in example 4.1, corresponds directly to the first three pitches of the SEA motive, while the second element [0,1,4], appearing as the descending figure in the first violins in bar 2 (F, E, D flat), corresponds to the third, fifth and sixth pitches of the six-note extended SEA collection.

The previous year, Takemitsu had composed *Far Calls. Coming Far!* which, as the composer explains, explicitly employs the six-note extended SEA motive (1998: 10). It seems likely that he wished to explore further this pitch collection in *Dreamtime* without exactly repeating material from his earlier work. This attitude towards the reuse

of primary generative material is to be found elsewhere in Takemitsu's output, as is the case with *How Slow the Wind* (1991), *And then I knew 'twas Wind* (1992) and *Archipelago S.* (1993), all of which were composed approximately at the same time and share much thematic material (Burt 2001: 220–2). The occasional fragment even finds its way into *Spirit Garden* (1994), as was seen in chapter 3.

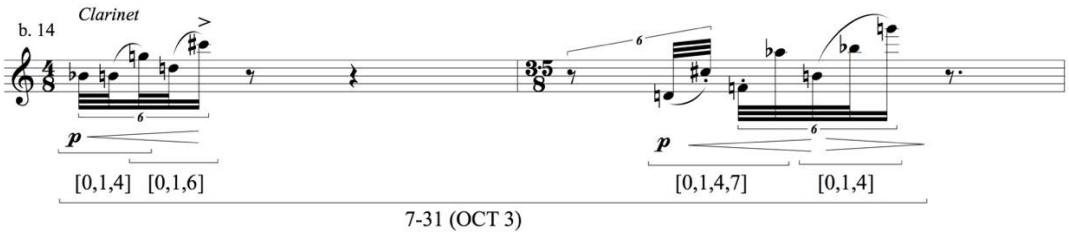
The extent to which the thematic content of *Dreamtime* is dependent on the above three-note pitch collections, [0,1,4] and [0,1,6], is immediately apparent from the opening bars. Each of the first six bars presents a motivic permutation of one or other of these sets as the principle melodic material (Ex. 4.2).



Ex. 4.2 *Dreamtime*, bars 1–6, permutations of the [0,1,4] and [0,1,6] collections

Further permutations of these motives appear in the various angular interjections in bars 14–17. The clarinet part in bars 14–15 is particularly interesting due to the somewhat symmetrical arrangement of the sets. The first three notes of the five-note figure at the

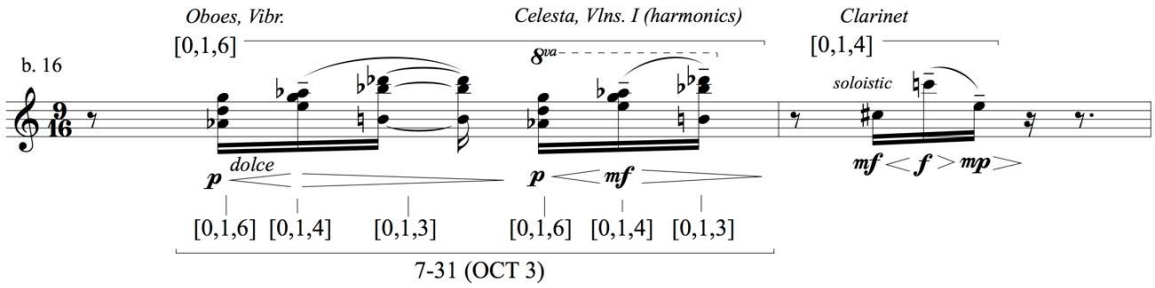
beginning of bar 14 form the [0,1,4] set, as do the last three notes of the seven-note figure in bar 15. The last two pitch classes of the first figure are the same as the first of the second figure. The three pitches at the end of the first figure form the [0,1,6] set as do the first, second and fourth pitches of the second figure (Ex. 4.3).



Ex. 4.3 *Dreamtime*, bars 14–5, quasi-symmetry and *laddergram* type linking

Important, from the perspective of this study, are the quasi-symmetrical arrangement and the *laddergram*-type linking that was seen in *Spirit Garden* in the previous chapter.

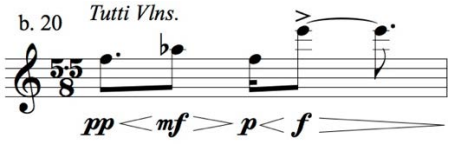
The repeated rising three-note figure in bar 16 and the three-note interjection in the clarinet part in bar 17 both reinforce the [0,1,6] and [0,1,4] sets as key constituents of the work (Ex. 4.4).



Ex. 4.4 *Dreamtime*, bars 16–7, vertical and horizontal [0,1,4] and [0,1,6] sets

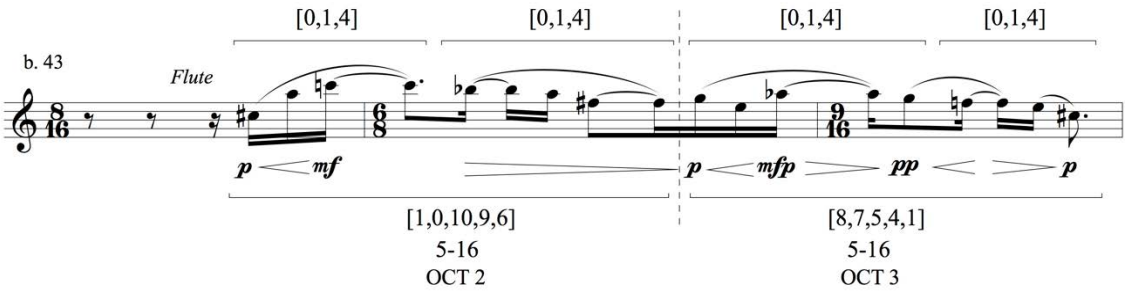
In bar 16 both the horizontal melodic line and the initial chord are versions of the [0,1,6] collection while the clarinet interjection in bar 17 forms a [0,1,4] collection. The clarinet interjection is part of an ongoing series of thematic transformations beginning with the oboe figure in bar 4, of which it is an intervallic inversion. The combination of the intervals of a minor third and a major seventh acquires an increasingly important

thematic role. The material at the beginning of *Dreamtime* seems to represent a 'search' for stable arrangements of these sets from which to build strong thematic structures. It is not until bar 20 that such a formation finally crystallises from the more exploratory style of the previous angular interjections. The increasing number of appearances of the intervals of a major seventh and minor third seem to culminate in the emergence of the four-note figure at bar 20 (Ex. 4.5).



Ex. 4.5 *Dreamtime*, bar 20, four-note figure [0,1,4]

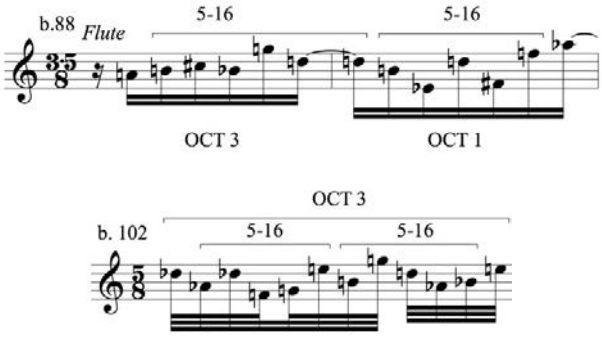
At bar 43, a longer melismatic melody displays four consecutive transformations of the [0,1,4] set (Ex. 4.6). Each half of the melody forms a 5-16 set [0,1,3,4,7], a superset of both the [0,1,4] and [0,1,6] collections. The first half of the melody falls within the ambit of the OCT2 collection and its second half falls within the ambit of the OCT3 collection.



Ex. 4.6 *Dreamtime*, bar 43, pitch symmetry within the melodic line

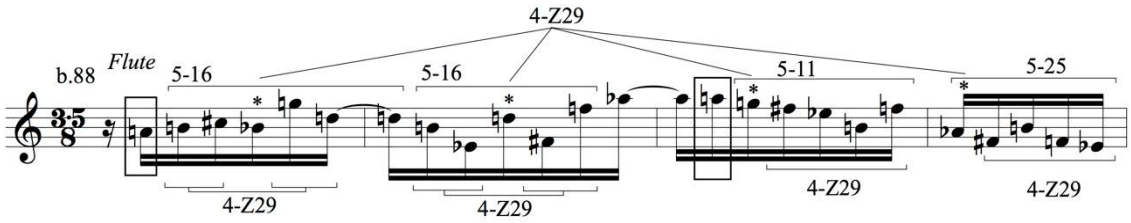
The above arrangement of 5-16 sets appears elsewhere in *Dreamtime*. One instance is the slow flute quasi-ostinato line beginning in bar 88, and another can be found, again in the flutes, beginning at bar 102, as a more rapid quasi-ostinato covering the complete OCT3 collection (Ex. 4.7). While it would be erroneous to link these passages as

melodic variations, together they do seem to indicate that Takemitsu was using certain processes of pitch-manipulation to generate diverse material.



Ex. 4.7 *Dreamtime*, bars 88–9 and bar 102, set symmetry in the quasi-ostinato lines

Further examination of these lines reveals a systematic construction reminiscent of that in the opening four chords of *Spirit Garden*. In bars 88–91, the flute line can almost be seen as a series of four linear statements of set 4-Z29 with a fifth 4-Z29 set interwoven among them so that only one note from the fifth set appears in each of the other four. This has the result of producing four pentads all of which are, of course, supersets of 4-Z29. Only the initial A natural in bar 88, the high A flat in bar 89 and the A natural in bar 90 do not fit into this scheme. Example 4.8 shows an analysis of the arrangement. The pentads are shown directly above the staff; the first four 4-Z29 sets are shown below the staff, and the fifth 4-Z29 set is indicated at the top of the diagram.



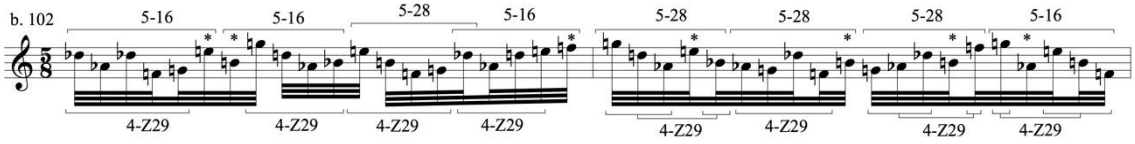
Ex. 4.8 *Dreamtime*, bars 88–90, analysis of pitch arrangement

Table 4.1 shows analysis of the passage in which all five 4-Z29 sets are given as pitch-class collections, along with the order that the pitches of each set appear, including the *rogue* A natural as the extra pitch in the fifth pentad.

Table 4.1 Analysis of the flute line in bars 88–91

bar. 16th	pitches	p-c set	4-Z29 subset	4-Z29 subset order
88.3-7	B–C♯–B♭*–G–D	5–16	[2,1,11,7]	3–2–4–1
89.2-7	B–E♭–D*–F♯–F	5–16	[6,5,3,11]	4–3–1–2
90.3-7	G*–F♯–E♭–B–F	5-11	[6,5,3,11]	1–3–4–2
91.1-5	A♭*–F♯–B–F–E♭	5–25	[6,5,3,11]	1–4–2–3
added set	A*–B♭–D–G–A♭	5-4	[7,8,10,2]	3–4–1–2

The above arrangement of set interpolation recalls the so-called tone-row of the opening chords of *Spirit Garden*. This might very well be considered a coincidence if it were not for the fact that when the passage at bar 102 is subjected to the same analytical method a startling similarity to bars 88–91 arises, now encompassing eight pentads.



Ex. 4.9 *Dreamtime*, bar 102–3, analysis of pitch arrangement

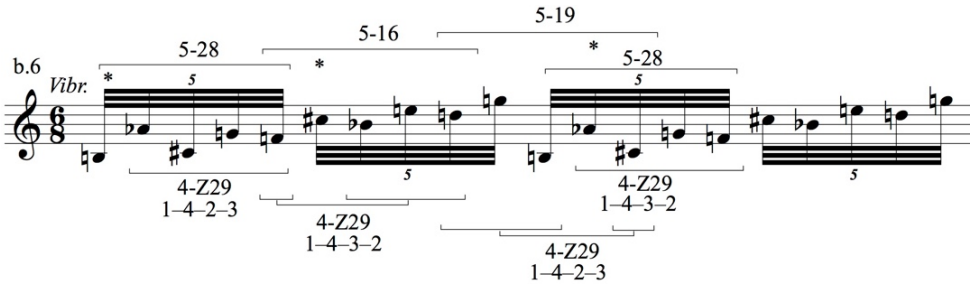
Only two slight anomalies spoil the ‘perfection’ of this passage and, as we have seen in *Spirit Garden* (lower parts in bar 5), Takemitsu seems to delight in making minute alterations that subsequently so confound analysts. Here, his playful libation to the Gods is especially pleasing. It turns out to be impossible to describe simultaneously both the eighth tetrachord and the extra ‘shared’ tetrachord as 4-Z29 sets. If the eighth set is taken to be 4-Z29 then the added set must be 4-18, while if the added set is taken to be 4-Z29 then the eighth set turns out to be 4-18. This recalls the story of the carved Yomei-mon gate at Nikko which the renowned physicist Richard Feynman uses to help describe an almost symmetrical phenomenon in the physical world.

> There is a gate in Japan […] with lots of gables and beautiful carving and lots of columns and dragon heads and princes carved into the pillars, and so on. But when one looks closely, he sees that in the elaborate and complex design along one of the pillars, one of the small design elements is carved upside down; otherwise the thing is completely symmetrical. […] the story is that it was carved upside down so that the gods will not be jealous of the perfection of man. So they purposely put an error in there, so that the gods would not be jealous and get angry with human beings (Feynman 1963: 47).

Table 4.2 Analysis of the flute line in bars 102–3

bar. 32nd	pitches	p-c set	prime order	subset	4-Z29 order
102.1-6	D♭–A♭–D♭–F–G–E*	5–16	[0,1,3,4,7]	4-Z29	1–4–3–2
102.7-11	B*–G–D–A♭–B♭	5–16	[0,1,3,4,7]	4-Z29	1–4–2–3
102.12-15	E–B–F–G–D♭*	5–28	[0,2,3,6,8]	4-Z29	1–4–2–3
102.16-20	D♭–A♭–D–E–F*	5–16	[0,1,3,4,7]	4-Z29	1–4–2–3
103.1-5	G–D–A♭–E*–B♭	5–28	[0,2,3,6,8]	4-Z29	1–4–2–3
103.6-10	A♭–G–D♭–F–B*	5–28	[0,2,3,6,8]	4-Z29	1–2–4–3
103.11-15	G–A♭–D♭–B*–F	5–28	[0,2,3,6,8]	4-Z29	2–1–4–3
102.16-20	G–A♭*–E–B–F or G*–A♭–E–B–F	5–16	[0,1,3,4,7]	4-Z29 or 4-18	3–1–4–2 or N/A
added set	D♭*–E–B–F–A♭ or D♭*–E–B–F–G	5-32 or 5-28	[0,1,4,6,9] or [0,1,3,6,8]	4-18 or 4-Z29	N/A or 1–4–2–3

Table 4.2 shows not only the consistency of Takemitsu's use of the 4-Z29 set but indicates that he also has a preferred sequence of its elements. Approximately half of the appearances occur in the order 1–4–2–3. With this in mind, an examination of the vibraphone part in bar 6 reveals yet another sequence of linear 4-Z29 subsets with similar ordering to that found in bars 102–3 (Ex 4.10). It is possible that the third pentad in Ex. 4.10 (5-19) is simply a coincidence since the first ten notes are repeated; nevertheless, it can be stated that the systematic interpolation of pitches into regularly ordered 4-Z29 sets clearly figures in many of the linear constructions of *Dreamtime*.



Ex. 4.10 *Dreamtime*, bar 6, order of elements within linear 4-Z29 subsets

A clear correlation between the ostinati at bar 6 and bar 102 can be seen from the almost perfect inversion of pitches within the two lines. In Fig. 4.2 only the 4-Z29 set elements are given. The elements of the three 4-Z29 sets in bar 6 align with those of the second, third and fourth 4-Z29 sets from bar 102 respectively (Fig. 4.2).

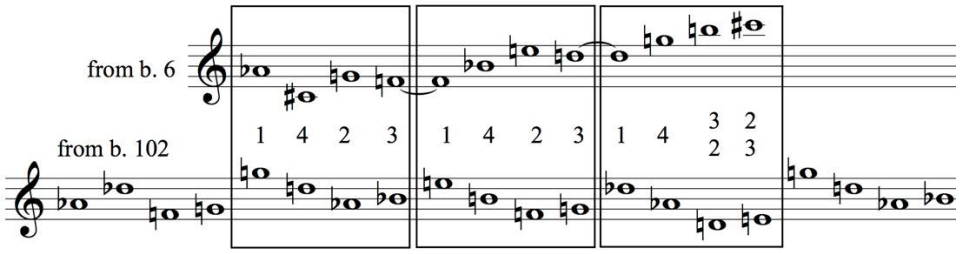
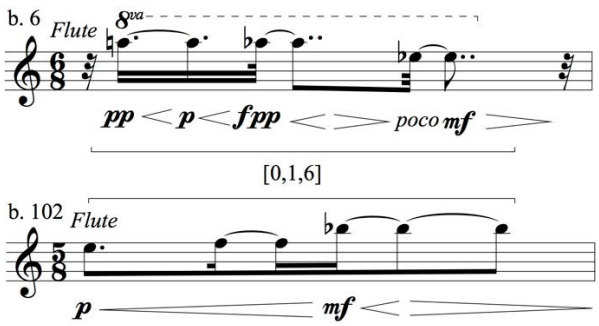


Fig. 4.2 *Dreamtime*, alignment of 4-Z29 elements in bars 6 and 102

In addition to the inversions of the ostinato material found in bars 6 and 102, pitch inversion is clearly evident in the melodic lines in both bars (Ex. 4.11). The 'SEA' collection [0,1,6] of bar 6 is inverted and transposed and is presented in a similar anacrusis rhythm in bar 102. These connections are clear enough to mark bars 6 and 102 as formally related.



Ex. 4.11 *Dreamtime*, collection [0,1,6] in bar 6 inverted in bar 102

Also of interest is the almost symmetrical order of the elements of the first four sets in bars 88–91. All but the final element of the second set are 'reflected' in the third and fourth sets as such: 3–2–4–1–4–3–1– (2) becomes 1–3–4– (2) –1–4–2–3. This may be seen as quasi-symmetrical about the last element of the second set with the last element of the third set being yet another of Takemitsu's frustrating alterations (Fig. 4.3).

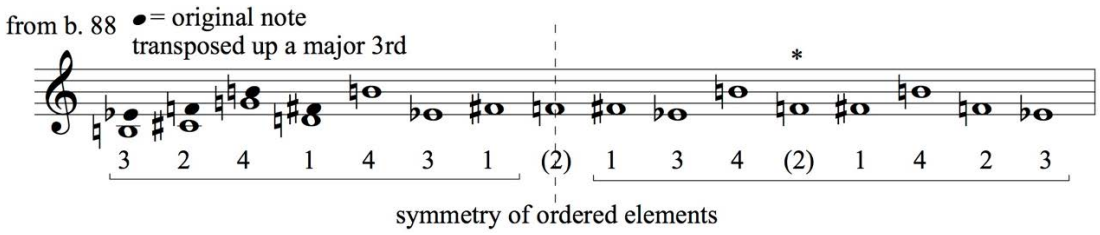


Fig. 4.3 *Dreamtime*, bars 88–91, quasi-symmetry in the ordered 4-Z29 subset elements

In addition to the [0,1,6] and [0,1,4] motivic cells, regular instances of other three-note cells are to be found in the melodic lines of *Dreamtime*. Of these, [0,2,6] and [0,1,3], both subsets of 4-Z29, occur nine and fourteen times respectively. The four cells [0,1,6], [0,1,4], [0,2,6] and [0,1,3] have been labelled A, B, C and D respectively, and mapped across the duration of the entire work in Fig. 4.4 (following page). In terms of form, the most important conclusion to be drawn from Fig.4.4 is that the concentration of these four motivic cells varies in density, revealing large sections where all four cells are used and others which dwell upon two cells almost exclusively. The primary melodic material in bars 1–26, 60–85 and 95–100 presents interactions between all four of these four cells, while the section at bars 27–59 derives the primary melodic material more from the [0,1,3] and [0,1,4] cells, and bars 86–94 and 101–12 again make use of less varied motivic source material. It is theoretically possible to see these divisions broadly as four large sections, as shown in the last line of Fig. 4.4, but it is more the thematic material, which is examined in the next section, and the contrasting dynamics that give the initial aural impression of form in *Dreamtime*. Nevertheless, there is here an interesting parallel to the four-part form of *Spirit Garden*.

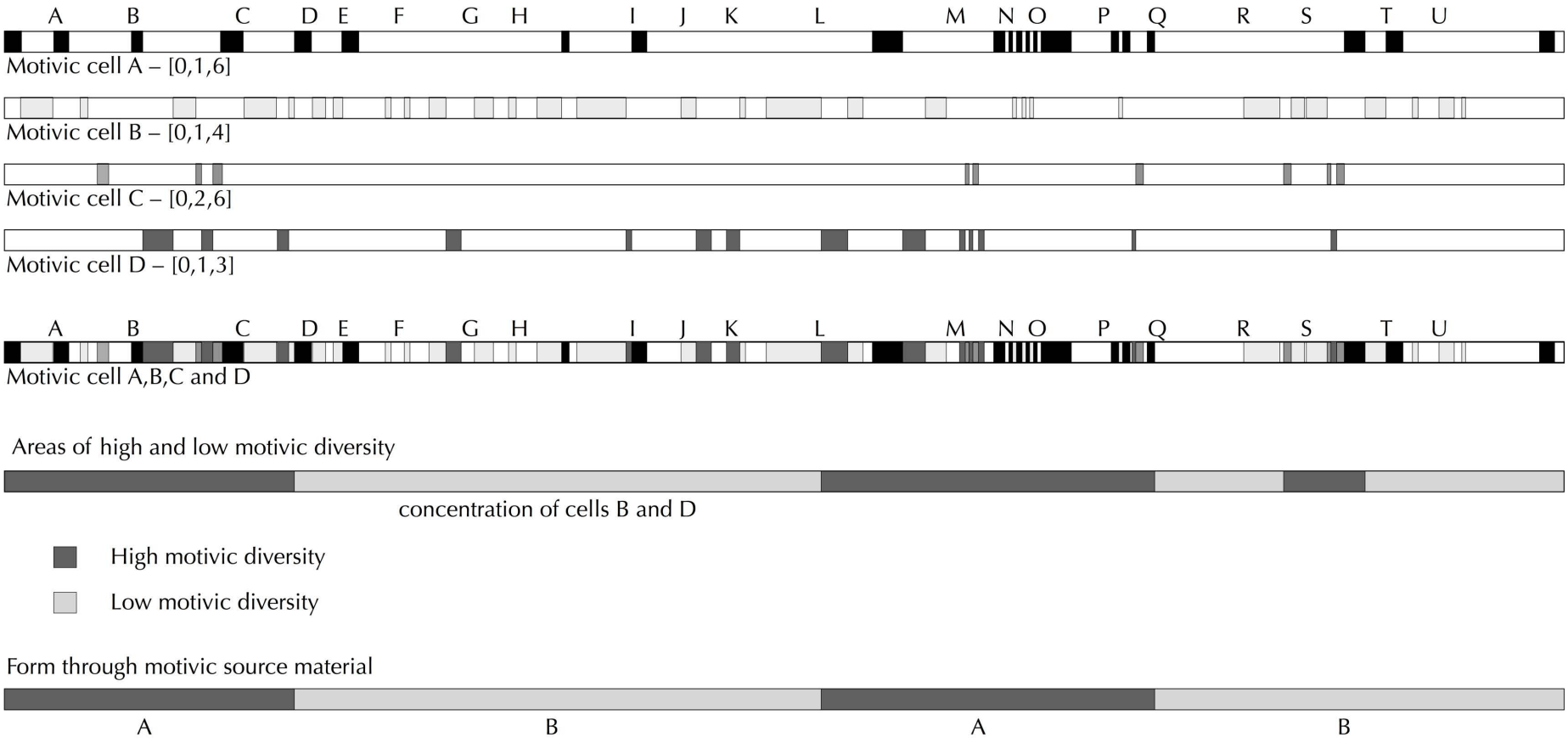
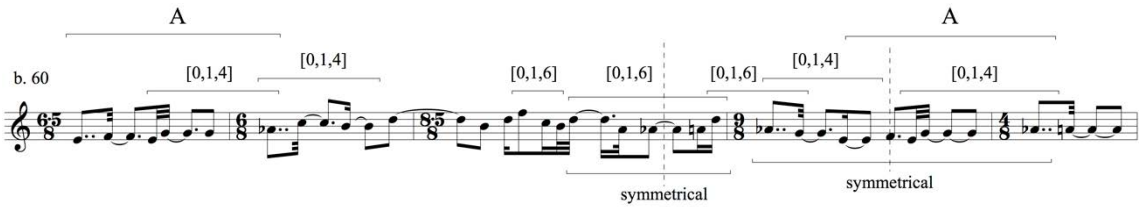


Fig. 4.4 Form through the arrangement of motivic cells

Taken together, the above processes of interpolation, inversion and retrograde bear striking similarities to serial techniques, but here they are applied to octatonic collections rather than the complete chromatic collection. Nevertheless, they are 'systematic procedures', and even if one of them involves a degree of chance, its application is systematic – a dice roll to determine every fifth set element is still a systematic procedure despite the results displaying the randomness inherent in that system. There exists the possibility of a purely deterministic process at work here, such as the use of a 'magic square', which has already been mentioned as the tool that Takemitsu used to generate the harmonic fields in *A Flock Descends into a Pentagonal Garden* (1967). The extrapolation of a 'magic square', if one exists, from the composition alone may be possible but it is beyond the scope of the present study.

4.1.2 *Melodic Material*

A long melodic line appears at the slow central section of the work, beginning at bar 60 (Ex. 4.12). This section stands apart from the rest of the composition in several ways. The tempo is marked *Extremely slow again, slower than letter H*, and is scored for thick divisi strings with only three supporting harp arpeggio on notes already present in the string parts; the dynamics are subdued, staying mostly in the piano to pianissimo range with only one longer crescendo building to the middle of bar 62; and the passage is almost entirely homophonic, with only the melody slipping slightly 'out of phase' for any more than a couple of notes.



Ex. 4.12 *Dreamtime*, bars 60–64, symmetrical arrangements within the melody

It can be seen from Ex. 4.12 that both the [0,1,4] and [0,1,6] cells figure frequently in the melodic line, and in addition to the roughly A-B-A disposition of these sets, other symmetrical arrangements also appear within the melody. In addition, there is an almost exact repeat of the opening notes (bracketed A in Ex. 4.12) towards the end, but not right up until the last note. As will be seen later, this 'repeat plus coda' is also exhibited formally by the entire work in which bars 16–19 are repeated towards the end of the piece and then followed by a twelve-bar coda. This last point supports the notion that Takemitsu sometimes includes a miniature version of the composition's form within the work itself, as was seen in *Spirit Garden*. The atmosphere of these bars is one of absolute serenity, creating an island of respite from the swoops and flares which characterise the rest of the work. The mood is only recalled briefly in the final three bars of the piece, which begin and end with a chord almost identical to that found at the beginning of bars 61, 63 and 64.

At bar 69, a thematic transformation of the central portion of the above melody appears in entirely homophonic style in the strings, woodwind and brass at a much louder dynamic. At bar 76 another transformation of the same section appears in clarinets with a shimmering string accompaniment. The correlation of the three passages is shown in Fig. 4.4. The pitches of the sections of each of the three melodies within the enclosure are exact transpositions. As was shown above, the melody contains two different [0,1,6] elements, both falling within a single octatonic collection.

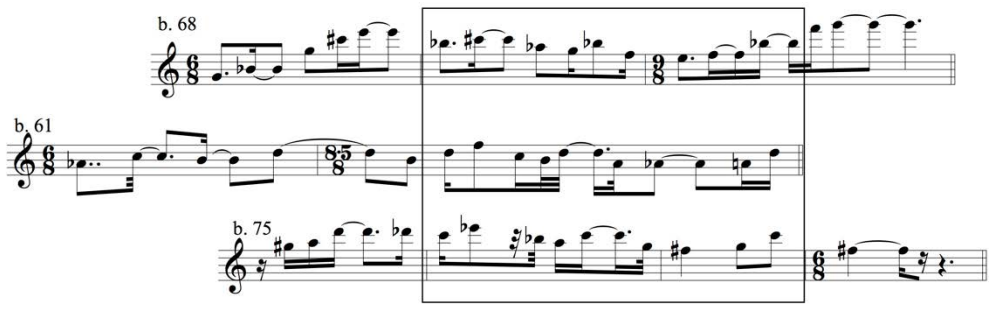


Fig. 4.4 *Dreamtime*, bars 68–70, 61–2 and 75–8, thematic transformations

The melodic line in bars 75–8 can be seen as a transformation of that in bars 43–5 with the motivic cell of [0,1,4] now loosely replaced with [0,1,6]. The alignment of the two passages is shown in Fig. 4.5. While at first these four passages may appear quite different in terms of dynamic and orchestration their melodic relationships are clear and can be considered coloristic variations.

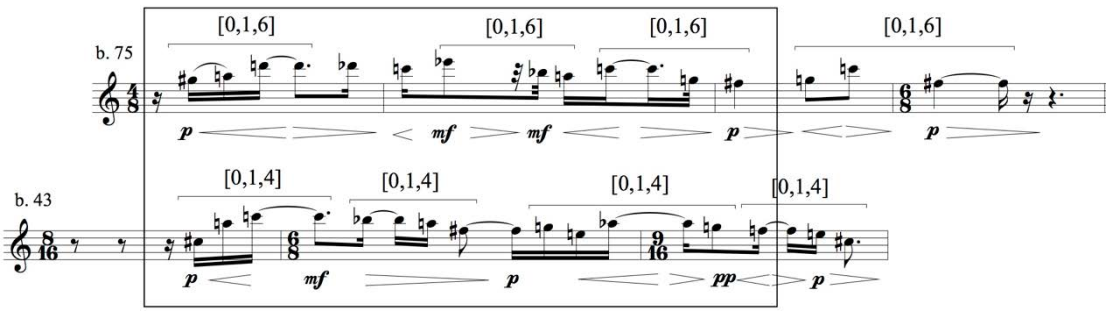


Fig. 4.5 *Dreamtime*, replacement of motivic cells in thematic transformation

The notion of expanding intervals in thematic transformation was seen in *Spirit Garden* at bar 58 (Ex. 3.6), but in bar 75–6 of *Dreamtime*, it is the outer interval of the motivic set that has been stretched from a diminished fourth to a diminished fifth.

Many of the melodic lines of *Dreamtime* seem to be constructed, to a large extent, from a variety of sequences of the two main motivic cells often arranged in quasi-symmetrical patterns. Similarly, there are examples of symmetry and interconnectivity in the harmony, which reveal a much more organised compositional approach than a mere juxtaposition of unrelated material. The harmonic language of *Dreamtime* will be examined in the following section.

4.1.3 *Harmonic Structures*

The two primary cells [0,1,6] and [0,1,4] combine to form several larger structures: [0,1,4,6] or pc set 4-Z15; [0,1,4,7] or pc set 4-18, which has already been seen linearly in Ex. 4.3; the pentad [0,1,3,4,7] or pc set 5-16, which is deeply integrated into linear

structures such as that in Ex. 4.6; the pentads [0,1,3,6,7] or pc set 5-19; [0,2,3,6,8] or pc set 5-28, and the hexad [0,1,3,4,7,9] or pc set 6-Z49 all figure prominently in the harmony of *Dreamtime*. Notably, many of these are supersets of the all-interval tetrachord 4-Z29, which, as was seen above, plays an important role in the construction of the quasi-ostinato figures at bars 6, 88–91 and 102-3.

In the opening bars, the harp, vibraphone, celeste and glockenspiel present a series of four chords, each of which includes set 4-Z15. The repeated transposition down a minor third is also apparent in the choice of added pitch classes (Fig. 4.6). From a technical perspective, the 'misaligned' transpositions of the 4-Z15 components and the added notes somewhat resemble bars 111–13 of *Spirit Garden*, where the chordal material is regularly transposed up a minor third.

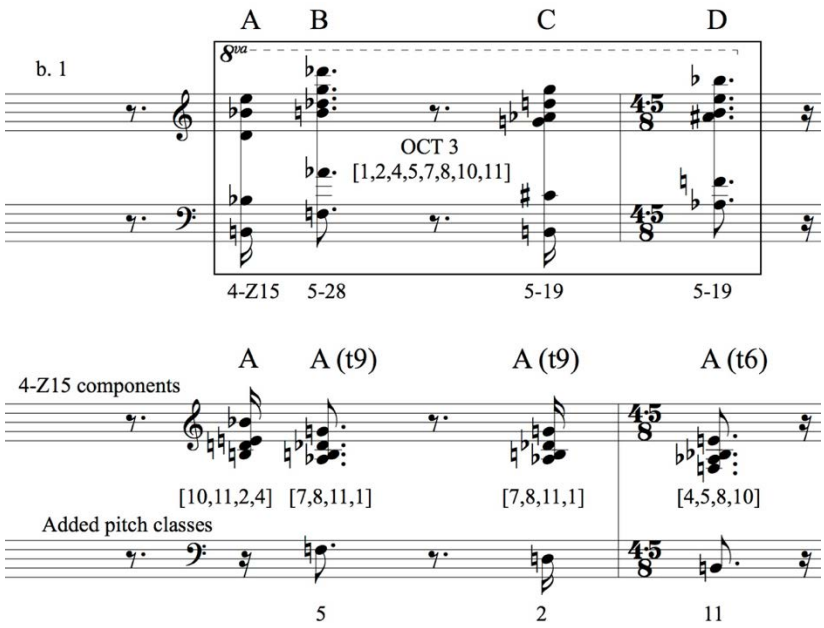
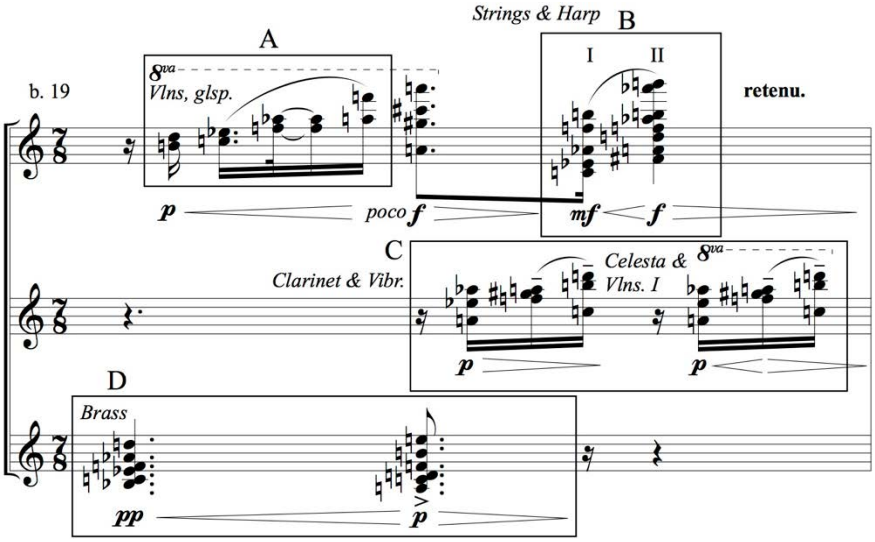


Fig. 4.6 *Dreamtime*, bars 1–2, 4-Z15 subset transpositions

There, the bass 'misses' one of these transpositions and falls behind by a step. Here, in each of the chords B, C, and D, the added notes descend in turn whereas the 4-Z15 component of chord C seems to 'stick' at t9. A complete study of this particular

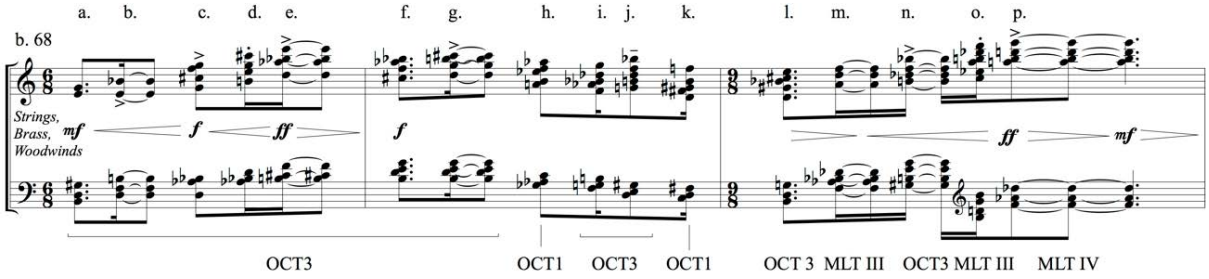
phenomenon in the music of Takemitsu is beyond the scope of this thesis, but it would be interesting to discover how often this phase-shifting of elements occurs in his output.

In the bar 19, a similar pair of semiquaver chords (enclosure B in Ex. 4.13) are also supersets of 4-Z15, and together complete the OCT1 collection. Within the same bar, the rising figure in the violins and glockenspiel (enclosure A in Ex. 4.13), which begins melodically with the [0,1,6] SEA motive, also covers seven of the eight notes of OTC 1 forming set 7-31, the set encompassed by the melodic interjections mentioned above (Ex. 4.4). Also, the rising three-note semiquaver chords in bar 19 are transposed versions of those appearing in bar 16 (enclosure C in Ex. 4.13); yet another layer of material in bar 19 consists of the diatonic clusters in the brass (enclosure D in Ex. 4.13). These recall the diatonic clusters of bars 7 and 8 (see below) inasmuch as they are related to each other by a minor third transposition – in bar 19 the two clusters form E flat major and C major scales, while in bars 7 and 8 the clusters form E major and D flat major scales.



Ex. 4.13 *Dreamtime*, bar 19, layers of octatonic and diatonic modes

Another instance of the systematic use of 4-Z15 can be seen in bars 68–70 (Ex. 4.14). All but the seventh of the chords in this passage contain the 4-Z15 set, including the final two, which are whole tone based rather than octatonic.



Ex. 4.14 *Dreamtime*, bars 68–70

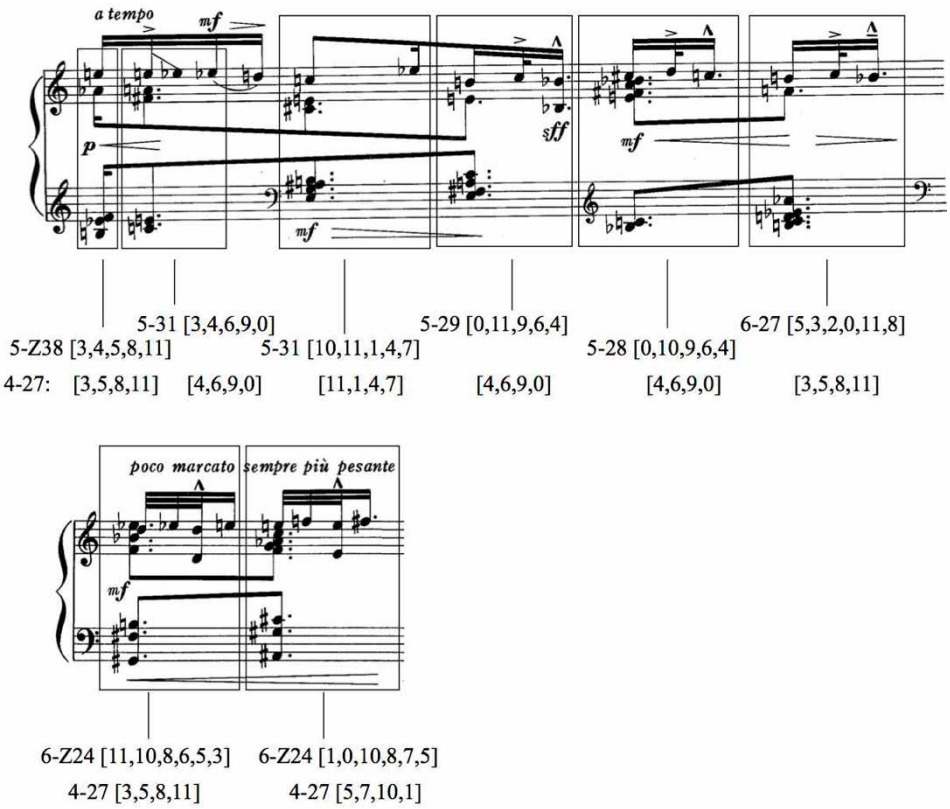
While the sets initially seem to be used at random, it is possible to find certain aspects of symmetry with in the number of 4-Z15 sets contained in each. It is clear that the number of 4-Z15 sets will, in general, increase with the cardinality of most sets within the octatonic collection, but this does not always hold true – set 5-25, for example, contains no 4-Z15 subset. Table 4.3 shows an analysis of this quality and the quasi-symmetry it displays.

Table 4.3 4-Z15 supersets in bars 68–70

chord	a.	b.	c.	d.	e.	f.	g.	h.	i.	j.	k.	l.	m.	n.	o.	p.
p-c set	5-32	5-19	6-50	7-31	7-31	8-28	5-25	7-31	6-23	8-28	6-30	7-31	6-44	7-31	8-24	7-28
4-15	1	1	2	3	3	4	0	3	2	4	2	3	1	3	4	2
MLT	II	II	II	II	II	II	II	II	II	II	II	II	III	II	III	IV

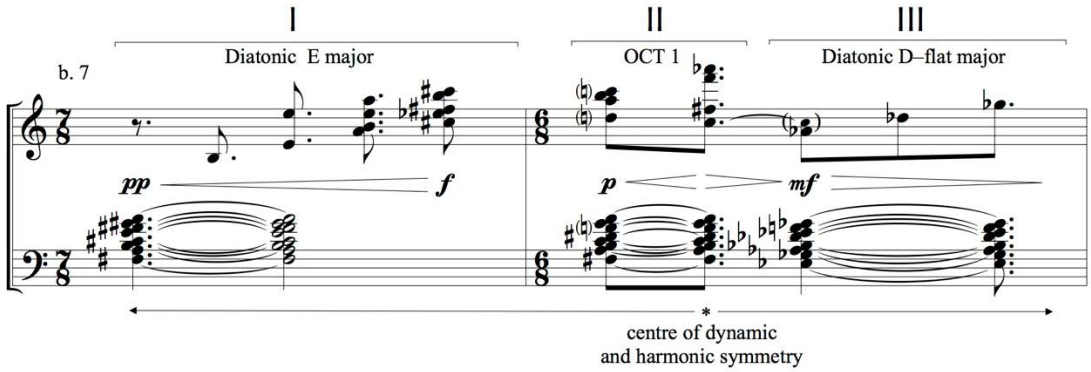
OCTATONIC → WHOLE-TONE BASED

The rich variety of supersets of a single tetrachord found in this passage can also be traced in *Uninterrupted Rests* (1952-9), in the passage beginning at the third line of the score (Ex. 4.15). There, Takemitsu uses six of the twelve possible pentads and hexads which circumscribe the set 4-27.



Ex. 4.15 *Uninterrupted Rests* (1952-9), lines 3–4, complex of 4-27 supersets

It was mentioned in chapter 3 that Takemitsu often creates quasi-symmetrical structures with dualistic divisions. In bars 7 and 8 of *Dreamtime* such a situation appears, presenting a melodic line which begins and ends with rising perfect fourths. The three-note figures (B–E–A and A flat–D flat–G flat) are each harmonised with a full diatonic cluster, the first in E major and the second in D flat major. The symmetry of these clusters is remarkable in that the leading note of the first diatonic cluster, E flat (enharmonically D sharp) is introduced at the last quaver, and the leading note of the second diatonic cluster, C natural is dropped after the first quaver (bracketed note in Ex. 4.16). The symmetry can also be seen as applying to the dynamic curve of the passage, which centres around the second quaver of bar 8, while the point of symmetry occurs itself at the Golden Section of the phrase, dividing it into eight and five quavers. The same ratio between diatonic and octatonic collections is also found in the final three bars of the entire piece.



Ex. 4.16 *Dreamtime*, bars 7–8 reduction, symmetrical formations

Of interest is the horizontal 'migration' of pitches between the diatonic and octatonic modes within this passage. Between the two diatonic clusters are two chords that together form the octatonic collection OCT1 from which four chords of the dominant seventh with an added 13th (pc set 5-25, a superset of 4-Z29) can be drawn, $B^{7,13}$ $D^{7,13}$ $F^{7,13}$ A flat^{7,13}. The first full-diatonic cluster (marked I in Ex. 4.16) contains $B^{7,13}$ (within the first enclosure in Fig. 4.7), while the second full–diatonic cluster (marked III in Ex. 4.16) contain A flat^{7,13} within the second enclosure. The intervening octatonic collection OCT1 (marked II in Ex. 4.16) contains both $B^{7,13}$ and A flat^{7,13} thus acting as a bridge between the two diatonic sets (Fig. 4.7).

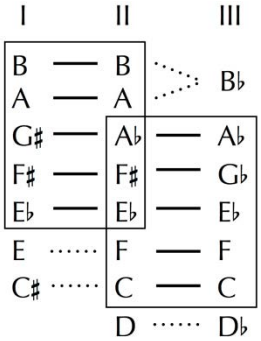


Fig. 4.7 *Dreamtime*, bars 7–8, modal migration

The A–B–A structure of this modal scheme is aurally very clear, with the sweetness of the first diatonic cluster giving way to the more acerbic octatonic for the second cluster, then returning to the smoother diatonicism of the third. This pattern of a contrasting

centre-piece is echoed in the formal design of the entire work where the music between letter L and M (bars 60–4) is markedly more relaxed and introspective than its surroundings. Modal migration is also found within this central passage in bar 62 (Fig 4.8). Here there is no overlap within the intermediate collection, and the full chromatic collection is covered. Once again, the aural effect of this 'side-shift' is entirely audible.

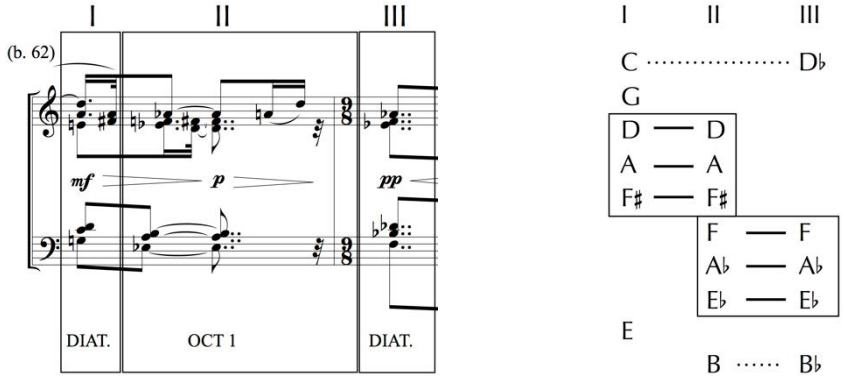
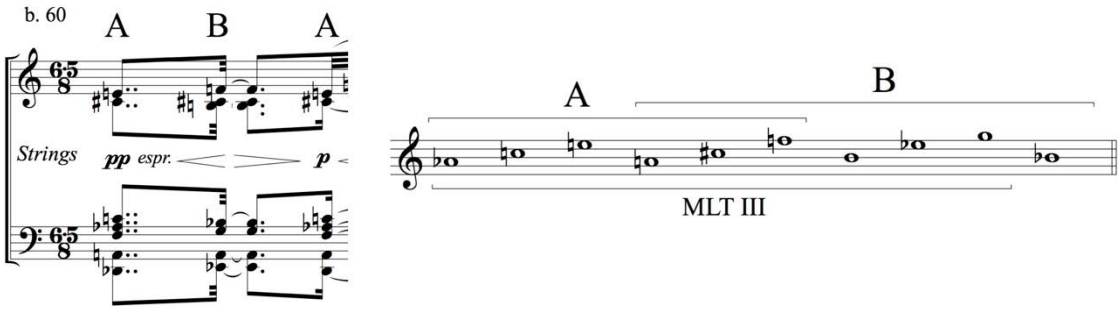


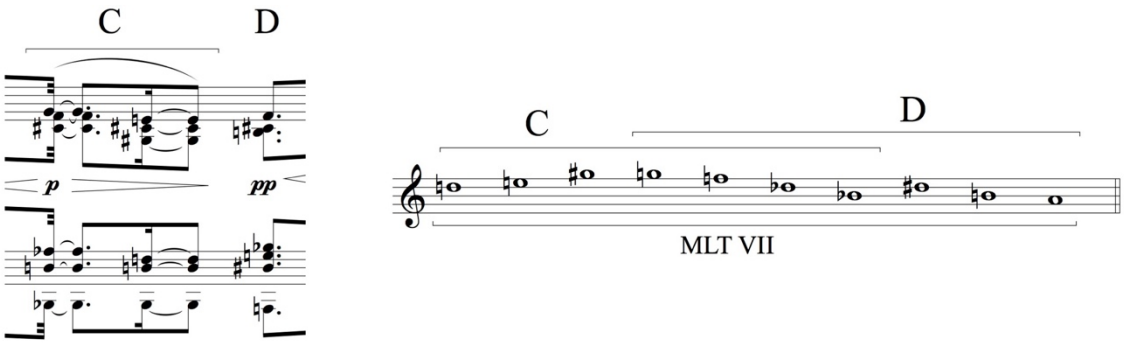
Fig. 4.8 *Dreamtime*, bar 62, modal migration

Further examination of the passage at bars 60–4 reveals that adjacent pairs of chords often form large well-known collections such as the octatonic, the whole-tone plus one, pc set 6-20, MLT III or MLT VII, with similarly recognisable smaller sets (i.e. augmented, major and minor triads, dominant seventh chords etc.) common to both chords. Even when substitution chords are used, such as in the third chord of bar 63 which assumes the role of the first chord in bar 60 when that passage is repeated, the adjacent chords together form complete collections of one of Messiaen's modes of limited transposition, and the notes common to both chords forms characteristic chords of these collections. For example, the common notes of chords A and B (Ex. 4.17 a.), which together form MLT III plus one, make up an augmented triad characteristic of MLTIII, while at bar 63, where the role of chord A is assumed by chord C, the combination of the two chords C and D in Ex. 4.17 b. complete MLT VII with an overlap of a half-diminished chord (Ex. 4.18 b.) – many of the chords of the first

example that Messiaen gives of the use of MLT VII in *Technique de mon langage musical* (No. 355) are half-diminished chords with one added note.

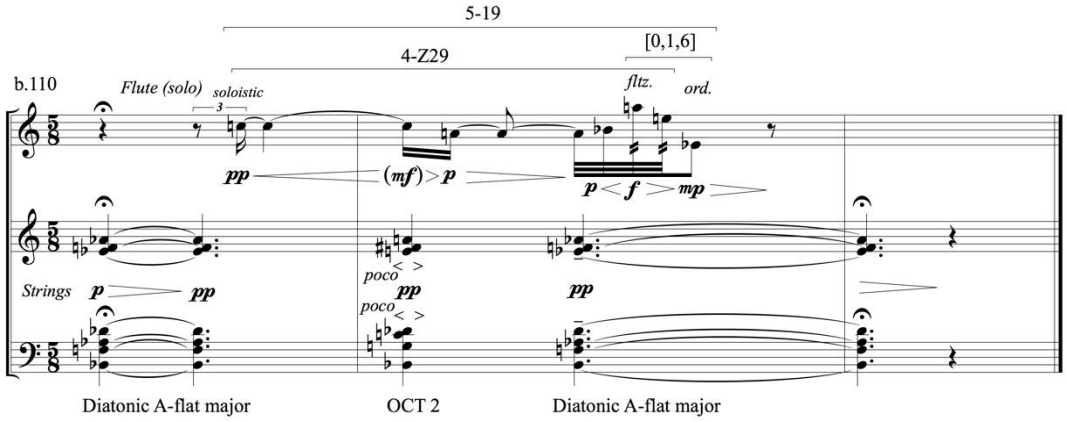


Ex. 4.17 a. *Dreamtime*, bar 60, chordal overlapping in the whole-tone based MLTIII



Ex. 4.17 b. *Dreamtime*, bar 63, chordal overlapping in the octatonic-based MLTVII

The final three bars of the work (Ex. 4.18) present a combination of two of the prominent melodic and harmonic processes used in *Dreamtime*. The flute line is made up of a now familiar superset of 4-Z29, 5-19, while harmonies in the string form a corresponding binary modal fluctuation from diatonic to octatonic and back again.



Ex. 4.18 *Dreamtime*, bars 110–12, modal migration and motivic 4-Z29 superset

4.2 *Large-scale Structures*

4.2.1 *Polymodality and Pitch Contamination*

The passage at bars 71–4 reveals one possible explanation of a certain harmonic feature of *Dreamtime*. The music is a combination of two independent ideas which, together, recall two of Messiaen's regular compositional techniques (Fig. 4.9). The first is the polymetric relation between the two superimposed ideas – a six-semiquaver figure (*a*. in Fig.4.9) and ten-semiquaver figure (*b*. in Fig. 4.9). The second of Messiaen's techniques is the idea of 'polymodality', which involves the simultaneous use of two or more of modes of limited transposition – in this case MLT VI and MLT II are clearly defined melodically in the two independent ideas.

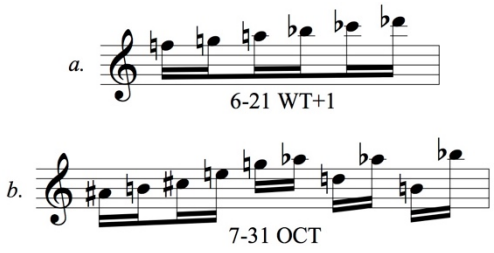
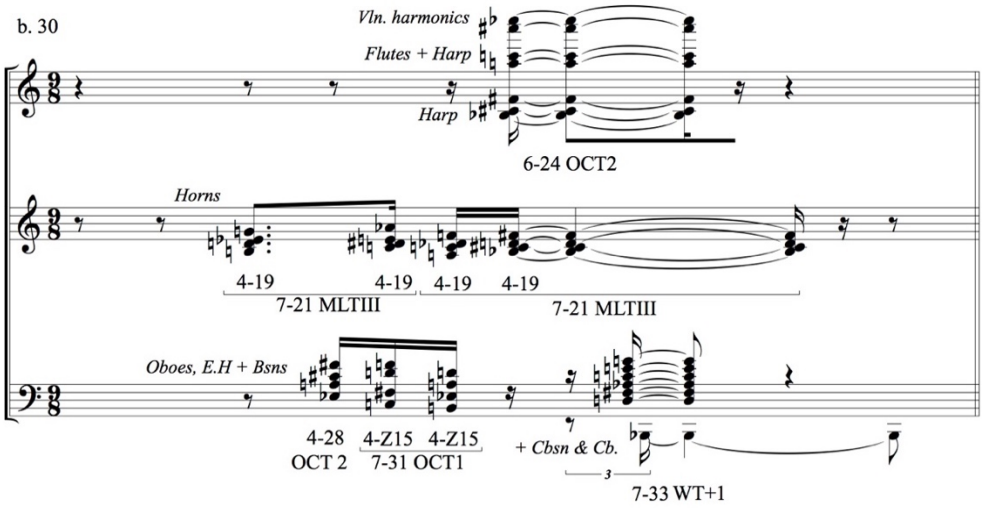


Fig. 4.9 *Dreamtime*, bars 71–4, metrically and modally independent ideas

In terms of pitch content, both figures *a*. and *b*. represent all but one pitch from the respective modes, however, taken together, they comprise the complete octatonic OCT3 plus one foreign note (A natural) or, to extend Burt's idea of WT+1, the OCT+1 collection. The OCT+1 collection is to be found regularly in *Dreamtime*. In bar 5, for example, only the C natural of the second cello trill lies outside the OCT3 collection.

Throughout *Dreamtime*, passages of vertically layered polymodality display the same attention to detail as the horizontal pitch migration examined above. At bar 30, for example, two independent ideas are presented simultaneously. The first is a series of four transpositions of the 4-19 chord (drawn from MLTIII) in the horns in parallel

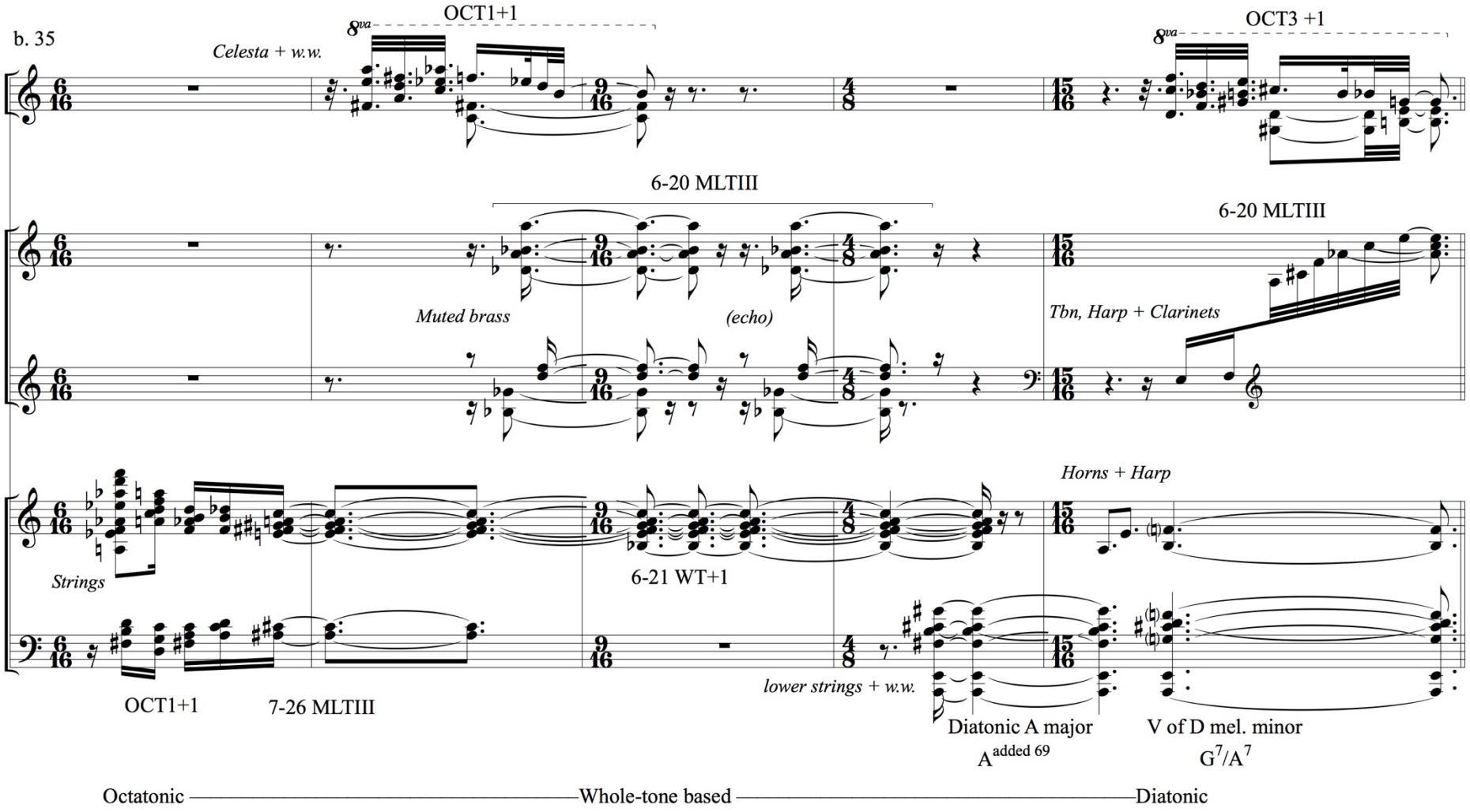
motion, which together cover the complete chromatic collection (second staff in Ex. 4.19). The second idea is made up of three octatonic tetrachords followed by a complete WT+1 collection spaced as a B flat extended dominant chord (third staff in Ex. 4.19). The final chord of the horn passage is reinforced with violin harmonics, harp and flutes.



Ex. 4.19 *Dreamtime*, bar 30, polymodality and closing modal shift

It can be seen that large modal subsets can be derived from summing neighbouring pairs of chords, such 7-21 a subset of MLTIII and 7-31, the octatonic scale minus a single note. The initial chords of both ideas when taken together also form 7-30, another seven-note subset of MLTIII.

A more extended passage of polymodal writing occurs at bar 35, where three modal layers are superimposed (see Ex. 4.20 on the following page). The strings enter with a swooping descent of four chords with clear octatonic derivation and settle on a fifth sustained chord of whole-tone derivation. In bars 38–9 the lower strings and woodwind present diatonic chords supporting a clear tonality of A major. Above the strings in bars 36–39 are two independent motivic structures, both played twice. In bar 36 the celesta, harp, vibraphone, clarinets and piccolo have a short octatonic motive covering 7-31 melodically, and harmonically the OCT1 plus an E natural. This motive is repeated in bar 39 a major third lower with a slightly different instrumentation.



Ex. 4.20 *Dreamtime*, bars 35–39, polymodality

The second motive is a muted brass ‘interruption’ which is echoed almost immediately. This motive forms the 6-20 set, the sum of two augmented triads and a common truncation of MLT III. While having no whole tones within the 6-20 collection, the augmented triads and abundance of major thirds within the sonority lean aurally towards a whole-tone impression. The passage is rounded off with an ascending arpeggio in the harp doubled by trombone and clarinets. Again, the arpeggio forms the 6-20 collection and, taken together with the brass interruptions, presents a complete MLTIII. The passage also displays a modal shift from octatonic to whole-tone based modes and then to diatonic modes. This series of modal shifts occurs frequently in Dreamtime, and will be examined in the following section, along with other recurring modal shifts, in an attempt to uncover the overall form of the work. There is a steady decrease in emotional intensity in this passage, which is followed by soft string chords with a clearer tonal focus. Examining such passages as this, bars 7–8 and bar 68–70, there seems to be some correlation between the order of modes within a passage and its emotional curve. This, too, will be addressed in the section on medium and large-scale form.

The confluence of the 6-20 arpeggio, the octatonic motive and the sustained chord in the second half of bar 35 display what might be described as ‘pitch contamination’. The C natural added to the octatonic motive and the A natural in the sustained chord are the two notes of the 6-20 arpeggio that do not belong to the OCT3 collection, which otherwise comprises both the octatonic motive and the sustained chord. The idea of ‘borrowing’ foreign pitches between the modes in polymodal passages might explain why certain motives with a clear aural octatonic character appear to be ‘contaminated’ with extraneous pitches. A simple example occurs on the third beat of bar 6 where the sustained chord belongs to a WT+1 collection, as does the supporting harmony of the main line. However, the ostinato material, while clearly octatonic-based, is ‘contaminated’ with an A natural which seems to have ‘drifted in’ from one of the

whole-tone collections. Fig 4.10 shows the pitch content of each element of the beat in question and its modal derivation with the contaminating A natural being drawn from the sustained horn and lower string chord.

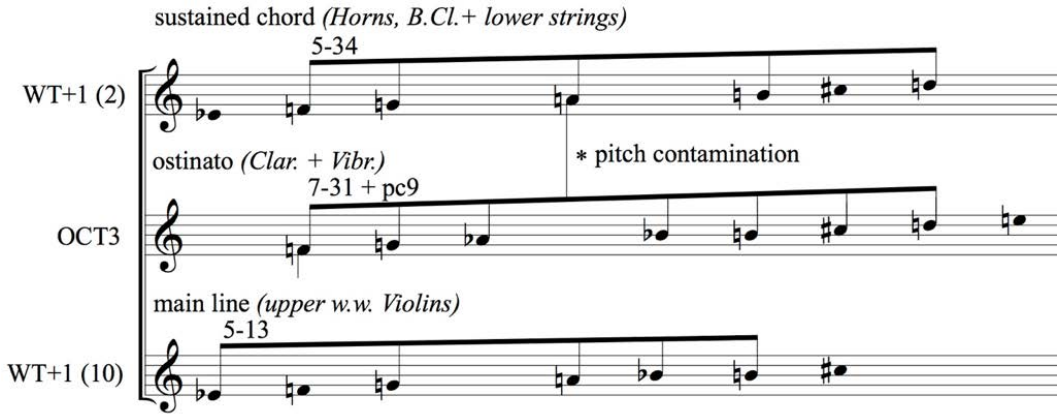
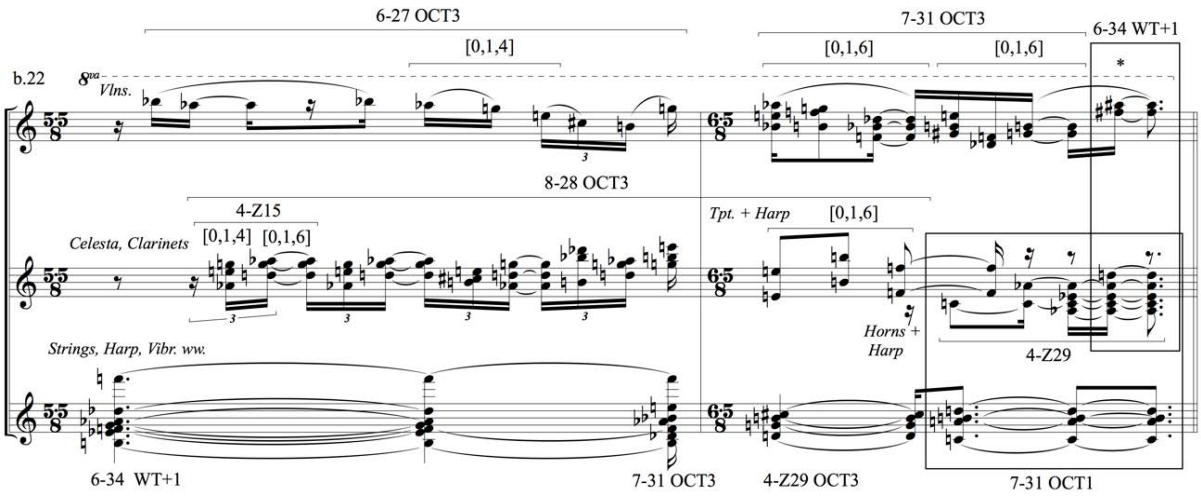


Fig. 4.10 *Dreamtime*, bar 6 beat 3, polymodal 'pitch contamination'

Vertical situations of polymodality also display the sharing of emblematic collections between the modes, rather like the horizontal modal migrations mentioned above. At the end of bar 23 a combination of WT+1 and OCT1 appears with an overlap of the now familiar 4-Z29 (Ex. 4.21). The final chord in bar 23 is the climax of a short crescendo to *forte*.



Ex. 4.21 *Dreamtime*, bars 22–3, polymodality

Similar crescendos towards a final chord or group of chords, displaying a modal shift at the end of a phrase, occur regularly throughout *Dreamtime*, such as the passage in bars 68–70 examined above. These instances will be used in the following section to help identify some of the focal points in the work's formal structure. The modes of the string chords and the clarinet and celesta triplets in bar 22 have a similar relationship to that between the modes in final chord of bar 23. The octatonic collection and the WT+1 set 6-34 can be superimposed in such a way that the resulting superset appears to be an octatonic collection plus one, two or three extra notes, while the overlapping subset is absorbed into the prevailing octatonic collection. In the first chord of bar 22, the one 'extra' note is E flat, while in the final chord of bar 23 the 'extra' note is the high B flat. Such superimpositions may be clearly defined melodically as in bars 71–4, while others such as that in bar 6 are more integrated into the harmonic surroundings. It will be shown later that the specific arrangement of these pitch contaminations cover the entire length of the piece and fall into a seemingly prearranged plan. The discussion between Jiri Kylián and Takemitsu referred to the importance of the invisible elements in *Dreamtime* and it may well be that this is something like a map of the hypothetical underground root system of the 'fragile Japanese tree'.

The harmonic language of *Dreamtime* appears to revolve around three major axes. The first is the almost continuous inclusion of specific subsets, such as 4-Z15 or 4-Z29 in chains of harmonies as in bars 1–2, and 68–9. The second axis is the migration from mode to mode, using emblematic pitch collections as pivotal links. These shifts display patterns of either an extended section in one mode followed by a short pivot to another mode before returning as in bars 7–8 and 110–12, or a movement to another mode at the close of a phrase or motive as in bars 68–70. The third axis of the harmonic language is the use of more than one mode simultaneously, polymodality, often resulting in densely

chromatic passages such as those at bars 6, 19, 22–3, 30, 35–9 and 71–4, where occasional cross contamination between modes may occur.

4.2.2 *Form Through Modal, Dynamic and Pitch Structures*

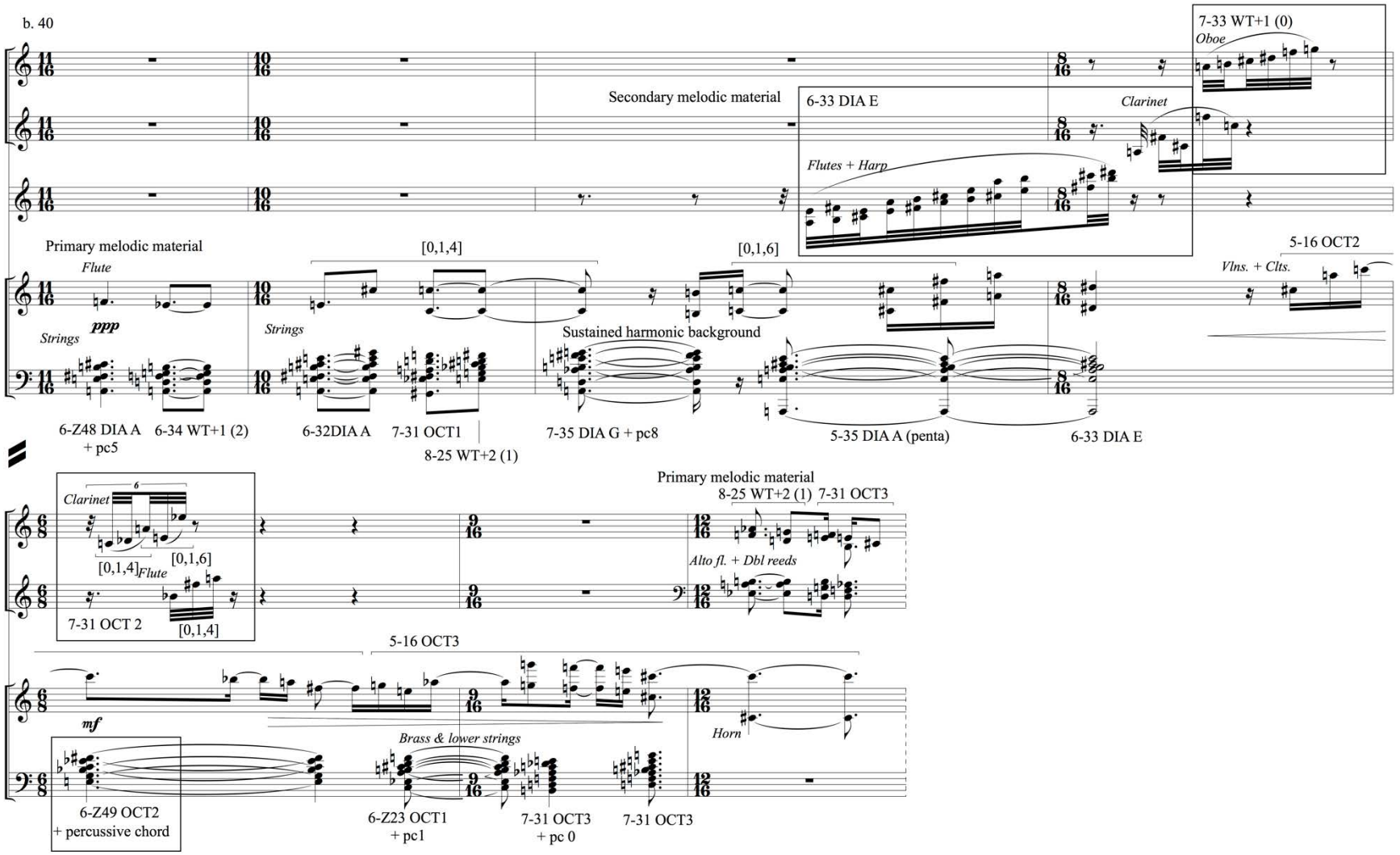
In *Dreamtime*, Takemitsu is clearly interested in interchanges between modes, and many of the short passages that make up the work exhibit subtle shifts between diatonic, whole-tone and octatonic modes, which in turn often guide the dynamic curve of the passage. The appearances of occasional 'foreign' pitches in otherwise purely modal passages (pitch contamination) present another architectural level of the form of *Dreamtime*. In addition to the rather abstract ideas of modal shifts and pitch contamination, a more traditional examination of the arrangement of the various motivic cells and coloristic variations helps to define the surface level form of *Dreamtime*. The symmetrical and asymmetrical dispositions of these all factors seem to delineate and unify the large sections of the work into a whole.

The modal shifts fall into three main categories: the first of these is a short 'auxiliary' sidestep from one mode to another and back again as in bars 7–8 (Diatonic A–flat, Octatonic, Diatonic E). The second category includes shifts from one mode to another that do not return to the previous mode within the same phrase or have a more permanent character such as in bars 68–70 (Octatonic to the whole-tone based modes MLT III and MLT IV). The third category includes passages where a twofold shift takes place within the same phrase as happens in bars 34-9.

Almost all of the music in *Dreamtime* can be seen as belonging to one of four layers. The first layer contains the primary melodic material, including any parallel harmonic support; the second layer contains the secondary melodic material, again including any harmonic support rhythmically related to it; the third is the sustained or static harmonic backgrounds over which melodic material is presented and the fourth

layer consists of the various percussive chords that punctuate the work. The distinctions between these layers facilitate pitch-class segmentation and the identification of modes. Ex. 4.22 shows the material in bars 40–6 grouped according to these layers. The primary material begins with parallel support for the first bar, after which it becomes a unison line over a sustained harmonic background. The secondary melodic material includes the woodwind and harp flourishes, while the harp also reinforces the peak of the dynamic swell at the beginning of bar 44. In bar 46, the primary melodic material is now in the alto flute and double reeds. The modal shift across this passage can be broadly described as moving from diatonic to octatonic with short references to whole-tone based collections, i.e. DIA – WT – OCT, with the dynamic climax at bar 44 marking the moment where the octatonic mode is established. In *Dreamtime*, crescendos often seem to accompany modal shifts towards whole-tone based modes while quieter dynamics are often to be found at diatonic passages. These correlations between dynamics and modes are not systematically applied, with exceptions to these general observations occurring throughout the work. Nevertheless, they are useful in identifying 'cadential' figures and will help outline the form of the piece.

Bars 35–46 displays many of the above features, lending coherence to the eleven-bar passage. Table 4.4 gives the pitch-classes of the various materials, and shows the modes of each layer (the passage contains none of the percussive chords of the fourth layer so the column has been omitted) as well as pitch contaminations, motivic cells and the general dynamic.



Ex. 4.22 *Dreamtime*, bars 40–46

Table 4.4 Layers of material in bars 35–46

bar/division		1° Melodic line	2° Melodic line	Harmonic BG	P. Con.	motivic cell	dynamic
35	1	7-31 OCT1				[0,1,4]	*pp*
	2	6-Z47 OCT1 + pc7			7		*mf*
	3	7-31 OCT1					
	4	6-Z39 OCT1 + pc1			1		*p*
36		7-31 OCT1 + pc4		7-26 MLTIII	4	[0,1,4,]	*mf-f*
37			6-20 MLTIII				*p*
38	1						*mf*
	2			DIA A			*pp*
39		7-31 OCT3 + pc0	6-20 MLTIII	DIA C + pc1	1/0	[0,1,4,]	*p-mf*
40	1			6-Z48 DIA A + pc5	5		*ppp*
	2			6-33 WT+1 (2)			
41	1	6-32 DIA A				[0,1,4]	
	2	7-31 OCT1					
	3	8-25 WT+2 (1)					*mf-p*
42	1			7-35 DIA G + pc8	8		*p*
	2	5-31 OCT2	6-33 DIA E	5-35 DIA A penta		[0,1,6]	*ppp*
43	1			6-33 DIA E			*p*
	2	5-16 OCT2	7-33 WT+1 (0)			[0,1,4]	*p-mf*
44	1		7-31 OCT2	6-Z49 OCT2			*mfp*
	2						*p*
45	1	5-16 OCT3		6-Z23 OCT1 + pc1	1		
	2			7-31 OCT3 + pc0	0		
	3			7-31 OCT3			*pp*
46	1	8-25 WT+2 (2)					*p*

From the above table, it can be seen that the louder dynamics generally fall at the introduction of whole-tone based modes. For example, in bar 36 the brass figure presents a complete 6-20 set – a truncation of MLTIII – which projects out from the sustained string chord, together with which it forms the complete third mode of limited transposition. At the end of bar 41 the dynamic reaches mf exactly where the string

chord consists of an entire MLTVI collection. In bars 38–43, the mostly diatonic chordal background remains between *p* and *ppp*. In bar 43, the woodwind flourishes have a modal shift from diatonic (pentatonic) to WT+1, with a whole-tone scale in the oboe peaking at *mf* exactly at the moment of the modal shift. When these crescendos to whole-tone based modes and quieter diatonic passages are mapped across the duration of the entire work it becomes clear that the crescendo is used regularly, while the quiet diatonic passages appear in three sections. The first group of quiet diatonic chords is the passage examined above, bars 35–46; the second group consists of the four instances in the very slow middle section at letter L, and the third is at the very end of the piece, which was examined in Ex. 4.18. In the column marked P. Con. in Table 4.4, the various foreign pitches, which seem occasionally to contaminate 'pure' modes, have been mapped. While these occur throughout the entire work, there are, however, passages where the concentration is much higher than others. Again, the above passage is a case in point with a high concentration of pitch contamination and when these pitches are compared across the duration of the entire work a rather startling pattern appears. The pitches in each concentration form collections that contain a 4-Z29 set. This long-range process of interpolation, recalling the quasi-ostinato lines examined in the motivic section above, points to a much more organised pre-compositional plan than would be expected on aural impressions alone, and is certainly one of the most important findings of the present analysis. The third line of Fig.4.11 shows a summary of the concentrations of pitch contamination.

There is also a strong, but not exact, correlation between the motivic cells and the thematic material (fourth line in Fig. 4.11). The occasional discrepancy is accounted for by the use the interchanging of motivic cells in coloristic variations of certain themes such as the use of [0,1,6] in bars 75–8 instead of the [0,1,4] cell found in the original at bars 43–7.

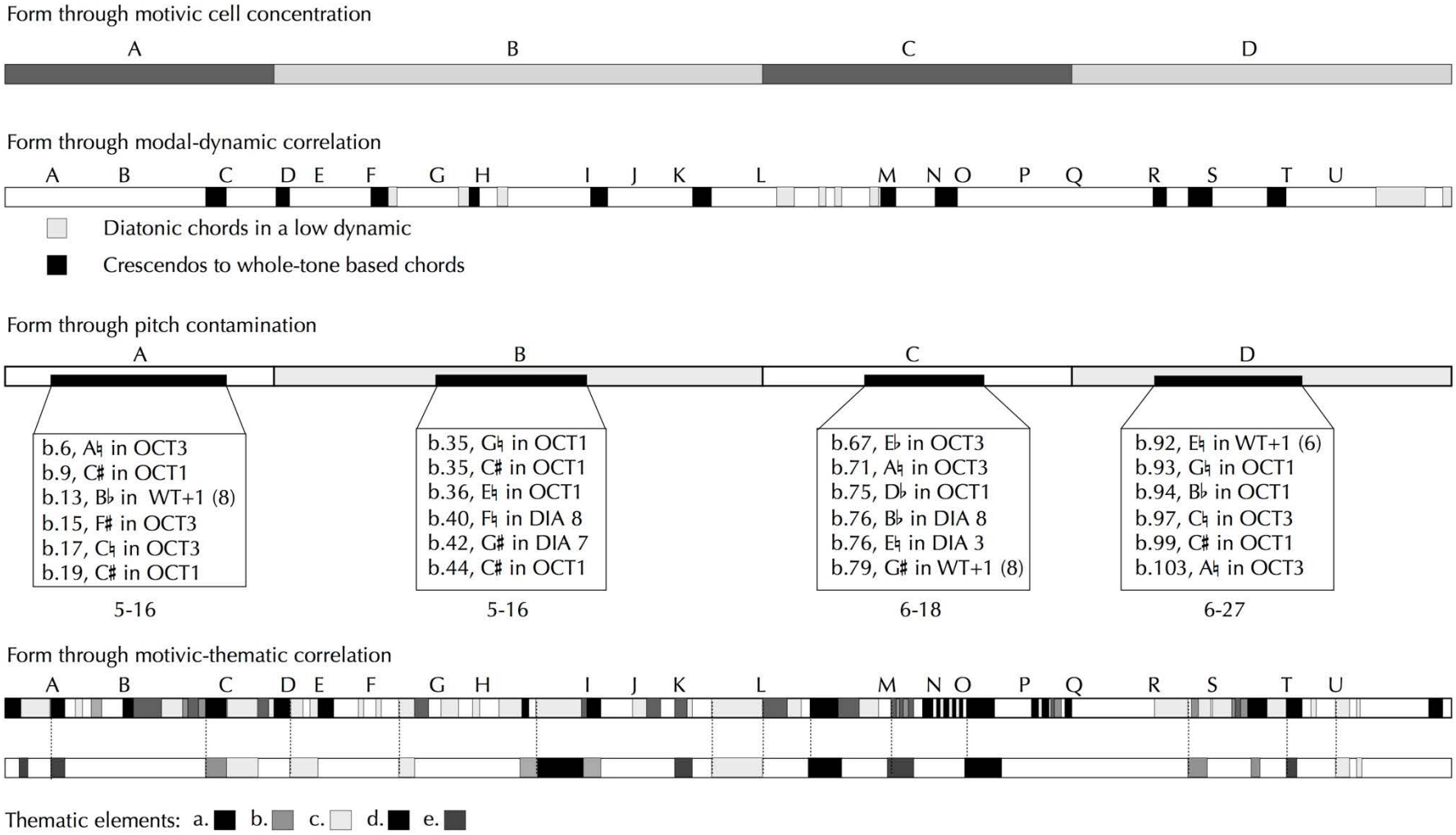
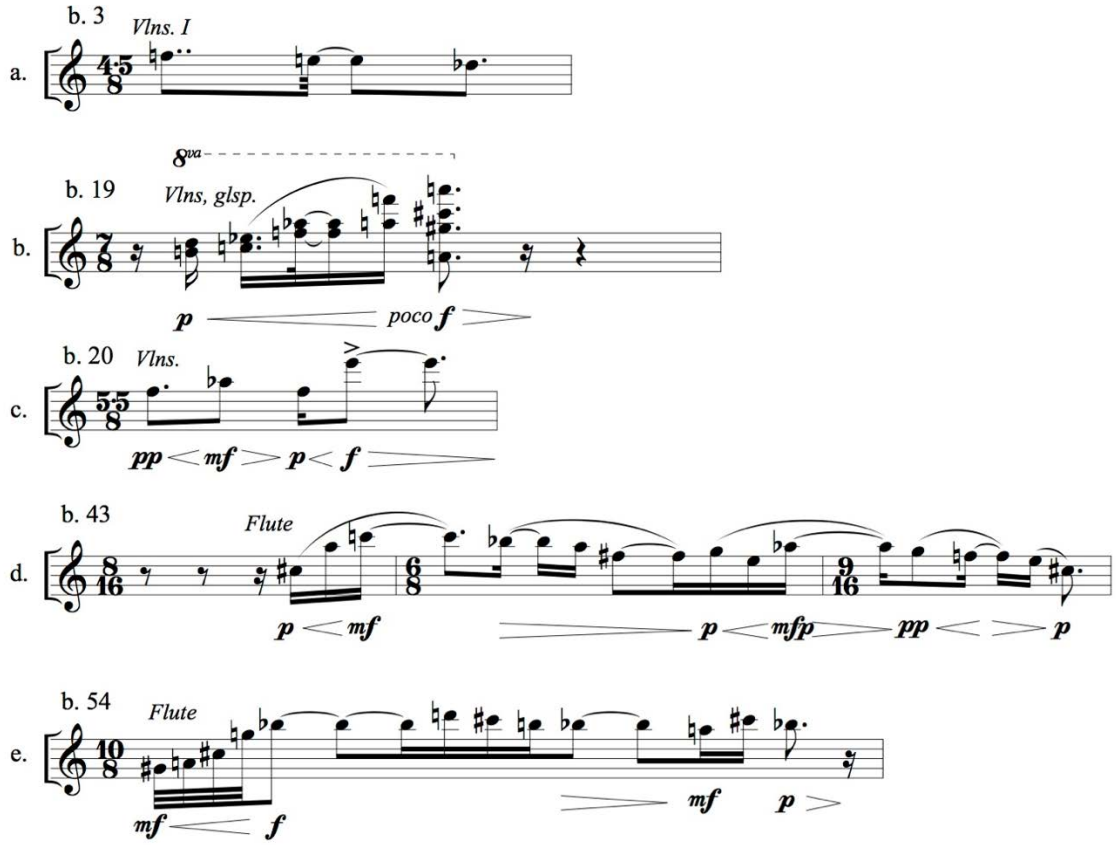


Fig. 4.11 *Dreamtime*, four possible formal plans

Labelling the first appearances of five main thematic elements (a., b., c., d. and e. in Ex. 4.23) and then by plotting their subsequent appearances (Fig. 4.12), it can be observed that they fall roughly into four groups which correspond to the four sections A, B, C and D, which were derived from the concentration of motivic cells.



Ex. 4.23 *Dreamtime*, five main thematic elements

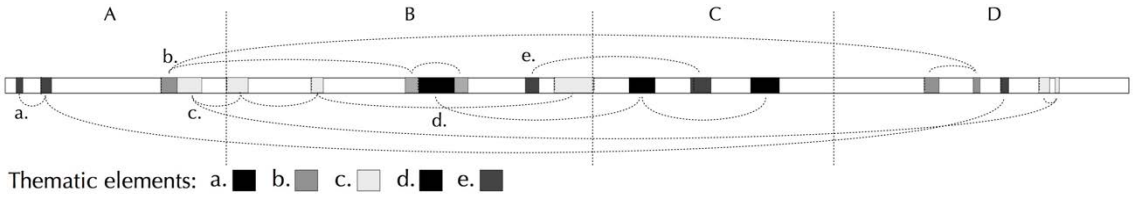


Fig. 4.12 *Dreamtime*, a mapping of five main thematic elements

The first and fourth groups both contain themes a., b. and c.; the second group show symmetrical arrangements of themes b. and c., while another symmetrical arrangement

of variations of themes d. and e. is to be found in the third group. In order to clarify the symmetry of these groups, a more compact version of their layout is required (Fig. 4.13).

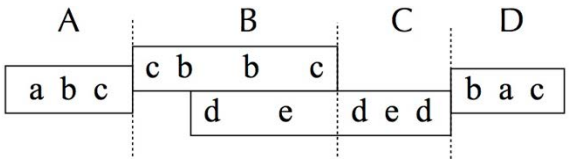


Fig. 4.13 *Dreamtime*, compact layout of the five thematic elements

The most striking feature of this arrangement is the return of the opening three thematic elements, a., b. and c, at the end of the work. Not a recapitulation in the Austro-Germanic sense, these reappearances, along with the repeat of bars 16–19 in bars 97–100, may only be intended to act as markers, perhaps reflecting some semi-conscious recognition that an image in a dream suddenly seems unreal, an awakening rather than merely an abstract musical event that logically flows from the preceding argument. The two central groups also seem to form symmetrical arrangements. However, it is necessary to portray them in an overlapping, non-linear fashion, which may appear artificial but this somehow echoes Takemitsu's thoughts, where images are 'thrown together, somewhat unstructured as in a dream' (1985: 106).

4.3 *Conclusions*

The above examination of the various compositional processes of *Dreamtime* indicates clear evidence of careful planning on every level of construction. Much of that planning is in areas that hardly affect the aural impression of the work, such as the grouping of pitch contaminations and the interpolation of 4-Z29 sets with in the quasi-ostinato lines. One explanation may be that these tools give Takemitsu a generative mechanism for building slightly 'dirty' structures etc. which, by virtue of these mechanisms, will have a

predictable consistency of harmonic identity, while seeming not entirely bound by strict principles. Systematic arrangements of themes, motives, and modes aligned with dynamics all play strong roles in the binding together of the 'initially incomprehensibly juxtaposed episodes' of *Dreamtime*. Perhaps there is, here, a mixture of the invisible and visible that Kylián and Takemitsu discussed on Groot Eylandt; perhaps the subconscious and conscious are blended into a ritual dance of trance and recollection in *Dreamtime* – a musical montage of seemingly disconnected and fleeting images such as occur in dreams. The technical tools and imagination of the composer certainly enabled him to create a work that consummately parallels these extramusical ideas.

In the following chapter, an attempt will be made to evaluate the relationship between the various compositional processes in *Spirit Garden* and *Dreamtime*. The possibility that these processes might be generalised and reused in new compositions is also commented upon. Finally, in the second part of this study, a portfolio of original compositions, which deliberately employ many of the techniques explored here, is presented.

Chapter 5

Conclusions

5.1 *General Conclusions*

At the outset of this study, questions were raised about the possibility of uncovering some underlying principles that might apply to a number of Takemitsu's works. It was hypothesised that at least some of Takemitsu's compositional processes – perhaps those yielding a wide variety of results when applied to different source material – had been employed and re-employed, without adaptation, in several works over a period of many years. It should be stressed that these are dynamic constructive processes rather than static stylistic characteristics. Many studies have presented such stylistic elements in Takemitsu but few have made speculations as to the systematic processes that might have generated them. This is probably due to the fact that the composer himself gives very little information about his compositional techniques in his own writing, preferring to dwell on aesthetic and cultural aspects of his works. Subsequently, there are few points of departure for analysis of this kind. Even texts that touch on the famous *Pentagonal Garden* magic square go no further than a clarification of Takemitsu's own writings. An in-depth study of how the harmonic fields derived from the magic square are applied to the formal construction of *A Flock Descends into the Pentagonal Garden* would certainly be a welcome addition to the literature.

While analyses of only two major works have been presented here, the common ground shared among their various compositional and formal processes is surprisingly rich. However, it would be wrong to say simply that a large number of these processes are identical; rather, they are linked by a common 'unique musical intelligence' (Rands, 1987: 479), which continually develops, refines or simplifies them over time. This does not imply that no new processes are introduced in each new composition but it does

seem that a reliance on certain 'recycled' techniques and processes exists, and while the unique ideas that may be present in each new piece are undoubtedly of interest, here, it is the common ground and the potential organisation into a reusable stock of compositional techniques that are of importance.

5.2 *Conclusions Concerning Compositional Techniques*

Many of the processes discussed here are to be found in both of the analysed works, but their applications in *Spirit Garden* (1994) are not exact replications of those in the thirteen years earlier *Dreamtime* (1981). Indeed, their uses in *Spirit Garden* seem more refined than their counterparts in *Dreamtime*. The similarities between the intermingling of 4-Z29 sets in the quasi-ostinato lines in *Dreamtime* foreshadow the elegant construction of the opening chords of *Spirit Garden*, despite the former being a horizontal system and the latter being more compact and vertical. The symmetrical placements of coloristic variations of related themes in both works seem to adhere to the idea of a cyclic form – in particular, the plan of a Japanese stroll garden, but those placements in *Spirit Garden* are more obviously arranged since they incorporate the idea of two different views of the same object. The use of motivic cells that combine into larger sets, which are then used both melodically and harmonically are present in both works; the symmetrical arrangements of the bell signal (Ex. 3.3) in *Spirit Garden* and the thematic material in bar 43 (Ex. 4.6) of *Dreamtime*; the binary fluctuation in so many of the harmonic sequences in both works; and the fact that both works were envisaged as visits to Japanese stroll gardens all indicate not a re-invention of formal principles on a piece-by-piece basis, but the development, through time, of the same formal principles.

In terms of pitch manipulation, both of the examined works depend, to some extent, on the inclusion of specific sets and intervallic arrangements within their

harmonic and melodic structures. The repeated inclusion of 4-Z15 in passages of *Dreamtime* (Ex. 4.14) and the intervallic sequences found in *Spirit Garden* (Fig. 3.11 and 3.12) date back at least to 1957 and *Uninterrupted Steps*. The methods of developing melodic ideas by adding before and after a core idea, through ideas such as *laddergram*, and the extension of intervals (Ex. 3.6 and Fig. 4.5) appear almost formulaic when seen in both pieces. Conceptually, many of these processes seem to have something of the crossword compiler's ingenuity about them, which is not surprising considering Takemitsu's penchant for word games.

There is also a world of difference between the two works and no list of technical minutiae can outweigh the contrast in orchestral complexity and emotional intensity between them. There is no counterpart in *Spirit Garden* for the slow string section at letter L in *Dreamtime*, and the placement of something like the bell signal at the beginning, mid-point and end of *Spirit Garden* is not found in *Dreamtime*.

This search for the answer as to what, for Takemitsu, may have constituted a satisfying continuity has highlighted many subtle unifying features hidden in the small print of his complex compositions – some so subtle that they are inaudible like his beloved silence, which his music now seems not only to confront, but to embody and engulf as an indispensable ingredient of its structural cohesion.

5.3 *Suggestions for Further Research*

There are many avenues for further research that may enhance the exploration of developing compositional processes in Takemitsu (and other composers). The most obvious continuation of this study would be to identify and explore these techniques in a larger number of compositions and to assess their development more accurately over time. Due to space limitations, some of these techniques were not examined or analysed in enough depth to make accurate statements about their use or exact workings. The out

of phase transpositions of subset elements mentioned on pages 74–75 is a case in point, and a deeper investigation into the correlation between mode shifts and dynamics in post-tonal music would certainly be useful.

5.4 *The Conclusion to the Conclusions*

To sum up, it seems that, for Takemitsu, form is certainly not determined on a whim. The juxtapositions of seemingly unrelated materials often have a much deeper interconnectivity than is discernible on the surface level. It is also quite clear that at least some of the 'invisible' processes that imbue his work with interconnectivity were perennial parts of Takemitsu's compositional toolkit. The technical details of the processes also seem to have developed over time, but their conceptual similarity remains, for the most part, unaltered. *Dreamtime* and *Spirit Garden* hide inner networks, not only of pitch-class sets similar to those identified by Onishi (2004), but of more subtle pitch manipulations which pervade the entire works. One is left with the impression that Takemitsu envisions on a relatively grander scale than had been previously thought, building root-like substructures, which are largely obscured, and therefor rendered inaudible, by the intricacy of his small-scale writing. The idea of a satisfying continuity seems to rely on more than just an aural surface impression. That is to say, it involves an interconnectivity which stems from a highly-organised, overarching pre-compositional design of immense detail. One may never see the roots of a tree, but without them that tree would never be able to stand. Perhaps Takemitsu truly was, as he suspected, one of those who try not only to hear, but also to write the inaudible.

PART TWO

Chapter 6

Composition Portfolio - Commentary

The accompanying portfolio contains a single work in two movements titled *Two Japanese Screen Paintings* for large chamber ensemble. The entire work lasts approximately 14 minutes and serves both as an original abstract diptych and as an example of the practical application of some of the compositional techniques described in part one of this dissertation. By the very nature of this study, the music here seems strongly influenced by Takemitsu but it also represents a personal process of immersion, absorption, assimilation and integration. Many passages, especially those written towards the end of the study, display a complete integration of Takemitsu's processes into my own personal style, and this was, of course, one of the original goals of the project.

The first movement is titled *After the Rain* as a slightly humorous reflection on Takemitsu's *Rain Coming* (1981), and consciously employs several of the compositional techniques examined in the dissertation. This movement will be analysed here in some depth. The second movement is titled *What Tides May Bring*. It is freer in style and represents a less cerebral approach to the processes presented in the dissertation than that taken in *After the Rain*. In general, a more intuitive method was adopted for *What Tides May Bring*, resulting in a work that feels closer to my own personal expression, yet still displays the influence of Takemitsu. The following section examines the form of *After the Rain*, making specific reference to the techniques mentioned in part one of this dissertation, giving the page numbers of the relevant passages in parentheses.

6.1. After the Rain – *Garden Strolls as Form*

Although Takemitsu was born and grew up in Japan, his musical aesthetic is widely recognised as stemming more from the influence of European composers such as Debussy, Messiaen and Webern, and less rooted in a love for and appreciation of the music of his native land. It appears that only in his later years, after meeting with American composer John Cage, did Takemitsu start to take a serious interest in the traditional music of Japan. His love of Japanese stroll gardens, on the other hand, did give him an original format in which to compose. One of my aim with *After the Rain* was to apply some of the formal principles found in *Spirit Garden*.

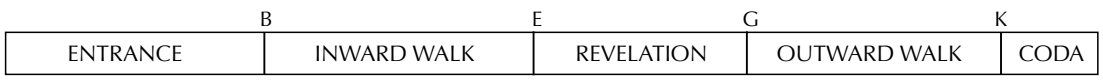
After the Rain makes use of the garden as a metaphor for musical form, directly in line with Takemitsu's model (see pp. 35–39), which consists essentially of a quasi-symmetrical arrangement of thematic material in coloristic variation[17]. Here, the garden in question is Dr Neil's Garden in Duddingston, Edinburgh. I visited the garden in the summer of 2017 and, as the title suggests, it was seen after a night of heavy rain. The imagery of seeds, shoots and flowers unfurling provides the inspiration for much of the small-scale ideas in terms of rhythm and melodic direction. The formal structure of the piece is in alignment with the principles discussed in the dissertation, specifically a metaphorical stroll around the paths, bridges and lawns found at Duddingston. Before proceeding to a detailed examination of the motivic and thematic material itself, it would be useful to see how that material helps divide the work into larger sections.

6.1.1 *Formal Overview*

The introductory section up to letter B (bars 1–21) acts as free exposition of three thematic elements. This thematic material returns towards the end of the work but more

[17] For a full description of the term 'coloristic variation', see Onishi, 2004: 75–80

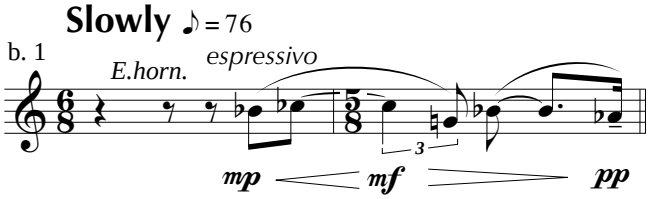
as part of the cyclic nature of walking round gardens – a topographical marker rather than a recapitulation, recalling Takemitsu's own writings on repeated material in his works and his rejection of developing transformation in favour of coloristic variation. The introductory section may be seen as representing the visitor's entry into the garden. It is followed by a group of more energetic themes, which runs from letter B to letter E (bars 22–44). This section represents the visitor's walk deeper and deeper into the garden. The central core of the work stretches from letter E to letter G (bars 45–67) and is characterised by a mystery and its revelation – the spasmodic birdcall-like phrases in the oboe in bars 47–54 over shimmering celesta arpeggios lead to a bold trumpet line at letter F, which represents the revelation of the sunlit loch. Dr Neil's Garden stand on the edge of Duddingston Loch, but only after passing along dark, tree-covered paths does it come into view, making it all the more breath-taking. Remnants of the oboe line are echoed in the wake of the revelation eventually subsiding just before letter G. The section from letter G to letter K (bars 68–92) retraces the material in the first and second sections approximately in reverse order, reflecting the visitors return to the entrance – but now in more relaxed coloristic variations, since the visitor has been somehow enlightened by his revelation. The coda, beginning at letter K (bars 93), is essentially a gently rocking oscillation between two of the key harmonies of the piece, set 5-Z17 and 6-30 or, in tonal terms, Am ^{maj7,9} and $F^{7,\#9,13}$. The coda represents the visitor's contemplative reflection on his visit as the final droplets of rain fall from the leaves in the last bars. An overview of the formal structure is given in Fig. 6.1, showing the work's sections in terms of the garden visitor's experience.



Ex. 6.1 *After the Rain*, overview of the formal structure

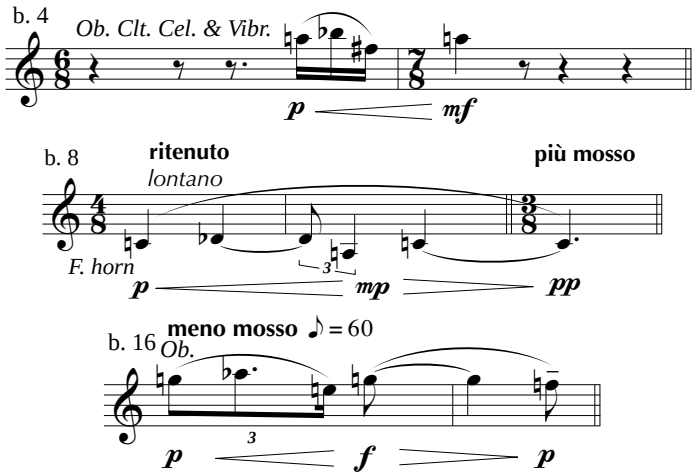
6.1.2. *Thematic Material*

There are seven distinct thematic elements in *After the Rain*, many of which undergo various degrees of transformation as the visitor is taken around the 'garden'. The positioning of the themes throughout the piece and type of variations used are modelled on Takemitsu's formal idea of viewing an object from two different angles. In *Spirit Garden*, as many as twenty variations of a single theme, representing some generic object, possibly trees, were arranged in such a precise manner that a map of the garden could be made. Here, the themes and motives represent various trees, plants, shoots, flowers and even birds on a musical map of Dr Neil's Garden. The themes will be labelled, here, from A, B, C, etc., to G. The first theme (A) is a melodic phrase that appears in the English horn in bars 1–2. Despite being octatonic in origin, there is a distinct sense of an A flat minor tonality to this line, lending it a somewhat romantic familiarity (Ex. 6.1).



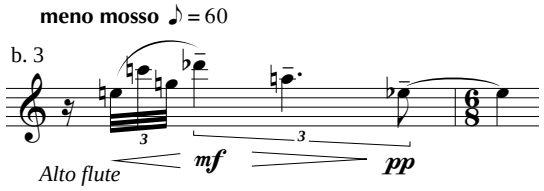
Ex. 6.1 *After the Rain*, bars 1–2, theme A

Theme A appears in an incomplete variation in the oboe, clarinet, celesta and vibraphone at bar 4, then in the French horn at bar 8 and complete again at bar 16 in the oboe. (Ex 6.2). The first four versions of theme A are part of an introductory section which lasts up to letter B and, in some respects, resembles a repeated exposition. This will become clear after examining themes B and C, and their placements up to letter B, in relation to theme A.



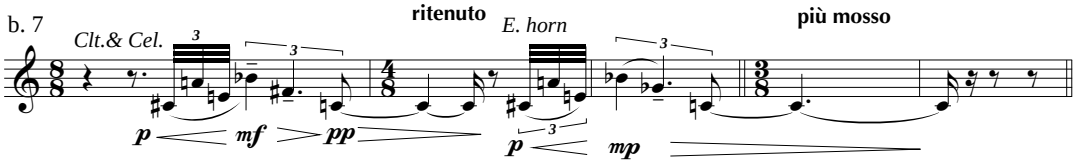
Ex. 6.2 *After the Rain*, variations of theme A during the introduction

Theme B appears eight times throughout the piece and often acts as a cadential or topographical marker (see pp. 18, 22–24), sectioning off areas of the garden as the visitor passes from say flower bed to dense tree cover. In its original form, theme B consists of a rapid rising upbeat and a series of three descending notes with the interval series of <M3, +4>. Its first appearance is in the alto flute in bar 3 (Ex. 6.3).

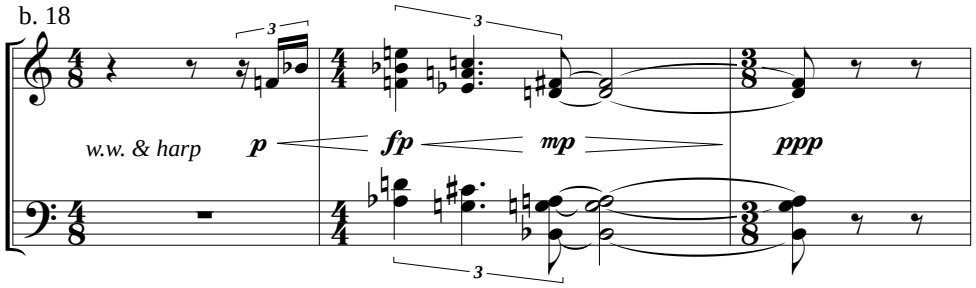


Ex. 6.3 *After the Rain*, bars 3–4, initial statement of theme B

There are three more statements of theme B in the introductory passage: two almost identical at bar 7 (Ex. 6.4), and another with supporting harmony and an adapted upbeat in bar 19 (Ex. 6.5). The supporting harmony will be examined below.

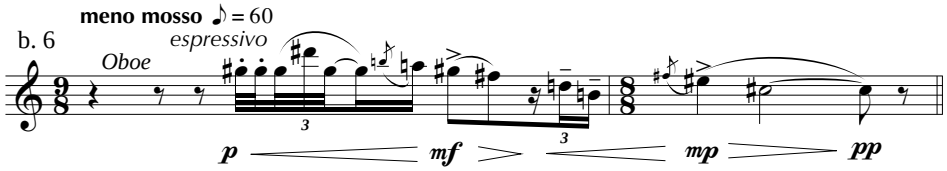


Ex. 6.4 *After the Rain*, bars 7–11, two almost identical statements of theme B

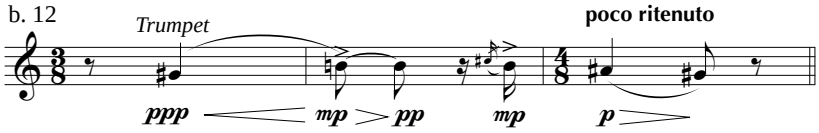


Ex. 6.5 *After the Rain*, bars 19–21, variation of theme B

The upbeat component of theme B also appears in the oboe at bar 13, now divorced from the descending long notes. Theme C appears initially in the oboe at bars 6–7 (Ex. 6.6). There is a brief allusion to the first half of theme C in the trumpet at bars 13–14 (Ex. 3.7). The only other statement of theme C is towards the end of the piece, in the alto flute at bars 89–90, where it serves as a marker that the visit is soon to end. As will be seen, the reappearances of thematic and motivic material give rise to cyclic form, representing the circular stroll around the garden.

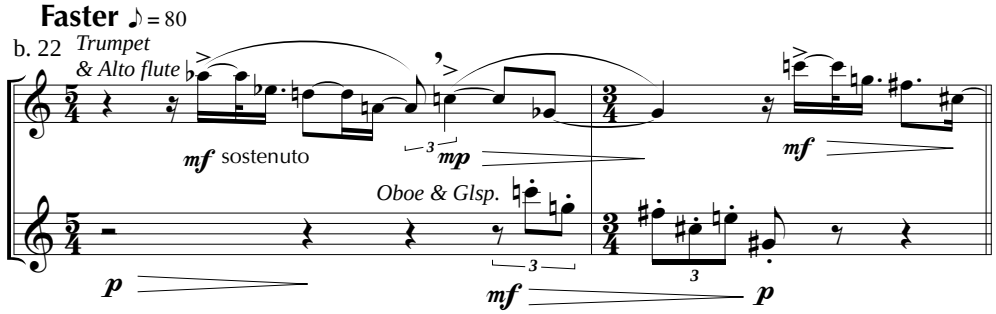


Ex. 6.6 *After the Rain*, bars 6–7, theme C



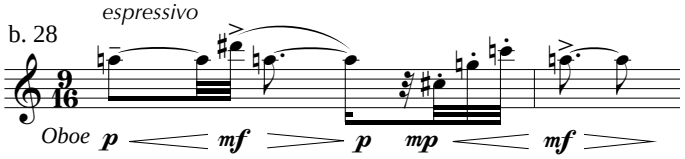
Ex. 6.7 *After the Rain*, bars 12–4, allusion to theme C

The inward walk begins in earnest at letter B with a more decisive step. A descending syncopated figure appears in the muted trumpet and alto flute at bar 22, over propulsive arpeggios in the harp. This slightly jazzy cascade is theme D. It is followed in *stretto* by a staccato triplet variation in the oboe and glockenspiel, forming a contrapuntal duet which evaporates just before letter C (Ex. 6.8).



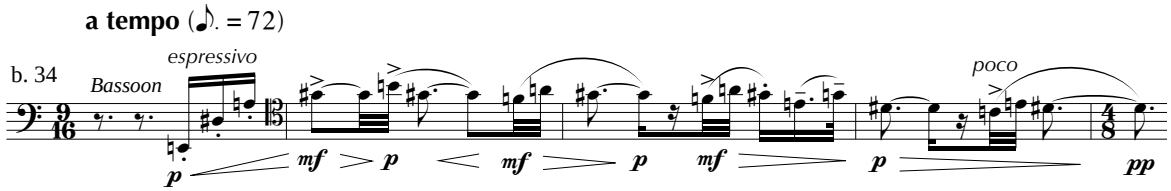
Ex. 6.8 *After the Rain*, bars 22–3, theme D and variation

The first fragments of theme E appears in unaccompanied oboe at bar 28 (Ex. 6.9).



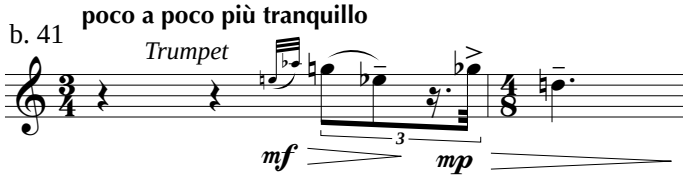
Ex. 6.9 *After the Rain*, bars 28–9, theme E

In *Spirit Garden*, Takemitsu employs a process of extending melodic lines by rearranging several related motivic elements (see pp. 40–50). The complete version of theme E, which appears in the bassoon at bar 34 (Ex. 6.10), makes use of this process. It is clear that the two motivic cells in bar 28–29 have been swapped around, and then developed. Note also that the dotted rhythm at the end of bar 36 is borrowed from theme B.



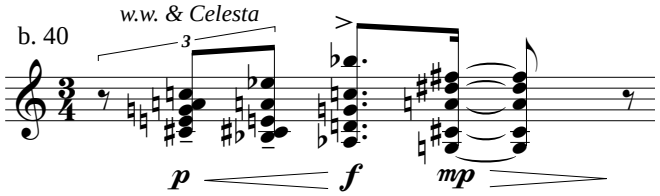
Ex. 6.10 *After the Rain*, bars 34–8, theme E extended variation

The fragmentary use of theme E is also heard in the trumpet at bar 41, where the rhythm is, again, borrowed from theme B (Ex. 6.11).



Ex. 6.11 *After the Rain*, bars 41–2, fragment of theme E

One more thematic element of importance to the form of the entire piece, theme F, appears in the woodwinds doubled by celesta at bar 40 (Ex. 6.12).

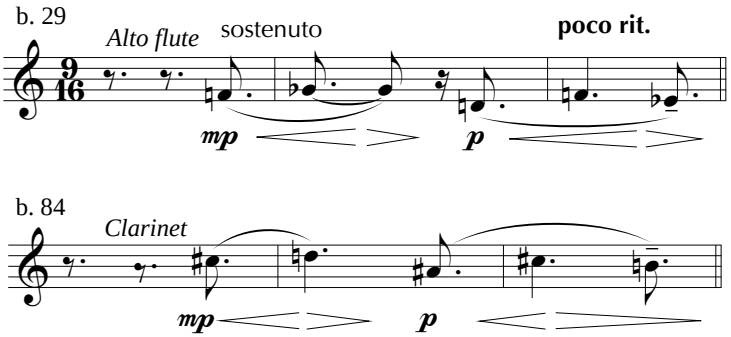


Ex. 6.12 *After the Rain*, bar 40, theme F

These six thematic elements (themes A, B, C, D, E and F) form the visitor's entry into the garden and his *inward walk*, which leads to the *revelation* awaiting him – in this case, the view of Duddingston Loch. This, the central core of the work, lies between letters E and G and will be examined in some detail below. However, before examining the revelation, it is more appropriate to see how the themes of the *inward walk* relate to the *outward walk*, and how that relationship governs the overall form of the piece.

The *outward walk* begins at letter G with two coloristic variations of theme F followed by a fragment of theme E in the French horn at bars 71–73. The mood is more relaxed and assured as the visitor comes across plants and trees that he knows from the *inward walk*. The reverse arrangement of groups of themes, rather than single themes, reflect the way in which the visitor sees the garden as a series of sections and not as just a series of individual plants. At letter H, theme D is transformed into a less exotic variation with the syncopation now reworked into a sequence using the dotted rhythm of theme B. This is followed by the same fragments of theme E that were found in bar 28, but now in the alto flute. Again, this section correlates to the passage between letters B

and the third bar of C. Just as it had appeared at bar 29, Theme A correspondingly reappears in the clarinet at bar 84 (Ex. 6.13), but here, it represents a return to the entrance of the garden.



Ex. 6.13 *After the Rain*, bars 29–31 and 84–6, theme A

The other objects from the entrance (themes B and C) now reappear. Theme C, the birdcall, is heard again at bars 89–91, and theme B, the cadential marker at bars 92–93, gently usher the visitor out of the garden to reflect on his experience during the coda. Fig. 6.2 shows the correspondence between the sections of the *entrance* and the *inward walk,* and the *outward walk*, with the rehearsal letter shown above for reference.

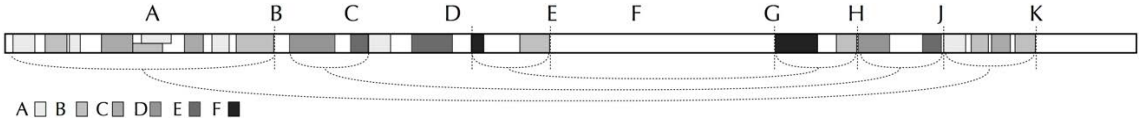
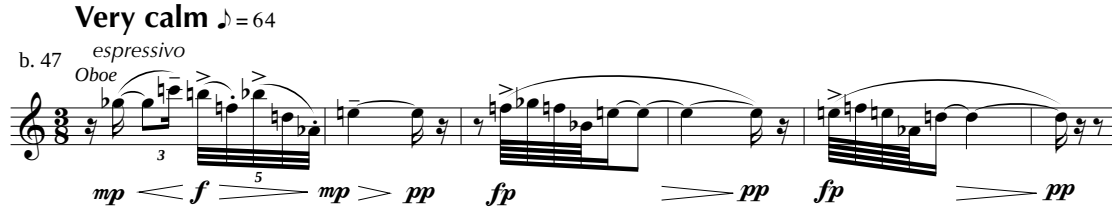


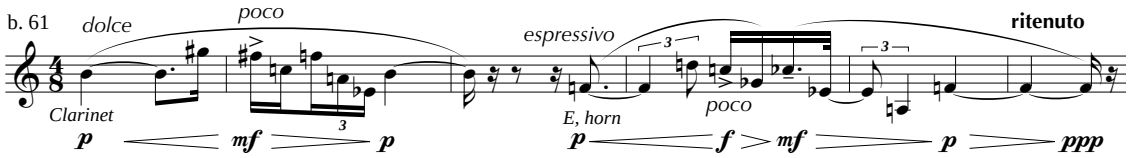
Fig. 6.2 *After the Rain*, layout of thematic material in the *introduction* and the *inward* and *outward walks*

Having explored the outward walk and its relationship to the inward walk, we can now return to examine the central section of the work. The section between letters E and G, the *revelation*, depicts a dark and mysterious path with unfamiliar sounds, leading to a glowing, sunlit vista of the loch. The underlaying harmony is carried by bell-like broken chords in the brass, beginning with a whole-tone based chord on the note D at bars 45–50, and moving gradually into the pitch-field described above. As the visitor walks along the path, he hears a birdcall played by the oboe at bar 47 (Ex. 6.14).



Ex. 6.14 *After the Rain*, bar 47, birdcall

True to the symmetrical formal process described in the accompanying dissertation, the bird call is found again in coloristic variation at bar 61 in the clarinet and, again, in the English horn at bar 63 (Ex. 6.15). The variations are more relaxed, reflecting the calm after the ecstatic revelation, which occurs at bars 56–9.



Ex. 6.15 *After the Rain*, bar 61–6, variations of the birdcall from bar 47

The work concludes with a short coda, beginning at bar 92. The thematic material of the coda is only loosely related to the other material in the piece and follows the plan of the final bars of Takemitsu's *Archipelago S.* (1992) as a model. There is a sense of closure with a gradual *ritenuto* and *diminuendo*, evaporating finally into silence.

We are now in a position to map out the formal structure of *After the Rain* as a real garden stroll in Dr Neil's Garden (see pp. 40, 50). The following diagram (Fig. 6.3) shows themes A to F as trees and shrubs and also indicates the point of revelation as the visitor reaches the loch. The formal sections of entrance, inward walk and outward walk are marked and the exact route of my visit is marked with a heavy dotted line. Here then, is the blueprint for *After the Rain* (Fig. 6.3).

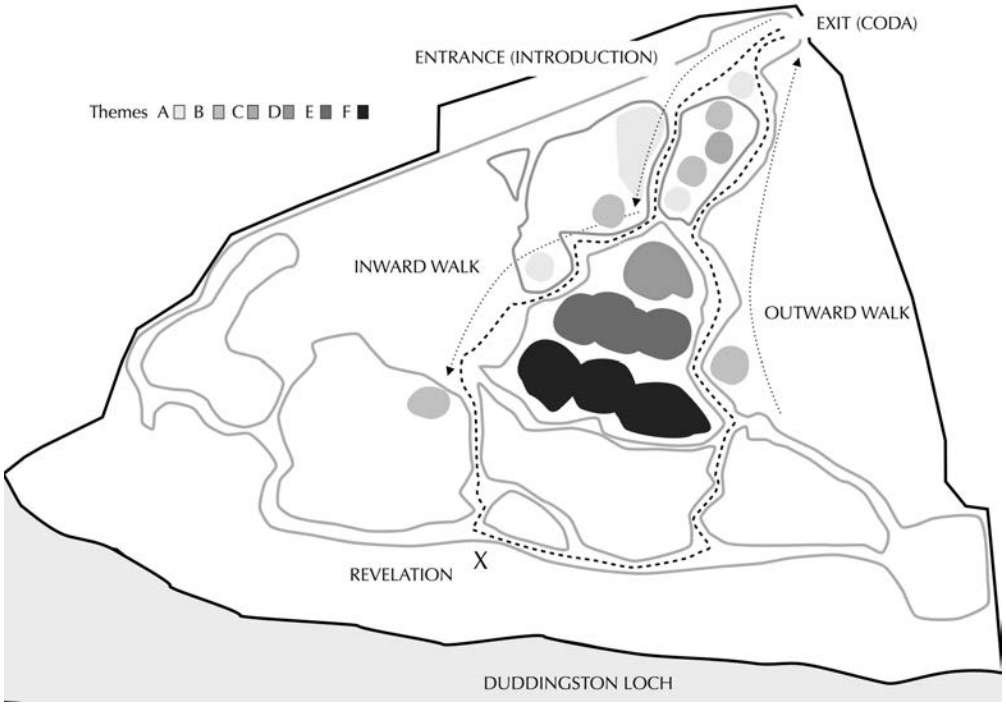


Fig. 6.3 *After the Rain*, formal plan as a real garden stroll

Takemitsu's various remarks that his approach to musical form was similar to Japanese gardens[18] are often taken to mean he creates a musical impressionistic image of a garden, whereas it seems he primarily uses the layout of the garden as a formal guide; he is not trying to transport the listener to some imaginary garden, rather he uses the physical structures of Japanese stroll gardens as blueprints for his own works, and it is this principle that I have followed in both *After the Rain* and *What the Tides May Bring*. It is easy to imagine that certain themes may be somehow representative of the plants and trees, but only the vaguest correlation can be drawn between the musical material and actual plants. Birdcalls, however, do exist as acoustic events, and thus theme C and the line in bar 47 are not musical images but attempts to recreate these events.

The following sections examines the details of pitch material of *After the Rain*, making frequent reference to similar processes in the two works of Takemitsu analysed in the dissertation.

[18] (Wilson 1982: 6)

6.1.3 *Pitch Material*

Much of the motivic and harmonic material of *After the Rain* is drawn from a rising symmetrical ten-note arrangement of the seventh mode of limited transposition (the chromatic scale minus a tritone). The interval series can be shown as follows: < +4, m6, +4, p4, +4, p4, +4, m6, +4 > and the middle five intervals yield a number of [0,1,6] sets, – Takemitsu's 'SEA' collection (p. 62) – which are combined throughout the work. In Fig. 6.4, the pitches have been numbered from 1–10 to simplify their identification in following descriptions of material drawn from the pitch series.

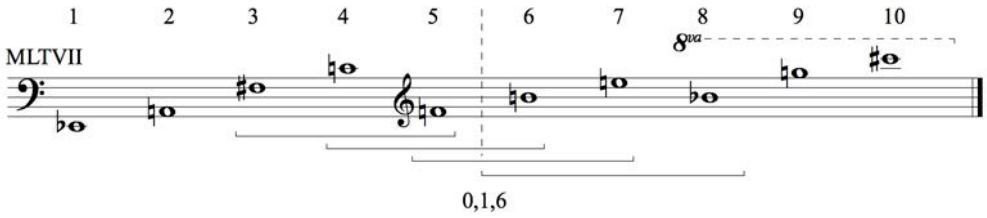
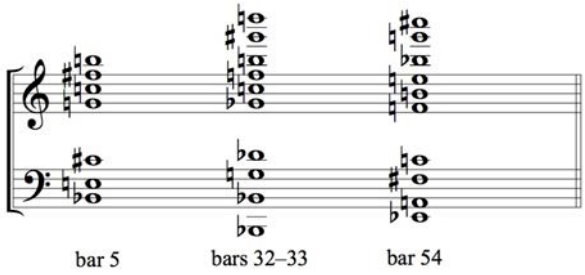


Fig. 6.4 *After the Rain*, ten-note series derived from MLTVII

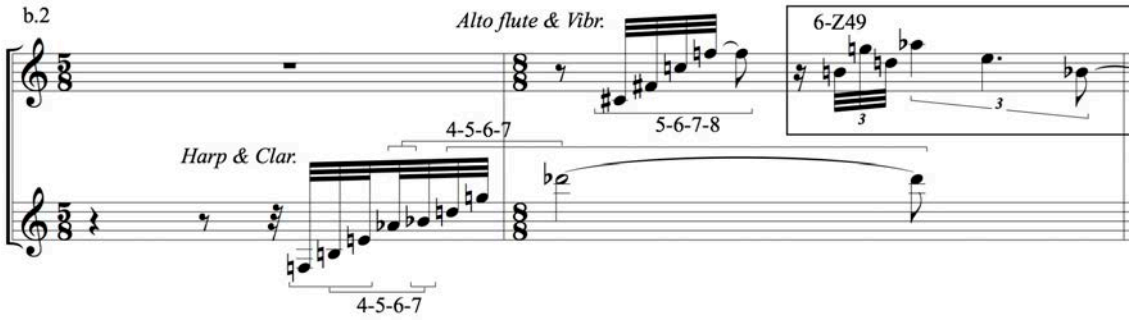
The series not only generates much of the motivic material, but also forms a harmonic field which governs many of the vertical structures. The only time the pitch field is played vertically in its entirety is at the central climax of the entire work in bar 54, although the lower seven pitches appear transposed up a perfect fifth in bar 5 and all but the lowest pitch, transposed up a semitone, form the arpeggio in bars 32–33 (Ex. 6.16).



Ex. 6.16 *After the Rain*, pitch fields in bars 5, 32–33 and 54

Pitches 4, 5, 6 and 7; and pitches 5, 6, 7 and 8, produce two closely related motivic elements. The first (pitches 4, 5, 6 and 7) is labelled Mo.1 and pervade the whole work,

while Mo.2 (pitches 5, 6, 7 and 8) is only encounter twice – once in bar 3 (Ex. 6.17) and at the beginning of the bassoon solo at bat 34. These are often in the form of a rising arpeggio and occasionally the pitches are rearranged to form a more open variation with an interval pattern of <M9, p5, M9>, which can be found in bars 10, 11, 26, 61 and 90.



Ex. 6.17 *After the Rain*, bars 2–3

Each of the 19 appearances of Mo.1 and Mo.2 adopt one of three rhythmic patterns. The first of these patterns is a group of four demi-semiquavers tied to the next beat as in bars 2, 3, 7, 18, 61 and 90; the second is a slower staccato group of four semiquaver as in bars 4, 14, 34, 66 and 86, while the third pattern consists of a quaver, a dotted quaver and a semiquaver with the final note on the following beat as in bars 6, 10, 11, 26, 46, 78, and 79. By mapping the appearances of Mo.1 and Mo.2, and their respective rhythmic patterns, another aspect of the overall form becomes clear; the music up to letter B (20 bars) contains ten of the Mo.1 and Mo.2 statements, while the other nine are spread more evenly across the remaining 82 bars (Fig. 6.5).

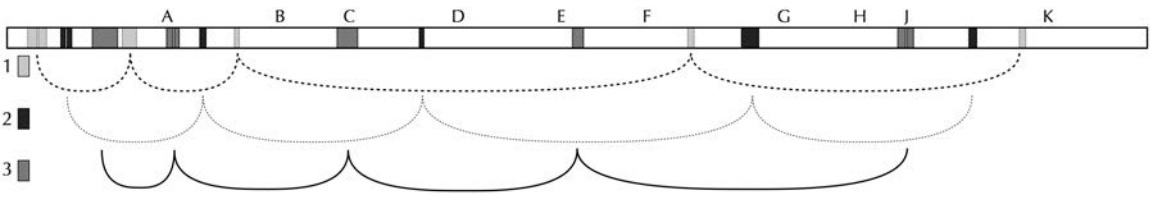


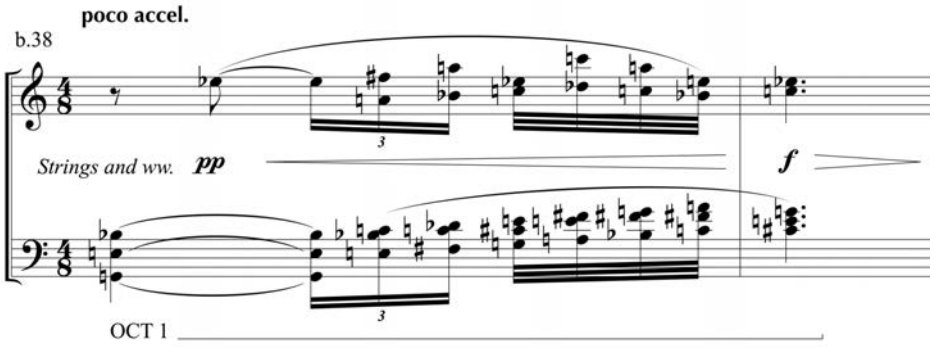
Fig. 6.5 *After the Rain*, motives Mo.1 and Mo.2 and the three rhythmic patterns

The arrangement of these motivic elements belongs to the larger structural organisation of thematic and motivic material, which covers the entire length of the piece.

The next section looks closely at the harmonic language of both movements, paying attention to the similarities to Takemitsu's own harmonic style, the suggested explanations provided in part one of this dissertation, and how I have adapted these techniques to suit the present works.

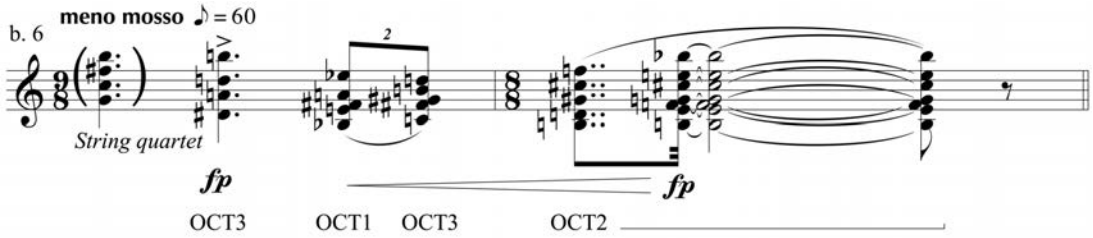
6.2 *Harmonic Procedures in* After the Rain *and* What Tides May Bring

The two movements employ mostly octatonic harmonies with the occasional use of whole-tone and diatonic collections as well as extended octatonic collections such as MLTVII. Of the purely octatonic passages, two systems can be clearly identified: firstly, the use of parallelism on one octatonic collection, and secondly, the free movement between the three octatonic collections. At bar 38, parallel chords on a single octatonic set provide the harmonic support. The recurring E flat in the melody is avoided in the harmony deliberately, which results in 'scalar' parallelism on the remaining 7-31 set (E, F sharp, G A, B flat, C and C sharp). Towards the end of bar 38, the second voice moves in contrary motion to the parallel chords only to avoid a collision with the melodic line. Similar octatonic scalar ascents can be found in *Spirit Garden* at bar 66 and in *Dreamtime* at bar 51.

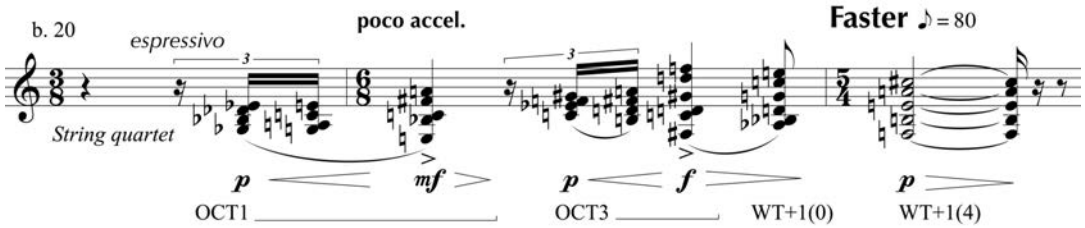


Ex. 6.18 *After the Rain*, bars 38–39, parallelism on a single octatonic scale

Again, at bar 74, the arpeggios in the harp and cello move upwards on consecutive members of the OCT1 collection. In addition to passages that remain entirely within a single octatonic collection, there are passages that move freely between the octatonic collections such as the string quartet chords in bars 6–7 (Ex. 6.19 a.), and passages that act as transitions between octatonic and whole-tone based modes such as that found again in the string quartet at bars 20–2 (Ex. 6.19 b.).



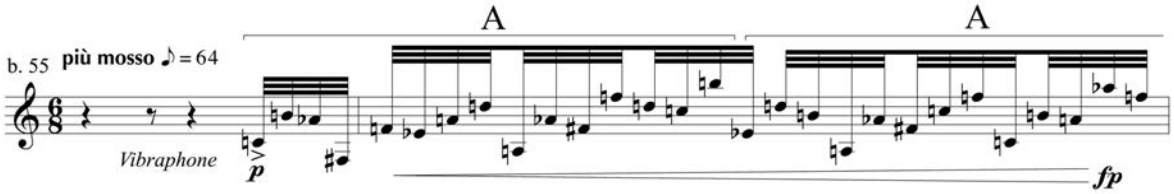
Ex. 6.19 a. *After the Rain*, bars 6–7, free movement between octatonic collections



Ex. 6.19 b. *After the Rain*, bars 20–2, transition from octatonic to whole-tone collections

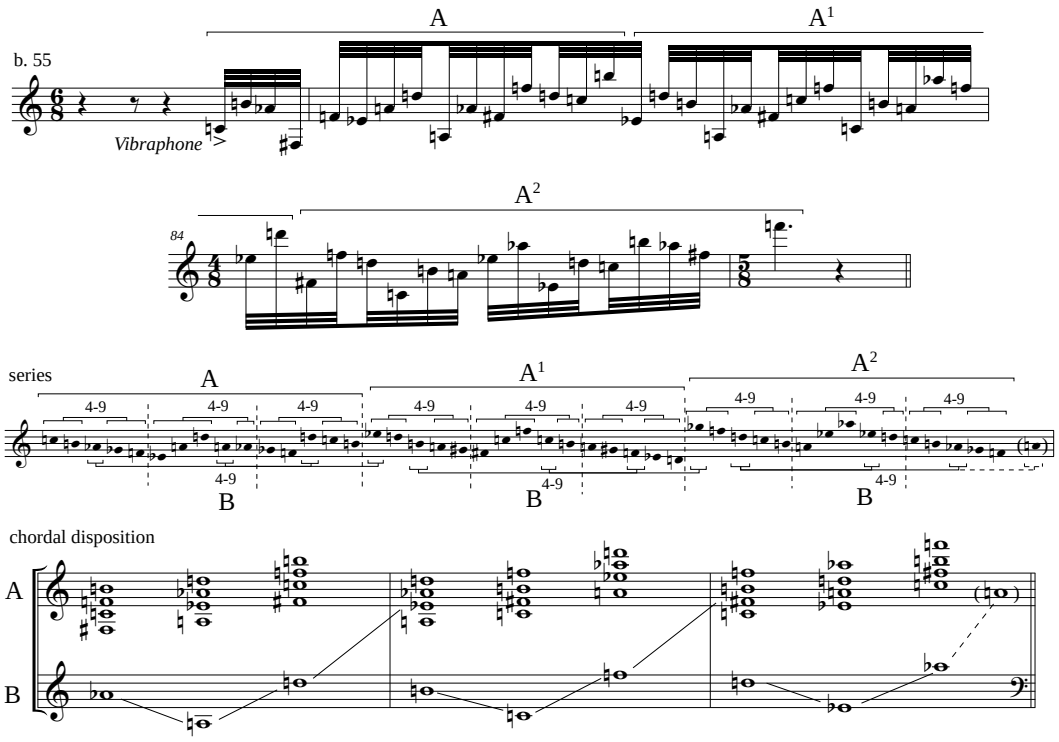
As with Takemitsu's handling of crescendos in *Dreamtime* where a transition from octatonic to whole-tone collections were often found, the passage at bars 20–2 in *After the Rain* uses the idea of tying modal shifts to dynamic and formal features to 'point up' the beginning of the faster section in bar 22.

One of the most unexpected discoveries in my analysis of *Dreamtime* was the apparent organisation of the internal structure of the ostinato lines (see pp. 65–70). There, a single set (4-Z29) was repeated in transposition with irregular interpolations of isolated members of yet another transposition of the same set. On the last quaver of bar 55 of *What Tides May Bring,* a similar construction can be found in the vibraphone part (Ex. 6.20).



Ex. 6.20 *What Tides May Bring*, bars 55–6, ostinato

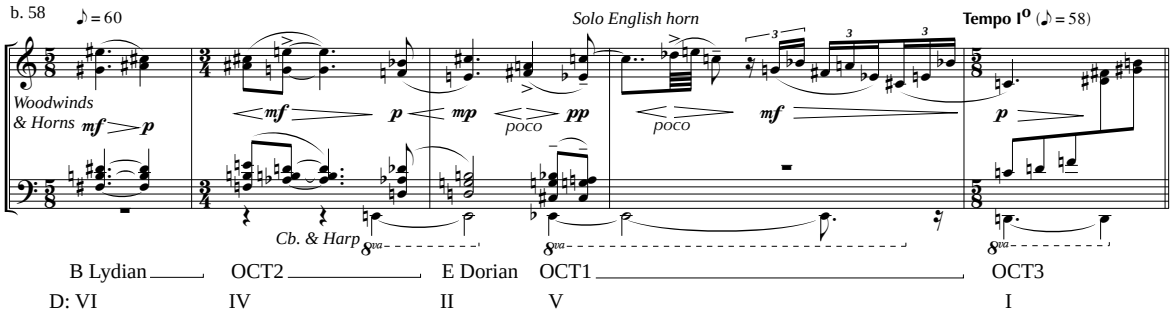
The pitches are derived by applying the above process to the set 4-9 while limiting the choice of notes to the OCT3 collection. As seems to be the case with the Takemitsu models in *Dreamtime*, the elements of the interpolated set are added here, according to personal taste. Ex. 6.21 shows the three 4-9 sets above with the interpolation below. It should be noted that the final pitch of the interpolated set becomes the first pitch of the next transposition. This process is carried out three times, ending on the fortissimo F natural, the highest note of the instrument, in bar 58. The ostinato consists of three transposed repeats of a fifteen-note figure (labelled A, A^1 and A^2 in Ex. 6.21), each of which is made up of three five-note units containing a 4-9 set plus one pitch from a fourth 4-9 set (labelled B in Ex. 6.21).



Ex. 6.21 *What Tides May Bring*, bars 55–6, ostinato construction

The final pitch of the fourth set becomes the first note of the following repetition. The intervallic disposition of each of the sets is the same: <+4, p4, +4>. The result is an ostinato which initially looks random but has a sense of cohesion that goes beyond the fact that the notes belong to the same octatonic collection.

Another technique which was described in part one of this dissertation is the use of as many common pitches as possible when transitioning between octatonic and diatonic modes (see pp. 79–80). One passage where this is consciously applied can be found at bars 58–62 of *What Tides May Bring* (Ex. 6.22).



Ex. 6.22 *What Tides May Bring*, bars 58–62, transferring between modes

Here, as at letter L in Takemitsu's *Dreamtime*, the music seems to take on a more tonal air. One explanation for this is that the 'voice leading' between the chords of various mode is smoothed by the use of common pitches, another explanation is that the chord sequences themselves by virtue of this smoothness become somehow identifiably tonal. In this instance, it is possible to view the modes as traditional tonal functions with a teleological goal. If the low D in bar 62 were to be considered the tonic, then along with the preceding bars the harmony of passage could be compared to the simple functional sequence, VI–IV–II–V–I as indicated in Ex. 6.22. A chart of the common pitches and semitone shifts between the modes is shown in Fig. 6.6. In *What Tides May Bring*, one of the overarching ideas was to express the continuous ebb and flow of the tides and one way this is achieved is to exploit the rather more relaxed sense of such quasi-tonal passages as contrast to the more acerbic intense octatonic passages.

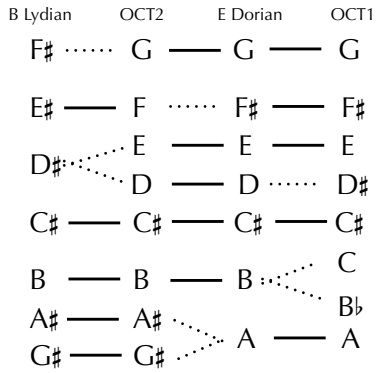
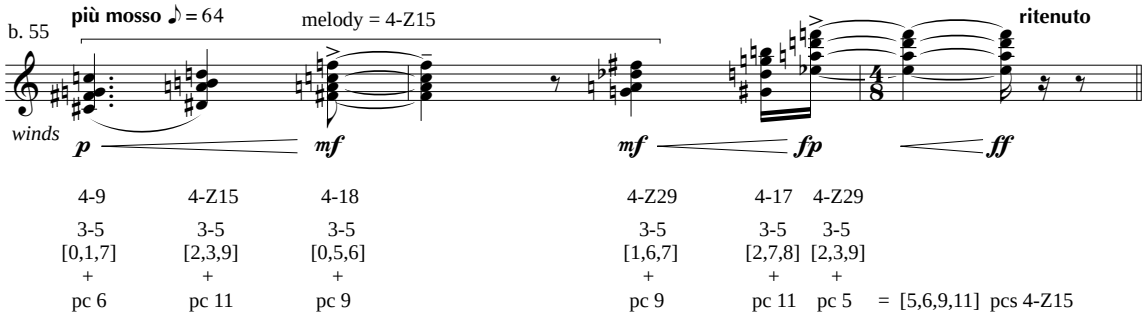


Fig. 6.6 *What Tides May Bring*, bars 58–62, common pitches and semitone shifts

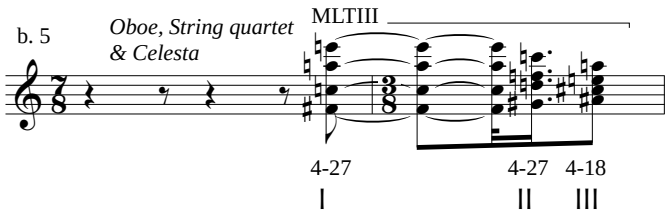
The series of wind chords in bars 55–7 in *What Tides May Bring* uses a technique similar to that found in the chord sequence in bars 68–70 in *Dreamtime* (see pp. 76–7). Each chord in this passage contains a [0,1,6] cell (pc set 3-5) to which is added one pitch from an extra tetrachord, namely 4-Z15. The set 4-Z15 is one of the core sets of *What Tides May Bring* and appears in isolation at the first bar of the work in the solo harp. The six-note motive that grows from the opening statement in bars 2–3 is harmonised at bars 55–7 as described above (Ex. 6.23).



Ex. 6.23 *What Tides May Bring*, bars 55–7, common subsets in chord sequences

The construction of a twelve-tone series from interlocking pitch collections was discussed in the examination of the opening bars *Spirit Garden* (see pp. 28–31) and while there are no completely chromatic groups of chords in either of the movements, there are short sequences that deliberately aim for saturation in various collections directly as a result of the analysis of the first eight chords of *Spirit Garden*. Such a case

is found in the three chords beginning on the last beat of bar 5 in *What Tides May Bring* (Ex. 6.24). There, all nine pitches of MLTIII are used within the first three chords, all of which contain a unique transposition of set 3-8, the diminished triad (Fig. 6.7).



Ex. 6.24 *What Tides May Bring*, bars 5–6, chords covering MLTIII

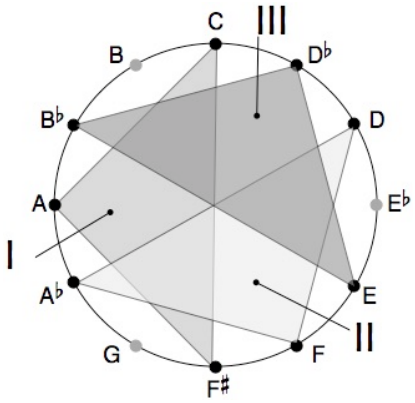


Fig. 6.7 *What Tides May Bring*, bars 5–6, three unique transpositions of set 3-8

This concludes the commentary on the work in the composition portfolio. The final section explains my personal approach to working with the above processes and discusses the benefits of such a compositional undertaking.

6.3 Closing Remarks

Two Japanese Screen Paintings must be viewed as a personal deposition on the above study of the works by Tōru Takemitsu. While the high concentration of borrowed techniques demands this perspective, it should be pointed out that nearly all of them were tailored to suit the compositional situations in the work at hand. The fact that the works were composed in tandem with the dissertation has resulted in these processes

appearing very much in the order in which they were investigated. This means that *After the Rain* reflects to a certain extent the study of *Spirit Garden*, while *What Tides May Bring* displays some similarities to *Dreamtime*.

The approach I adopted in these pieces was to work methodically through the results of the dissertation and then try to assimilate, if possible, their aural implications on a subconscious level. As the work progressed, an increasing amount of the material was the result of free experimentation in the wake of the above study rather than a mere application of the processes derived from it. It may even be possible to identify a point early in *What Tides May Bring* (a few bars after letter E) that signal a general departure from a conscious adherence to the techniques of the dissertation. This may explain why there are fewer examples from the second movement in this commentary.

My own personal gains from this project, I feel, have been undoubtedly an expansion of my own harmonic language, a chance to develop my orchestration skills and instrumental writing, and a chance to organise and regiment my own compositional toolkit, in an atmosphere of non-invasive guidance and academic rectitude. My future compositions, while perhaps recoiling stylistically towards earlier influences, will certainly benefit greatly from this study.

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