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TEMPLATE MORPHOLOGY AND SERIAL INVARIANTS: COMPOSITIONAL PROCEDURES IN STRAVINSKY'S LATE SKETCH COLLECTIONS, 1958-66

(TWO VOLUMES)

VOLUME I

BY
FERGAL G. CAULFIELD

A DISSERTATION SUBMITTED
IN CANDIDACY FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY

TO
THE UNIVERSITY OF DUBLIN
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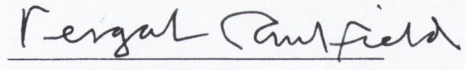
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Fergal Caulfield

January 2001

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The following people and institutions have obliged me greatly by granting permission for the inclusion of sketch and score transcriptions and facsimiles as illustrations to the main text: the Paul Sacher Stiftung (Basel), The Rychenberg Stiftung (Winterthur) and the copyright holders for the music involved, namely Boosey & Hawkes (London) and Chester Music (London).

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TEMPLATE MORPHOLOGY AND SERIAL INVARIANTS: COMPOSITIONAL PROCEDURES IN STRAVINSKY'S LATE SKETCH COLLECTIONS, 1958-66

A SUMMARY OF METHODOLOGY AND MAJOR FINDINGS

This thesis employs unpublished holograph sketch and draft material now in the possession of the Paul Sacher Stiftung, Basel, to investigate how serial deployment and the exploitation of row properties in the later works of Igor Stravinsky operate within the context of the composer's ongoing *modus operandi*. In particular, it examines the composer's predilection for generating templates, most frequently in the form of condensed 'capsule' sketches, which act as referential models for a number of musical parameters throughout the compositional process.

The thesis begins with a preliminary review of relevant Stravinsky literature together with an overview of the late compositional *modus operandi* and its relationship to that of other key serial figures of the pre- and post-war period. This introduction concludes with a brief examination of similar template archetypes to be found in earlier, published, sketch materials dating mainly from the composer's 'Russian' period, and also referencing unpublished holograph material for *L'Histoire du Soldat* housed in the Rychenberg Stiftung, Winterthur.

Extensive sketch material in the Stravinsky *Nachlass* for *Movements* (1958/59) – which the composer designated as 'the cornerstone of my late work' – and its immediate successor *A*

Sermon a Narrative and a Prayer (1960/61), display numerous highly complex interactions between invariant-based serial processes and the proliferation of template configurations ('clones') across extended spans of material. By using sketch materials to outline, as far as possible, the chronological evolution of these pieces, it is shown how Stravinsky's selection of row forms from his charts was often based on reproducing template configurations and creating specific types of continuity. This investigation additionally pursues the considerable influence of template methods on non-pitch parameters such as contour and duration, as well as more general textural and gestural features.

Discussion of Stravinsky's major serial compositions of the 1960's radiates outwards from the content of a small pocket notebook in the *Sammlung Robert Craft*, in which were entered brief initial notations for *Abraham and Isaac,* the *Huxley Variations, Elegy for JFK* and *Requiem Canticles.* These notations are considered in conjunction with the composer's own statements about his work, together with other documentary evidence, in order to reassess the nature of Stravinsky's initial compositional methodology – in particular his approach to the construction of note-rows and his use of the piano as a sounding-board. The section continues by examining various methodologies by which such generalised skeletal conceptions were expanded and adapted into substantive material for the pieces concerned.

The thesis thereby aims not only to investigate the composer's characteristic working methods, but also reappraises the function and objective of serial techniques in the late-period work in relation to Stravinsky's established compositional *modus operandi.*

PREFACE

Abbreviations, Nomenclature etc.

The present *Igor Stravinsky Collection* housed at the Paul Sacher Stiftung is a composite of several manuscript collections acquired independently and at different times. When examined there in late 1997, the materials relating to works discussed or cited in the present study were housed in the Stravinsky *Nachlass* (*Movements*, *Epitaphium*, *Doublecanon* for String Quartet), the *Sammlung Paul Sacher* (*A Sermon, a Narrative and a Prayer*), and the *Sammlung Robert Craft* (all the works discussed from *Abraham and Isaac* forward, together with a small number of additional holograph pages and printed scores relating to *Movements* and *A Sermon*). In addition, some holograph materials relating to *Movements* (principally *Reinschrift* scores) are housed in the *Sammlung Margrit Weber*[1]. Although the material in the three former collections has since been subsumed into the single *Igor Stravinsky Collection*, reference to the former sources has been retained here for purposes of identification. In addition, as the Paul Sacher Stiftung's catalogue and microfilm numbers relating to this material have not yet been fully finalised and are thus subject to change, the following system has been adopted as a convenient and abbreviated method of reference[2].

Material microfilmed up to end of 1997 is provided with an identification letter indicating the main sketch collection in which the item is located, e.g. 'M' for *Movements*. (The majority of

[1] See Tucker, *Stravinsky and His Sketches*, 1992, 18-22, for a brief history of these Stravinsky collections.
[2] The superseded microfilms copies are, of course, still extent and accessible at the Paul Sacher Stiftung.

the sketches for individual works are filed – and thus microfilmed – together. However, occasional items may be located in folders dedicated to another work; thus a row chart for movement V of *Movements* is designated here as 'SNP' because of its location within the main folder of sketches for *A Sermon*). A number corresponding to the frame number of the microfilm at the time of its consultation follows this letter. These provisional microfilm and work reference-numbers are provided in the taxonomy of sketch materials found in the appendix (Volume II). The original holograph materials were, however, consulted in every case.

Sketches not microfilmed by 1997 (e.g. the materials for *Requiem Canticles* and an unfinished work from 1966) or which are not provided with specific microfilm reference numbers (e.g. the pre-*Nachlass* material for *A Sermon*) follow a similar method, but employ an arbitrary number for each sketch, based on the order of the material in the individual folders/microfilm. This ordering, too, is not finalised and may subsequently change.

Full microfilm numbers are provided as a means of reference only in rare instances where an individual sketch was separated from the main collection or sourced in/microfilmed with a different collection. Once again such material may be subject to re-cataloguing.

In certain instances, the addition of bracketed lower-case Roman numerals or letters (eg. (ii), (b)) may be used to identify individual sketch fragments attached to the same background page, which are generally numbered downwards. Recto and verso of the same page may be identified as r, v, especially when no other reference (e.g. microfilm frame number) is

available. The identification 'C' placed before a reference number indicates the number of an item (when provided) in Robert Craft's provisional catalogue of the material acquired by the Stiftung together with the materials of the *Sammlung Craft* in September 1990[3].

On rare occasions, materials relating to *Movements* have been additionally or alternatively identified with a number prefixed by the letters AM. This refers to the frame number of the *Movements* material as it was microfilmed under the supervision of Stravinsky's son-in-law, André Marion, in Hollywood in 1967[4]. This microfilm (Box 3-11, Item 18-21 at the Stiftung) is used in cases where the material in question is omitted from, on otherwise unclear in the main microfilm copy, or to specify an item microfilmed together with several others.

The sketch designation M333(ii)/AM16 thus indicates that the sketch (in this case the lower of two combined fragments) is located in the main *Movements* sketch folder, and has been microfilmed as frame 333 of the microfilm on which the *Movements* material was consulted (in this instance microfilm 110). It also appears on frame 16 of the André Marion microfilm.

As the Paul Sacher Stiftung does not permit facsimile reproduction of its archives, the relevant examples in Volume II of the present study consist of hand-written transcriptions of this material. These transcriptions are diplomatic and attempt to reflect the layout, alignments and notational idiosyncrasies of the composer's text as accurately as possible. As many of the sketches are palimpsests, the presence of erased earlier layers is indicated by shading or lighter text (sometimes with added square brackets and/or the indication [Er]), the latter in instances

[3] Ibid. Some items described in this catalogue are not provided with an item reference number.
[4] See Craft, *Glimpses*, 320.

where legible material shows through in this manner. Details of the composer's hand-rastration are more difficult to represent. In the transcriptions, breaks in rastration or the approximate compass of short, isolated staves are indicated by parallel double lines (//). Fragments, e.g. sketches pasted together or to a single background page, are indicated by dotted or solid lines.

Certain frequently-cited sources are referred to in footnotes to the text without author's name and in abbreviated form, e.g. Vera Stravinsky/Robert Craft, *Stravinsky in Pictures and Documents* (*SPD*), the Stravinsky-Craft 'conversation books' (e.g. *Conversations*, *Dialogues*), Stravinsky's ghost-written *Poetics of Music* and autobiography, as well as Craft, *Stravinsky: the Chronicle of a Friendship, 1948-1971* (*Chronicle*). Other works are cited using the author's surname together with an abbreviated title. Full references are provided in the bibliography.

Occasional references to letters from the Stravinsky archives in the Paul Sacher Stiftung cite the recipient's name (under which they are filed) together with the date of the letter.

Serial nomenclature employed in the text for the most part standardises the idiosyncratic, and sometimes inconsistent, terminology used by the composer in his sketches, although his designations for rotations (which vary from work to work) are preserved. Stravinsky occasionally interchanged the lower- and upper-case forms of the Greek letters used to identify rotations, particularly in the case of χ (Γ) and δ (Δ)[5]. As there does not appear to be

[5] This interchange is found principally in *Movements*, the first work to make use of these designations.

any specific significance to the form used (except that the upper-case Greek letters closely resemble their Cyrillic adaptations), the lower case letters are employed throughout the present text, regardless of the form that appears in the composer's sketch. The nomenclature throughout is essentially that of recent standard textbooks on serialism, e.g. Perle, *Serial Composition and Atonality*, although, as no arithmetical ciphers are employed in the present text, order position (o.p.) within a serial statement is numbered from 1 (rather than 0) upwards. This method conforms to Stravinsky's habitual practice and allows for a direct comparison with the serial enumeration as found in the sketch material. Transposition of a row, or segment thereof, is indicated by the letter T, followed by the number of semitones of the transposition above the pitch-class of the model. Retrogression of a row or segment, other than that of the standard primary forms (R, RI) is represented by an enclosure in square brackets preceding a lower-case r, e.g. [χδII T1]r.

PART ONE

The 'Turn-of-the-Corner'

Movements and *A Sermon, A Narrative and A Prayer.*

INTRODUCTION

> For me the first idea is always the strongest, because it comes from a higher source – is God given and hence cannot be improved by the act of man.
>
> ***Stravinsky in Pictures and Documents*, 307.**

> First ideas are very important. They come from God. And if after working and working and working, I return to these ideas, then I know they're good.
>
> **Walsh, *Stravinsky: A Creative Spring*, 508.**

> But long before ideas are born I begin work by relating intervals rhythmically. . . . Only after I have established my melodic or harmonic relationships do I pass to composition. Composition is a later expansion and organisation of material.
>
> ***Conversations with Stravinsky*, 15.**

The above quotations are among the surprisingly few unequivocal allusions that Stravinsky made (or is reported to have made) to ontological questions concerning the nature of his compositional inspiration. The reply from *Conversations* is especially significant for the explicit way in which the composer distinguishes a framework of background pre-compositional relationships from the ongoing compositional process itself[1]. The first two quotations, attributed to Stravinsky by, respectively, Willy Strecker, director of the publishing firm of Schott Söhne[2], which handled many of Stravinsky's

[1] This is in response to Craft's question 'The musical idea: when do you recognise it as an idea?'
[2] See *Selected Correspondence* III, 217-272, also Stravinsky's *Autobiography*, 158, 165-166.

works in the 1930s and 1940s[3], and the composer's collaborator Samuel Dushkin[4], additionally appear to intimate an underlying metaphysical basis to the Russian composer's creative processes[5]. In the majority of his published allusions to his compositional *modus operandi*[6] the composer was more guarded, preferring to distance himself from the subject by offering descriptive, analytical or polemical accounts concerning the genesis of certain works. Indeed, the following caveat from *Poetics of Music* seems designed largely as a pretext to preclude any significant discussion of the issue:

> By its fruit we judge the tree. Judge the tree by its fruit then and do not meddle with the roots. . . . The study of the creative process is an extremely delicate one. In truth it is impossible to observe the inner workings of this process from the outside. It is futile to try and follow its successive phases in someone else's work. It is likewise very difficult to observe one's self.[7]

During Stravinsky's lifetime, and for many years following his death, only a small minority of the sketch materials were published in facsimile[8] or were accessible in public

---

[3] Among which were *Jeu de Cartes*, the *Symphony in C*, the *Ode*, *Dumbarton Oaks* and *Babel*.

[4] The attributed quote is taken by Walsh from Dushkin, 'Working with Stravinsky', in Edwin Corle ed., *Igor Stravinsky*, New York, 1949: also quoted previously in White, *Stravinsky: The Composer and His Works*, 102. Walsh notes in connection with this source that Stravinsky 'had a religious attitude to inspiration' (ibid.). Cf. also 'Nothing equals the joy of the first conception, when the idea emerges still living from his consciousness. . . . Once it begins to be expressed, the joy is already diminishing.' (Romain Rolland, *Journal des années de guerre*, entry for 26 September, 1914; cited ibid., 245)

[5] According to Strecker, the reported statement refers specifically to the Violin Concerto. Quite a number of the composer's published accounts additionally allude to an underlying subconscious or oneiric stimulus for certain compositional ideas, the most celebrated being that concerning *The Rite of Spring* (*Autobiography*, 31). See also *Conversations* 17 (*Histoire du Soldat*, *Threni*), *Expositions and Developments*, 92 (*Histoire*) and *Dialogues*, 39 (Octet).

[6] See especially *Poetics*, 47-65, *Conversations*, 15-26, *Expositions and Developments*, 101-103, 123.

[7] *Poetics*, 49-50.

[8] *The Rite of Spring, Sketches 1911-13* were published in facsimile by Boosey & Hawkes in 1969. Isolated sketchleaves from various works are also reproduced in *Stravinsky in Pictures and Documents* (*SPD*) and Craft, *A Stravinsky Scrapbook*, as well as being discussed and transcribed in several of Craft's published articles.

collections[9], thereby severely restricting (not to say effectively preventing) scholarly investigation into the composer's compositional *modus operandi*. The relatively recent availability for study, at the Paul Sacher Stiftung in Basel, Switzerland, of the vast majority of Stravinsky's sketch and draft materials[10] has thus inaugurated a new field of Stravinsky research, attractive precisely because of the prospect of unearthing the roots of his compositional tree. Despite the composer's forbidding admonition in *Poetics*, his sketches assist the uncovering of ongoing, and fascinating, compositional processes of a highly developed and consistent nature, lying beneath the completed exterior of the works. This is particularly the case in relation to the late serial music, where compositional choices regarding pitch selection – often seemingly heterodox in relation to 'standard' serial procedures and frequently so convoluted that they cannot be correctly deduced without recourse to the extensive annotations provided in the sketches – are fully traceable, and act as a basis for further investigation of the compositional *modus operandi*.

The present study concentrates on exploring several aspects of a specific compositional methodology, apparently hinted at in the quotes heading this introduction, and observable in, though seemingly not limited to, the sketches for a wide variety of works dating from the composer's later serial period, i.e. 1958 through 1966[11]. This period covers the interval

---

[9] E.g. sketchbooks for *Les Noces* and *L'Histoire du Soldat* in the Rychenberg Stiftung, Stadtbibliothek, Winterthur, which were acquired by Werner Reinhardt. The *Histoire* sketchbook is discussed later in this introduction (see 'Template Archetypes in the Pre-Serial Music').

[10] The two principal Stravinsky collections available for study at the Paul Sacher Stiftung, the Stravinsky *Nachlass* (purchased in 1983, but first made generally accessible to scholars in 1986) and the *Robert Craft Collection* (acquired in 1990 and still in the process of being catalogued and microfilmed by late 1997) have been subsumed into a single *Igor Stravinsky Collection.* A detailed account of the history of these manuscript collections is given in Susannah Tucker's unpublished Ph.D. diss., *Stravinsky and His Sketches: the Composing of* Agon *and Other Works of the 1950s* (1992), 18-22. See also Shepard, 'The Stravinsky *Nachlass*: A Provisional Checklist.'

[11] Several instances of comparable techniques observable in Stravinsky's pre-serial works are discussed later in the present introduction (see 'Template Archetypes in the Pre-Serial music').

between Stravinsky's initial introduction of hexachordal rotation techniques in the *Movements* for piano and orchestra through to the sketches for his final original composition (provisionally entitled *Sonata*)[12], made in late 1966 and which remained incomplete at the composer's death just over four years later. This methodology concerns the composer's use of circumscribed groups of brief rudimentary conceptions as 'templates' which were subsequently employed to guide and expedite the expansion of more extended blocks of material, and which act as referential models for a number of musical parameters throughout the compositional process.

Late Stravinsky Literature: A Brief Review

Anyone embarking on a study of this nature with regard to the late twelve-note works is faced with the prospect of a fairly patchy literature, dividing with reasonable consistency into writings that examine Stravinsky's serial *modus operandi* (in the majority of cases without the benefit of access to the sketches) and those engaging specifically with the primary sources themselves. The relatively small body of work constituting the latter category is generally of a much more recent vintage and naturally deals with a chronologically more diverse range of works. The following brief outline considers the most significant writings relevant to the present subject area. These and other publications are further referenced, as appropriate, within the main body of the text.

[12] This was probably intended merely as a section of a larger composition. See Chapter 13.

Stravinsky's gradual adoption of serial procedures in the 1950s attracted immediate critical attention. The works of the period from the *Cantata* through *Threni* are relatively transparent in terms of serial procedure and thus presented few problems to those attempting only a cursory dodecaphonic analysis or appraisement. Among the more significant contemporary articles and studies dealing with the works of this period are those by Robert Craft[13], Herbert Eimert[14], Roberto Gerhard[15], Heinrich Lindler[16], Colin Mason[17], Laurence Morton[18], Hansjörg Pauli[19], Erwin Stein[20], David Ward-Steinmann[21] and John S. Weissmann[22].

Subsequent, more detailed analyses of this repertoire include studies by Charles Wolterink[23], Amina Beecroft[24], Clare Hogan[25], Pieter Van den Toorn[26], Glenn Watkins[27] and Hans Keller[28], all once again accomplished without recourse to unpublished sketch materials.

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[13] Craft, 'Reihenkompositionen: vom *Septett* zum *Agon*' (1955), 'A Concert for St. Mark' (1956), 'A Personal Preface' (1957), 'Ein Ballett für Zwölf Tänzer' (1957).
[14] Eimert, 'Die Drei Shakespeare-Lieder (1953)'.
[15] Gerhard, 'Twelve-Tone Technique in Stravinsky'.
[16] Lindler, 'Igor Strawinsky: *Cantata*'.
[17] Mason, 'Serial Procedures in the Ricercare II of Stravinsky's *Cantata*'.
[18] Morton, 'Current Chronicle: Los Angeles' [discussing *Agon*].
[19] Pauli, 'On Stravinsky's *Threni*'.
[20] Stein, 'Stravinsky's Septet (1953): An Analysis' and 'Igor Stravinsky: *Canticum Sacrum ad Sancti Marci Nominis*'.
[21] Ward-Steinmann, *Serial Technique in the Recent Music of Igor Stravinsky*.
[22] Weissmann, 'Current Chronicle: Italy', 1957 [*Canticum Sacrum*] and 1959 [*Threni*].
[23] Wolterink, *Harmonic Structure and Organisation in the Early Serial Works of Igor Stravinsky, 1952-57*, (1979).
[24] Beecroft, *Internal Structures in the Early Serial Works of Igor Stravinsky, 1952-57* (1983).
[25] Hogan, *An Examination of Stravinsky's Contribution to Serialism in the Light of the Theories, Music and Personality of Ernst Krenek, with Particular Reference to the Connection between* Lamentatio Jeremiae Prophetae *and* Threni (1982) and '*Threni*: Stravinsky's 'Debt' to Krenek'.
[26] Van den Toorn, *The Music of Stravinsky*, 372-426.
[27] Watkins, 'The Canon and Stravinsky's Late Style'.
[28] Keller, serial analysis of *In Memoriam Dylan Thomas* ('Song' only) in *Stravinsky Seen and Heard*, 15-23.

The enormous extension of the composer's serial palette though his adoption of rotation-transposition matrices in the later works, beginning with *Movements*, had the effect of creating an impediment for analysts not initiated into the recondite procedural idiosyncrasies involved. In this respect, scholarly investigation of the late works was particularly handicapped by the unavailability of the sketches, in many cases the only dependable key to the often convoluted serial procedures employed, for – as Richard Taruskin has remarked – 'Stravinsky's elaborately verticalized serial technique was something he guarded during his lifetime as if it were some kind of Belyayevets guild secret'[29]. Not surprisingly therefore, the earliest attempts to explicate Stravinsky late-period serial techniques emanated from a small group of scholars who were close to the composer or came from within his immediate circle, and who had thus either obtained some elucidation from the horse's mouth or, perhaps, had some limited contact with the sketch materials themselves, though the latter are rarely directly referenced in the literature concerned. Among the first to investigate the serial basis of the late works was Claudio Spies, in a seminal series of articles[30] which, however, are largely synoptic and are not always in conformity with the procedures disclosed by the composer's actual sketch materials.

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[29] Taruskin, *Stravinsky and the Russian Traditions*, 1673.

[30] Spies, 'Some Notes on Stravinsky's Requiem Settings', 'Notes on Stravinsky's *Variations*', 'Notes on Stravinsky's *Abraham and Isaac*' and 'Impressions after an Exhibition'. During the 1960s, Spies checked scores and read proof copies for Stravinsky (private communication from Claudio Spies). See also Straus, 'Stravinsky's Serial "Mistakes"', which includes some reference to the Spies proof materials and his correspondence with Stravinsky.

The discovery of the essential mechanics of the technique enabled various scholars to expand on, and speculate further about the basic technical processes. Among the more important writings dealing with the late serial procedures are those of Milton Babbitt[31], Robert Craft[32], Jerome Kohl[33], Alfred Müller[34], Paul Schuyler Phillips[35], Joseph Straus[36], Richard Taruskin[37], Pieter van den Toorn[38], Timothy Buell[39], William Walden[40], Douglas Rust[41] and Norbert Jers[42]. Once again, it must be stressed that nearly all of this research (with the notable exception of Robert Craft's) had been accomplished with minimal (or even no) reference to the compositional sketches, and thus remains to some extant conjectural and speculative[43].

John Shepard's 'The Stravinsky *Nachlass*: A Provisional Checklist of Music Manuscripts' makes use of the listing drawn up while the *Nachlass* was in the temporary custody of the

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[31] 'Stravinsky's Verticals and Schoenberg's Diagonals', 'Order, Symmetry and Centricity in Late Stravinsky' and *Words about Music*, 107-114, all of which deal with serial structure in *Movements*.
[32] References to the mechanics of the late works are found throughout Craft's writings, but see especially 'On the Chronology of the *Requiem Canticles*', in *Selected Correspondence* II, 467-70.
[33] Kohl, 'Exposition in Stravinsky's Orchestral *Variations*'.
[34] Müller, 'Igor Strawinsky: *Movements* for Piano and Orchestra'.
[35] Phillips, 'The Enigma of *Variations*: A Study of Stravinsky's Final Work for Orchestra'.
[36] Straus, 'Two Mistakes in Stravinsky's *Introitus*' and 'Stravinsky's Serial "Mistakes"'.
[37] Taruskin, *Stravinsky and the Russian Traditions*, 1648-1675, dealing with *Requiem Canticles*.
[38] Van den Toorn, *The Music of Stravinsky*, 427-455.
[39] Buell, *Aspects of Stravinsky's 'Abraham and Isaac'* (Ph.D. diss.). This work makes an attempt to deal with the hexachordal (as opposed to strictly twelve-note) implications of the work and also identifies possible hierarchies within set choices.
[40] Walden, 'Igor Stravinsky's *Movements for Piano and Orchestra*: The Relationships of Formal Structures, Serial Technique and Orchestration'.
[41] Rust, 'Stravinsky's Twelve-Tone Loom: Composition and Pre-Composition in *Movements'*.
[42] Jers, 'Strawinskys *Movements for Piano and Orchestra* (1958/9) als Schlüsselwerk seiner letzten Schaffensphase', and 'Igor Strawinskys späte Zwölftonwerke (1958-66)'. These articles (1974 and 1976 respectively) represent early attempts to grapple with the serial construction, novel idiom and retrospective associations of the late-period music.
[43] In this regard, André Douw's investigations of serial usage in *Epitaphium* and *Double Canon* for string quartet (which encompass non-pitch parameters) must be mentioned as remarkable instances of theoretical reasoning (being essentially hermeneutical accounts based on Stravinsky's published allusions (e.g. *Memories and Commentaries*, 105-106)), achieved without reference to, and receiving little endorsement from, the surviving sketch material (see Douw, 'Closing the Circle' and 'Sounds of Silence').

New York Public Library during 1983[44]. As its title indicates, it is not intended to be exhaustive, though it provides a useful complement to the more significant, though still concise, inventory of the *Nachlass* sketch material in the Paul Sacher Stiftung's own publication *Igor Stravinsky: Inventare der Paul Sacher Stiftung, Musikmanuscripte* (1989). Since the acquisition of Robert Craft's collection in September 1990 (amongst other material), this provides only a partial inventory of the present *Igor Stravinsky Collection*. It should also be emphasised that the cataloguing of the material at the Paul Sacher Stiftung is ongoing, so that the classifications involved have changed and will undoubtedly continue to do so for some time. Mention must also be made of Christian Goubault's 1991 French-language biography *Igor Stravinsky*, which incorporates a useful and thorough appendix account of the known manuscript sources for each work, together with their present locations, where these were ascertainable.

The publication of the *The Rite of Spring* sketchbook by Boosey and Hawkes in 1968[45] encouraged, in addition to Craft's own analyses[46], a cluster of pre-*Nachlass* studies by Roger Smalley[47], Taruskin[48] and Van den Toorn[49] which employ these sketch materials in dealing with various aspects of the music and the compositional *modus operandi*. More

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[44] See Craft's critical appraisal of the article in *Glimpses*, 319-331. Craft's earlier catalogue of manuscripts in the composer's possession (1904-52) is reproduced in White, *Stravinsky: The Composer and His Works*, 599-618. An account of the history of the Stravinsky *Nachlass* is provided in Tucker, *Stravinsky and His Sketches*, 18-22 and in Rosenthal, 'The Paul Sacher Foundation at the Crossroads: The Purchase of the Stravinsky Archive'.

[45] *The Rite of Spring, Sketches 1911-13: Facsimile Reproduction from the Autographs*.

[46] Craft, 'Commentary to the Sketches' (published as an appendix to the *Rite* facsimile), 'Genesis of a Masterpiece', 'The Rite at Sixty-Five', 'The Rite at Seventy-Five' (in *Glimpses*, 205-218, 22-232, 233-247 respectively).

[47] Smalley, 'The Sketchbook of *The Rite of Spring*' (1970).

[48] Taruskin, *Stravinsky and the Russian Traditions*, 849-966, which however has its origins in earlier articles by the same author, e.g. 'Russian Folk Melodies in *The Rite of Spring*' (1980).

[49] Van den Toorn, *Stravinsky and The Rite of Spring: The Beginnings of a Musical Language* (1987).

recent sketch studies include Robert Craft's various sketch 'chronologies'[50] and articles by StephenWalsh[51], and Joseph N. Straus[52].

Susannah Tucker's 1992 unpublished Ph.D. dissertation, *Stravinsky and His Sketches: The Composing of Agon and Other Works of the 1950s*, concentrates on the works immediately preceding *Movements*, in particular the sketch collections for *Canticum Sacrum* and *Agon*, and represents a pioneering work as a sketch study of the earlier serial music. It is one of the earliest major studies to reference whole collections of holograph material (including correspondence and other documents) from the Stravinsky *Nachlass*, and in addition usefully synthesises a number of antecedent sources. It includes pragmatic approaches to sketch classification, a brief history of the *Nachlass* collection and detailed consideration of the working methods employed, as well as a thorough reassessment of Stravinsky's early serial development. Its disadvantages lie mainly in its understandably selective approach to the abundant quantity of sketch material involved and the heterogeneous range of theoretical principles applied. As it concludes with *Movements* (which receives only a perfunctory overview in the concluding chapter) its observations on serial mechanics are of limited usefulness in relation to the late works.

Among important facsimiles of sketch material in secondary sources, are those in Craft's

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[50] Published in the appendices to the *Selected Correspondence* volumes. See also *Stravinsky in Pictures and Documents* and *Glimpses*.

[51] Walsh, 'Stravinsky's Symphonies: accident or design?' (1996).

[52] Straus, 'The Progress of a Motive in Stravinsky's *The Rake's Progress*' (1991). Although this references sketch materials in the Paul Sacher Stiftung, these are employed only parenthetically to support the article's hypothesis of a pitch-specific dyad (with leitmotivic propensities) which the author finds embedded in a variety of harmonic contexts throughout the opera. As there is little attempt to investigate the evolution of such ideas in the sources, the article can only nominally be classified as a sketch study.

various publications[53], usually accompanied by the author's commentaries, of variable degrees of accuracy and insight. The Paul Sacher Stiftung's catalogue for the exhibition held in the Basel Kunstmuseum to mark its official opening in April 1986 includes splendid reproductions of working materials from all stages of the composer's career, albeit only a very limited number from the post-*Movements* period[54]. A later collaboration with the Kunstmuseum is commemorated in the lavish catalogue *Canto d'Amore: Classicism in Modern Art and Music, 1914-1935*, which reproduces a considerable number of Stravinsky holographs, though obviously none from the late period. Other notable Stravinsky-related facsimiles and publications by the Paul Sacher Stiftung are those concerning the *Symphonies of Wind Instruments* particell[55], various working materials for the *Trois Pieces pour Quatuour à Cordes*[56], *Quellenstudien II*[57], *Komponisten des 20. Jahrhunderts*[58], *Settling New Scores*[59] and the (invariably monochrome) reproductions illustrating the brief articles published in the various annual *Mitteilungen*.

Richard Taruskin's mammoth two-volume study *Stravinsky and the Russian Traditions: A Biography of the Works Through 'Mavra'*, as its title indicates, deals essentially with the

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[53] These are discussed as appropriate in the main body of the text. Craft is not always able to resist the temptation to reproduce the more impressively elaborate and colourful holographs, which in many cases are also the least technically informative in isolation (being mostly late fair-copies or particells).

[54] Virtually all the sketch material for the works from *Abraham and Isaac* onward were at this stage still owned by Robert Craft, and were acquired, as already observed, only in 1990.

[55] *Igor Strawinsky: Symphonies d'Instruments à Vent: Faksimileausgabe des Particells und der Partitur der Erstfassung*, Baltensperger,and Meyer (eds.).

[56] *Igor Strawinsky: Trois Pieces pour Quatuor à Cordes; Skizzen, Fassungen, Dokumente, Essays*, ed. Danuser etc.

[57] Volker Scherliess, '*Inspiration* und *Fabrication*: Beobachtungen zu Igor Stawinskys Arbeit an *The Rake's Progress*', in *Quellenstudien II: Zwölf Komponisten des 20. Jahrhunderts*, ed. Meyer, 39-72.

[58] Hans Oesch, 'Im Schatten des *Sacre du Printemps*: Beobachtungen zu den *Trois poésies de la lyrique japonaise*, einen Schlüsselwerk von Igor Strawinsky', in *Komponisten des 20. Jahrhunderts*, 95-102.

[59] This catalogue accompanied the exhibition of Sacher manuscripts in the Pierpont Morgan Library, New York, in 1998.

'Russian' works, extending from Stravinsky's earliest compositions to approximately 1922, although its implicit premise that Stravinsky' compositional practice remained fundamentally consistent throughout his life allows it to incorporate a sizeable and detailed section dealing with the pitch structure of *Requiem Canticles*[60]. Throughout this study, albeit in a more intermittent than organic way, Taruskin references sketch materials, which are largely used to endorse observations on octatony, metrical prosody etc., rather than as a means of examining Stravinsky's working methodology. Thus, the work in no way professes to be a sketch study.

As Taruskin's preface illustrates though, his primary sources should be treated with some discretion. Apart from the published facsimile sketchbook source of *The Rite of Spring,* the small (though wide-ranging) amount of Stravinsky *Nachlass* material referenced was consulted in the New York Public Library during its sojourn there from January to August 1983, immediately prior to its purchase by the Paul Sacher Stiftung. It should be noted that the sketch transcriptions reproduced in the volumes are thus identified throughout using the obsolete pre-Sacher 'Rothschild' numbering (1970)[61] (with occasional references to the Shepard 'checklist' sketchbook classification) which despite the belated date of the study's publication (1996) has not been updated. In addition, the volumes disregard holograph materials outside of the Stravinsky *Nachlass* relating to works discussed (e.g. the large

[60] Taruskin, *Stravinsky and the Russian Traditions*, 1648-75. The *Canticles* section synthesises various earlier studies and deals with the *modus operandi* of the row charts in some detail.
[61] See Craft, *Glimpses*, 320.

collection of *Noces* and *Histoire du Soldat* sketch materials in Winterthur)[62] and the bibliography takes no account of material published after 1990.

Although the comparatively small body of existing literature dealing with Stravinsky sketch materials contains occasional incidental allusions to what are clearly template-based processes, there has been little or no attempt at an extended investigation into the breadth and significance of template morphology operative within Stravinsky's compositional *modus operandi*. Craft[63], Tucker[64], Baltensperger/Meyer[65], Forte[66], Taruskin[67], David H. Smyth[68], and Van den Toorn[69] all parenthetically touch on, or allude to, processes (in works dating from various stages of Stravinsky's career) consistent with a variety of template methods to be discussed in detail within the main body of the present study.

All of the above, however, treat such phenomena incidentally and regard them as isolated

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[62] Werner Reinhardt Collection, Rychenberg Stiftung, Stadtbibliotek, Winterthur. The *Histoire* sketchbook is discussed later in the present introduction. The *Noces* materials consist of a large hardcover sketchbook containing an assortment of working materials (sketches, drafts, blue carbons, etc.), concluding with a sixty-page orchestral draft for the first version of the work (dated September/October 1917).

[63] See, for instance, *Glimpses*, 214-215 (reprinting part of Craft's commentary to *The Rite of Spring: Sketches 1911-13*). Not even Craft's observation here that 'Ideas do not always occur in the sequence of the completed composition. . . . But the unfailing appearance, in the latter part of whatever movement he is composing, of a capsule sketch of the next movement, *is* extraordinary', appears to alert him to the possibility of an ongoing, and deliberately applied, compositional process. Further ramifications of this article are dealt with later in the present introduction.

[64] Tucker (1992), 27: '. . . even when the material presented [in the sketches] is familiar, much is to be learnt from the manner of that presentation: about the order of composition . . . about Stravinsky's mosaic style of composition . . . about juxtapositions of material that occasionally indicate an unexpected relationship, or the use of one idea as the model for another, and much more.' Also: 'small-scale intervallic considerations [in the *Pas de Deux* of *Agon*] account for a significantly large number of the compositional decisions taken.' (Ibid., 188).

[65] Baltensperger and Meyer, *Symphonies d'Instruments à Vent*.

[66] Forte, 'Harmonic Syntax and Voice-Leading in Stravinsky's Early Music, 101.

[67] Taruskin, 'Stravinsky's Rejoicing Discovery'.

[68] Smyth, 'Stravinsky at the Threshold: A Sketchleaf for *Canticum Sacrum*' and 'Stravinsky as Serialist: The Sketches for *Threni*'.

[69] Van den Toorn, *Stravinsky and the Rite of Spring*, 139.

instances, rather than as the external evidence of a larger ongoing process of composition. Other recent articles referencing sketch material (e.g. by Scherliess, Lynne Rogers, Van den Toorn and Gretchen Horlacher)[70] pursue different agendas largely concerned with tracing and comparing alterations to detail made at successive stages of development for specific passages.

Key Issues and Findings: An Overview

Part I of the present dissertation involves a detailed examination of holograph materials relating to two consecutive major works, *Movements* (1958-59) and *A Sermon, a Narrative and a Prayer* (1960-61), the pieces in which the idiosyncratic technical procedures of the composer's final period were first established and refined. These sketch collections display numerous highly complex interactions between invariant-based serial processes and the proliferation of template-derived configurations ('clones') across extended spans of material. Sketch materials are employed to outline, as far as possible, the chronological evolution of these pieces, showing how Stravinsky's decisions regarding the choice of pitch material from his serial charts, as well as the evolution of certain non-pitch parameters, were often based on the propagation and expansion of a circumscribed number of key template configurations.

[70] Scherliess, 'Mozart à la Strawinsky – zu einer Melodie aus *The Rake's Progress*', Rogers, 'Varied Repetition and Stravinsky's Compositional Process', Van den Toorn, 'Metrical Displacement in Stravinsky', Horlacher, 'Sketches and Superimposition in *Stravinsky's Symphony of Psalms*'.

Stravinsky's own recorded assessment of *Movements* as 'the turn-of-the-corner in my later music'[71] emphasises the fundamental part that the work played in establishing the foundations of the *modus operandi* employed throughout his subsequent large-scale music, above all in the construction of rotation-transposition matrices and the use of serial 'verticals' as harmonic determinants.

This seminal and transitional role which *Movements* played in Stravinsky's development is evident from the apparent compositional struggle (alluded to in the composer's programme note for the work)[72] evinced by the sketch materials preserved in the Paul Sacher Stiftung's Stravinsky archives. Presumably as a result of the difficulties occasioned by the experimentation with new compositional methods, the nine-minute piece occupied the composer for well in excess of a year[73], and generated a quantity of sketch and draft material surpassing than of any subsequent work completed in the 1960s (including several pieces of greater duration). The archival materials preserved in the Paul Sacher Stiftung thus provide a remarkably comprehensive chronicle of the compositional process, making it possible to attempt a fairly detailed and thoroughgoing chronological assessment of its various stages.

The plethora of surviving sketch material for this work additionally allows for a comprehensive and ongoing assessment of template mechanics throughout the sketching

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[71] *Themes and Conclusions*, 33.
[72] 'The fifth movement . . . cost me a gigantic effort – I rewrote it twice' (*Memories and Commentaries*, 106).
[73] The completed particell of the first movement is dated 9 July 1958, and the latest dated sketch (for the fourth interlude) 16 August 1959.

process. The substance of these sketches, in comparison with those of the subsequent works, suggests that the composer found it necessary to resort to more elaborate drafting procedures in this piece. (It seems certain that, as a rule, some interim compositional stages would have been investigated and refined at the keyboard, thereby circumventing the sketch stage). Presumably as a result of compositional difficulties arising from the unfamiliarity with the newly extended serial vocabulary, fewer stages of *Movements* went unrecorded, so that the present sketch collection represents a compendium of template procedures, often heavily disguised by the actual layout and physiognomy of the sketch materials, but nonetheless more extensively illustrated that in any subsequent collection.

Because of the comprehensive nature of the holograph material and the work's fundamental significance within Stravinsky's *oeuvre*, the materials of *Movements* are not excerpted, but are presented for discussion as an entity. This allows for the tracing of compositional choices and technical procedures through various repertoires of related sketch materials and to observe how template mechanisms are established and manipulated within and between a variety of sketch sequences.

The constituent sections of *Movements* are thus considered, as far as possible, in their compositional sequence (differing widely from the succession of the final score) by observing the transfer and interrelationship of material from sketch to sketch, together with occasional dates appearing on individual sketchleaves and on the particell (short-score) draft. The latter is shown to have functioned as a parallel process to the preparatory

sketches, rather than simply as a later collation of the material outlined therein, and is therefore considered throughout in conjunction with them.

From a detailed investigation of the serial choices revealed by the composer's elaborate annotations (often not inferable from the score alone) and the often complex manner in which sketchleaves interact, it becomes evident that Stravinsky methodically manufactured and manipulated a limited number of (often interrelated) template configurations to act as 'filters' for many subsequent compositional decisions occurring throughout the sketching process. As discussed below, such templates are not an organic part of the work's substantive construction, but act as parallel compositional tools – a background strategy for directing compositional choices and facilitating the real-time manipulation of intervallic, rhythmic and gestural features.

One striking aspect that emerges from this investigation is the range and variety of template mechanics explored within the compass of a single work, an observation that is supported by a comparable diversity to be found in later sketch collections. The sketches reveal evidence of 'concept' templates, often originated in conjunction with, or prior to, the row itself; numerous varieties of 'secondary' template extracted from ongoing drafts (and often themselves interrelated)[74]; the action of a single template archetype across the sketches for two or more independent (sometimes non-consecutive) movements; the use of extended passages as templates for later block insertions (often in transposition or in retrograde); the autonomous use of contour templates; and the independent propagation of constituent

[74] Cf. Craft's observation given in footnote 63 above.

template parameters.

Following a detailed account of the evolution of *Movements* through its sketches, Part I of the present dissertation concludes by investigating a more circumscribed group of sketches drawn from the compositional materials for *A Sermon, a Narrative and a Prayer*. Composed directly after *Movements*, this was the first work in which a systematic application of rotation chains and vertical sequences derived from row matrices is evident, and it represents a considerable advance on the transitional and embryonic procedures introduced in the earlier work.

Preliminary sketches for the first of the three movements, *A Sermon*, profitably supplement the sketch materials for *Movements*, which, despite its extent, reveals comparatively little regarding the origins of the series or the very earliest pre-compositional strategies[75]. Here several sketches, specifically dated to the early months of 1960, along with their associated satellites, allow a more detailed reconstruction of how the composer formulated a final series via an intermediate row form, procedures which would seem to fall into the composer's category of 'pre-compositional' research.

Despite the extensive modifications undergone by the original 'concept' template, several (notably rhythmic) features persist unchanged, through several preparatory sketches, into the composition itself.

[75] As described in the main body of the present dissertation, these preparatory stages were almost certainly superseded or obfuscated by subsequent layers of musical text on palimpsest sketchleaves.

Investigation of the *Sermon* material concludes with a brief overview of certain configurations in the sketches for the later movements of the work, which are clearly associated with, and derived from, material delineated in these early preparatory notations.

Part II considers the ongoing compositional *modus operandi* and application of template procedures in extensive sketch collections for two major works of the 1960s, *Abraham and Isaac* (1962-63) and Stravinsky's last important compositional achievement, *Requiem Canticles* (1965-66), products of the composer's self-styled 'last-ditch-period'[76]. In addition, the sketches for several contemporary shorter pieces (*Elegy for JFK* (1964), *Introitus* (1965) and *The Owl and the Pussycat* (1966)) – all of which employ approaches to pitch organisation divergent from the larger-scale music – demonstrate that template-based procedures were not exclusive to works exploiting extended pitch matrices. As a postscript, a small number of surviving sketchleaves for an abandoned post-*Canticles* composition (1966) are examined, which simultaneously continue the characteristic template methods of the preceding works and point towards potential new applications of the matrix.

Abraham and Isaac and *Requiem Canticles* are chosen as paradigmatic for several reasons. Not only are their compositional methods wholly characteristic of Stravinsky's late period, but both works additionally have their origins in rudimentary notations found in a miniature pocket sketchbook in the *Sammlung Robert Craft* (item C115), hitherto ignored in the published literature. Here they form a chronological frame for a number of other

[76] *Themes and Conclusions*, 99.

correspondingly rudimentary notations relating to *Elegy for JFK* and the *Variations in Memoriam Aldous Huxley* (1963-64). The portable nature of the sketchbook (according to Craft the composer habitually carried it on his person)[77] and the fact that Stravinsky apparently made no subsequent attempts to integrate these condensed notations into the relevant main sketch collections or to identify their affiliation (as he usually did when assembling his sketches for storage), raise important questions as to the nature of his earliest compositional stimuli. It would certainly appear that he considered the pocket sketchbook notations as somehow independent from their later elaboration in the associated sketch collections, thereby substantiating the distinction between template models and real-time compositional materials intimated by the *Conversations* reply heading this chapter. The pocket sketchbook, considered in conjunction with other holograph material, thus permits a detailed examination of the initial gestation of both *Abraham and Isaac* and *Requiem Canticles.*

The subsequent stages of sketching for *Abraham and Isaac* substantiate earlier strategies and introduce new variants of template practice. Of particular interest are the cannibalisation of rejected material (originally devised for use at the beginning of the work) to serve as the basis for new (though associated) text underlay much later in the piece, and the systematic derivation of the work's coda from rudimentary configurations made at a demonstrably incipient stage of sketching. These transformations necessitated the internal expansion of the prototype models by permutational methods similar to those

[77] This is mentioned in Craft's description provided in the photocopied catalogue to the *Sammlung Robert Craft*, now in the possession of the Paul Sacher Stiftung. See Chapter 9.

found in *Movements* III. In the case of the revised opening, Stravinsky substituted invariant material which replicated much of the pitch content of the original material.

The sketches for *Abraham* additionally reveal that Stravinsky's compositional armoury and his approach to template manipulation continued to expand in the wake of *Movements*. The diagonal use of the serial matrix and ancillary mechanisms for the manufacture of verticals are introduced for the first time some distance into the compositional process. Neither technique is capricious: both are calculated, at least at a background level, to replicate key configurations defined by the earlier sketch material.

Consideration of the *Requiem Canticles* materials focuses principally on sketches for its central instrumental interlude, the first section of the score to have been composed, and which clearly evolved directly from the pocket sketchbook notations. This movement exemplifies a further expansion of Stravinsky's serial methods, in making use of two simultaneously deployed series. An account of the compositional chronology and an insight into the composer's protean conception of the musical continuity are facilitated by the existence of an 'intermediate' working particell, differing greatly in content and distribution from the final score. The role of the sketchbook template and its satellites as compositional determinants for several of the subsequently composed sections is briefly considered in conclusion.

Sketches for a piece begun directly in the wake of *Requiem Canticles*, but subsequently shelved, reveal several remarkable similarities with the compositional strategies employed

in the earlier work. Once again the work grows from an initial template notation (like *Canticles* this outlines an aggregate from which the ordered row was subsequently extracted), employs resourceful mechanisms for manipulating the matrix in relation to the template, and takes a flexible approach to block continuity.

Materials for *Introitus*, *Elegy for JFK* and *The Owl and the Pussycat* supplement this part of the dissertation by examining the further application of contour templates with regard to melodic sketching (in all three works the vocal lines were delineated as an initial framework). *Introitus*, the only late work to employ tetrachordal rotation techniques, follows the example of *Abraham and Isaac* in employing matrix diagonals as a basis for the manufacture of the serial 'verticals' occurring in the instrumental parts. Of particular interest in this regard are a large number of seemingly quixotic departures from the chart-prescribed pitch configurations. Some of these discrepancies may be reliably accounted for as clerical errors on the composer's part, but a number of others would appear to result from a conflict between template models and their subsequent real-time realisation.

It appears very likely that the principal attraction of the pitch matrices employed in the late-period works lay not in any systematic application, but predominantly in their versatility and in the multiplicity of serial choices and pitch selection procedures that they offered in relation to background template strategies. It seems no coincidence that Stravinsky later wrote, with regard to *Introitus* that 'choice was more important than any principal of seriation'[78]. Also in evidence, as a corollary, is the composer's adroit (if idiosyncratic)

[78] *Themes and Conclusions*, 66.

exploitation and manipulation of serial properties, particularly in the treatment of invariant structures, to generate 'cloned' material – a facility which challenges the still-prevalent view of the composer as a somewhat dilettante serialist[79]. As a by-product of its inquiry into various template phenomena, the present dissertation hopes to place the composer's use and particular understanding of serial techniques in the context of his ongoing compositional concerns.

Template Morphology: Definitions and Preliminary Observations

The template, as used in its present sense, may be broadly defined as any configuration that provides a conceptual model, or repository, for a number of subsequent musical events, and which acts, in whole or in part, as a direct basis or nucleus for the construction and extrapolation of other material. It is important to emphasise that templates exist largely as background compositional tools and are thus primarily abstract in nature, ordinarily remaining distinct from real-time compositional procedures. While playing a fundamental role in the process of composition, they rarely form an organic part of the substantive compositional material itself, functioning essentially as a parallel apparatus for facilitating the manipulation of primary material in the sketches. In this respect the notion of a

[79] Such a perspective (whether conscious or otherwise) is clearly detectable underlying the following observation, for example: '[Stravinsky] justified each decision or manipulation to himself by applying his own peculiar serial logic; in short . . . Stravinsky did understand the 'serialism' of such a passage to be governing the procedures, even if, to our [*sic*] eyes, the actual products seem relatively unsystematic.' (Tucker (1992), 252).

template differs substantively from the analytical concepts of motif, gestalt or basic shape, all of which are essentially concerned with the description of perceptible real-time structures within a teleologically defined temporal context[80].

The majority of the templates found in the holographs are condensed capsule-like notations encoding various possibilities for subsequent expansion within the sketch material. Stravinsky's statement in *Conversations*, which heads this introduction, that

> . . . long before ideas are born I begin work by relating intervals rhythmically. . . . Only after I have established my melodic or harmonic relationships do I pass to composition. Composition is a later expansion and organisation of material.

succinctly illustrates the crux of his template methodology, if remaining largely inadequate as a summary of it[81]. The remark has usually been taken at face value to imply that Stravinsky engaged in a certain amount of pre-compositional planning in the earliest stages of working on a piece. The sketches, however, reveal that such compositional/pre-compositional procedures acted as ongoing and complementary mechanisms throughout the whole compositional process, a phenomenon, moreover, fully compatible with the actual statement itself. In this light, the establishment of 'melodic and harmonic relationships' is exemplified by the template notations that remain as residual features distributed throughout the sketch material.

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[80] For an example of an essentially motivic approach to the analysis of a serial work, see, for example, Boynton, 'Formal Combinations in Webern's *Variations* Op.30'.

[81] As will be seen, template influence is not confined solely to rhythmic- and pitch-based parameters.

The present study seeks to demonstrate the specific ways in which templates were employed by Stravinsky as a conscious means of manipulating such features as intervallic, rhythmic and gestural configurations within the sketch material. The following points seek to clarify the notion of templates and to define associated principles in advance of the main body of the present thesis.

The term 'primary' template is employed here to describe independent configurations, acting as templates, which are not derived in any apparent way from earlier material for the work concerned, and thus have no directly discernible antecedent in the sketches. Such templates are, of course, commonly found in the earliest stages of composition, though they are not exclusive to them. 'Secondary' templates, however, are ostensibly manufactured by extrapolation from existing material (normally sketches which have been brought to a certain degree of completion) and thus preserve and propagate certain configurations within a new context. Both these classifications are used in reference to the origin of the template sources and do not in themselves imply any distinction in the subsequent predominance or treatment of the templates concerned.

The term 'concept' template is reserved specifically for a primary template configuration (invariably of an extremely laconic nature) which clearly represents an initial, independent idea for a piece (or by occasional extension, a major section thereof)[82]. It thus represents a significant and seminal primary template.

[82] The term is borrowed from Beethoven sketch study, where it has been generally used to indicate 'a short new idea for a movement about to be written . . . [although] it can by extension also be applied to new ideas for later parts of a movement . . .' (Cooper, *Beethoven and the Creative Process*, 104).

Sketches that are directly patterned on, or otherwise derived from, a template sketch are referred to as 'clones' of that template, in that certain parameter(s) or element(s) of the template determinant will be replicated within a new overall context. Clones are normally devised with a view to a specific real-time compositional context and are thus not intended as abstract conceptions, though they may, in certain instances, be appropriated for subsequent use as templates themselves (see below).

A 'contour' template defines only the general profile of a melodic line or of the constituent order positions within a serial deployment, without reference to specific intervallic quantities. It may thus be freely imposed on, or associated with, any number of distinct serial forms. For instance, the order positions of a row form may be distributed numerically according to the pattern of the template determinant, even if the row is partitioned to produce simultaneities or separate voices. Such templates may appear as rhythmically undifferentiated row forms, for example as noteheads (*Introitus*) or simply as abstract graphic images (*Movements* IV).

In the case of the late serial works, template models range from brief 'capsules' (e.g. single abstract row statements or musically configured aggregates) to complete blocks of detailed and well-developed material manipulated in a similar fashion. The more condensed templates, which are also the most commonly encountered, usually offer a cluster of constituent parameters – pitch, intervallic, durational and gestural characters –which may be dissociated and treated independently in subsequent 'cloning' processes, or

metamorphosed and extended in a variety of abstract ways distinct from *a priori* developmental concepts.

Such characteristic treatment further distinguishes the template from standard motivic stratagems, which normally seek to preserve audible associations in time. Template morphology does not seek to guarantee the projection of the template/clone association within the temporal context of the final score. Relationships between template and clone, frequently oblique to begin with, are often obfuscated further in the course of subsequent sketching[83] or by non-adjacent placement in the work. For these reasons, templates may be easily overlooked as abandoned sketch attempts. The affiliation of a template with its associated clones is, however, usually apparent within the context of the sketch material, through such factors as juxtaposition and alignment, serial practice or intervallic and rhythmic correspondences.

Key templates are often recognisable by their visual isolation from surrounding sketch material, are regularly placed in a referential position (e.g. at the top of a page), are sometimes dated (or otherwise identified), and are only very infrequently contextualised into the finished composition, in which case they usually appear in a greatly modified form. Such characteristics emphasise that they were not conceived as sketches or mnemonics for specific passages within the piece. In addition, these templates may appear primitive and unremarkable in character, and often hasty in calligraphic appearance, although usually exhibiting striking gestural features.

[83] I.e. clones may be treated as frameworks for further revision and modification.

Evidence to be discussed in the present dissertation suggests that templates are not in any sense organic outgrowths of the compositional process, and are instead deliberately 'manufactured' for use as and when required. Secondary templates frequently appear in the final stages of sketching for a movement or section, and as such are often conspicuously extracted from adjacent material[84]. This impression is reinforced by several uncharacteristic departures from this pattern, as in the case of the main fourth and fifth movement templates for *Movements*. The latter is briefly discussed in the example provided below, whilst the former template was introduced 'prematurely' in the midst of early work on the chronologically preceding fifth movement (from which it is extracted) when the composer decided to add a movement that was clearly not part of his original plan for the work[85]. This template was not employed in the intervening sketches for the fifth movement, however.

In general, a single template maintains an influence over a specific field of compositional activity, usually a movement or distinguishable large section thereof, after which it is superseded by a new prototype, usually cloned from real-time compositional material from within the section concerned. Certain templates however (usually 'primary' or 'concept' in nature), were referenced at various stages of composition (as in the *Danse de la Terre* example to be discussed below). However, this is very much a case of the exception that proves the rule, and such retrospective use of template sources appears to be carefully

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[84] Cf. Tucker, *Stravinsky and His Sketches*, 58: '[Stravinsky] often noted down ideas for a movement or section which had not been started, while ostensibly engaged on a different movement' and also Taruskin's discussion (see below) on the treatment of the Juszkiewicz folk sources in the *Rite of Spring* sketches. (*Stravinsky and the Russian Traditions*, 895-906).

[85] See Chapters 5 and 6.

circumscribed: only a small number of key templates are used in this manner and they mostly appear at what may be regarded to some extent as 'analogous' junctures of the compositional structure. The same template (drawn from M332) furnishes intervallic and rhythmic material for the opening bars and final coda of *Movements*, for example, and similar strategies are to be discovered in the *Abraham and Isaac* materials[86]. Clearly the templates involved were either reinstated on the composer's music rack or remained present throughout the entire compositional process.

To illustrate this synopsis of key template practices, some characteristic examples drawn from the sketch materials are provided in Examples 1 and 2 to the present introduction. Detailed discussion of these examples is furnished in the main body of the dissertation.

The earliest ('concept') template for *Requiem Canticles* is shown in Example 1. Located in the small pocket sketchbook (C115 in the *Sammlung Robert Craft*), it reveals several characteristic features of primary template formations. It is isolated from the main body of sketches (and even from other adjacent notations in the sketchbook – of which it is the only one relating to *Canticles* – by Stravinsky's bracket around the sketch), is clearly identified as being intended 'for Princton' [*sic*][87], and consists essentially of a musically-configured aggregate that, apart from its striking gestural content, seems fairly prosaic as a musical idea[88]. It is followed directly beneath by an extracted (ordered) series, closely resembling that of 'series II' in *Requiem Canticles* (Example 1(b) – the first hexachord is identical; in

[86] Cf. also the *Danse de la Terre* template discussed below, which was later referenced in the composition of the *Danse Sacrale*, the 'corresponding' movement in Part Two of the *Rite*.
[87] Princeton University was responsible for the commission.
[88] A rationale for the single (cancelled) pitch repetition (C#) is provided in Chapter 12.

the second only the position of the C# is changed). At no point does the notation appear in the completed work (or indeed in any subsequent sketch), yet many of its constituent features (including pitch and intervallic elements, as well as its basic durational framework) are unmistakably cloned in early notations for the first section of the work to be composed, namely the centrally-positioned instrumental interlude (bb.136-202) – see Example 1 (c) and (d). Yet it is in the *Lacrimosa* movement, demonstrably composed much later, and based exclusively on the alternative 'series I', that its gestural ideas (low-register chords in dotted rhythm answered by a single high chord associated with a pizzicato-like bass pitch) are explicitly developed. The opening of the work's *Prelude* also conspicuously references the sketchbook template (Example 1(e)).

Example 2(a) shows the principal template for the fifth movement of *Movements*[89]. In a similar manner to the *Canticles* example, its template status is disclosed through its affiliated date, physical separation (it appears on the top right-hand side, as the highest notation, on a very large page of dissociated sketches relating to the first half of the movement), and by its non-appearance in this form in the subsequent sketches and completed score. Once again though, it has obvious direct influences on several later notations for the movement (see the clones in Example 2 (b) and (c)). Unlike the *Canticles* 'concept' however, this is demonstrably a 'secondary' template, extracted from late sketches for the third movement (its immediate chronological predecessor). Example 2(d) shows the source of the fifth-movement template (taken from M376), a collage of χ and δ segments which provides an early outline of the second flute in b.89. Direct intervallic

[89] See sketchleaf M362(ii).

correspondences are found between the two notations (cf. Examples 2 (a) and (d)). The cloned template was created by the substitution of intervallic serial invariants[90] almost three weeks after the completion of the third movement particell[91], and it was therefore systematically fabricated for use as a template, and is in no way an organic outgrowth of the third movement sketches.

Another distinctive category of template practice, invariably occurring late in the compositional process, is the use of a completed passage, in its entirety, as a model for an inserted block of new material. In such cases, the prevailing serial basis of the model is transferred, together with some of its associated features, such as certain idiosyncratic intervallic configurations, timbral strata, or rhythmic characteristics. Each of the four interstitial 'interludes' of *Movements*, together with an additional insertion in movement V, was constructed in this manner[92]. In a similar way, rejected material for the opening of *Abraham and Isaac* was cannibalised as the basis for a later section in the same work, and a passage in the instrumental interlude of *Requiem Canticles* was modeled directly on that immediately preceding it[93]. In these cases the models were appropriated as templates only after having first been planned for use in a real-time compositional context.

The above, however, are largely axiomatic examples. The composer's sketches reveal an extensive, imaginative and highly refined variety of template-based procedures in use

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[90] The mechanism whereby this was achieved, discussed in detail in Chapter 5, demonstrates the extent to which cloning processes, and thereby the whole practice of template morphology in the late works, was dependent on the exploitation of invariant serial substructures.
[91] Dated 14 February [1959]. The model is drawn from the preparatory sketches, however.
[92] In the case of this material, the models and insertions appear as consecutive passages in the score. In one instance the model is used in retrograde, in two instances transposition occurs. See Chapters 5 and 7.
[93] See Chapter 10. Stravinsky's particell explicitly refers to one passage as a 'variation' of the other.

throughout the late period, which cannot be briefly abstracted in this introduction. The symbiotic manner in which such procedures interact with the serial *modus operandi* that Stravinsky first evolved in *Movements* is highly suggestive, and perhaps offers a clue as to the function of the composer's idiosyncratic, and sometimes puzzlingly refractory late serial methods.

Compositional *Modus Operandi* in the Late-Period Works

Movements, commissioned through Nicolas Nabokov in March 1958 for the Swiss pianist Margrit Weber[94], has long been regarded as the critical work of the composer's final period, a view first expressed by Stravinsky himself – 'I now see the *Movements* as the turn-of-the-corner in my later music'[95]. Prompted by Stravinsky's own published remarks on the work's technical construction, *Movements* rapidly acquired, and sustained, a forbidding reputation for elusiveness, hermeticism and procedural abstruseness:

> I *have* discovered new (to me) serial combinations in the *Movements* for piano and orchestra . . . (and I have discovered in the process, too, that I am becoming not less but more of a serial composer) . . . . and the *Movements* are the most advanced music from the point of view of construction of anything I have composed . . . . Every aspect of the composition was guided by the serial forms, the sixes, quadrilaterals, triangles, etc. The fifth movement, for instance (which cost me a gigantic effort – I rewrote it twice), uses a construction of twelve verticals. Five orders are

[94] The commissioning letter is reproduced in both *Selected Correspondence* II, 396, and in *SPD*, 452.
[95] *Themes and Conclusions*, 33.

> rotated instead of four, with six alternates for each of the five, while at the same time the six 'work' in all directions as though through a crystal.[96]

This commentary, which provided a stimulus for much of the piece's subsequent notoriety in analytical circles, was evidently not so much intended to be an exegetical account of the work's serial basis as something of an artistic manifesto[97], and is in this respect very much in line with Stravinsky's contemporary promulgation of Webern and certain works of the 'Darmstadt' generation[98]. The metaphor of the 'crystal' used here by Stravinsky invokes the Darmstadt concern with constructive 'mobiles' and a systematic approach to musical 'space'. In this respect, it is interesting to note that Stravinsky employed an analogous geological metaphor four years earlier in his epigraphic encomium to Webern published in 1955 in the Darmstadt serialist periodical *Die Reihe*[99]. The *Movements* programme note proceeds to suggest, albeit rather ambiguously, that other parameters of the work – duration and timbre, in particular – are influenced, though not strictly organised by serial concepts. However recondite its wording may be, the composer's commentary indisputably alludes to the key components which, appearing here for the first time, were to constitute the basis of his late technical armoury, principally involving the construction of rotation-transposition matrices and the use of verticals as harmonic determinants.

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[96] Reprinted in *Memories and Commentaries*, 106-7.

[97] Taruskin, in *Stravinsky and the Russian Traditions*, 1673, n.99, observes than 'in place of an exposition of his transposition/rotation technique, Stravinsky offered gobbledygook . . . . When this description was first printed, in the program of the world premiere of *Movements* under the composer's baton at a Stravinsky festival in New York's Town Hall (10 January 1960), literally no one in the audience (an audience that included Robert Craft and Milton Babbitt) knew what it meant, as Babbitt recalled in talks given at Stravinsky centennial symposia in La Jolla and Notre Dame in 1982.'

[98] See for example, *Memories and Commentaries*, 103-5, *Conversations*, 127-130.

[99] '. . . he inexorably kept on cutting out his diamonds, his dazzling diamonds, the mines of which he had such a perfect knowledge.' Foreword, dated June 1955, to *Die Reihe* II, (a symposium on Webern), ed. Eimert and Stockhausen.

Simple techniques of permutation (whereby order positions are systematically internally rearranged) are infrequently applied to single row forms in certain sections of *Canticum Sacrum* and *Threni*[100]. However, there can be little doubt that the initial stimulus for Stravinsky's extensive expansion of his serial vocabulary in *Movements*, and the works which followed, came directly from the theories of Ernst Krenek, and specifically from his *a cappella* choral piece *Lamentatio Jeremiae Prophetae* (of which the pervasive canonic textures, and of course title, had already exerted conspicuous influence on *Threni*).[101]

The obliquity of the metaphors employed in Stravinsky's programme note for *Movements* may be clarified somewhat by an examination of the work's technical basis. Example 3 to the present introduction is an extract from the composer's row-charts for the piece (M309), showing the prime form of the row together with its matrix of concomitant rotations. The permutational mechanics of this particular rotation-transposition technique – to which the composer alludes in the programme note – have been widely discussed in relation to a number of late works since the 1960s[102]. Nevertheless, a brief *resumé* of the fundamental procedure is provided here as a background to the further discussion of Stravinsky's *modus*

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[100] Some of these processes are discussed in Tucker (1992), 124 foll. and 245 foll., and Hogan, '*Threni*: Stravinsky's 'Debt' to Krenek', 24-5. See also Babbitt, 'Remarks on the Recent Stravinsky', 180-81, White, *Stravinsky: The Composer and His Works*, 501, and Boucourechliev, *Stravinsky*, 276-77. Sketchleaf M334, the verso of one of the *Movements* sketches, contains rough notations for *Threni* which employ such permutational procedures.

[101] See Hogan, '*Threni*: Stravinsky's 'Debt' to Krenek'. The influence of Krenek's theories on Stravinsky's late work is discussed in further detail below.

[102] See, for instance, Babbitt, 'Order, Symmetry and Centricity in Late Stravinsky' and 'Stravinsky's Verticals and Schoenberg's Diagonals', also *Words about Music*, 107-114; Spies, 'Impressions after an Exhibition','Notes on Stravinsky's *Abraham and Isaac*', 'Some Notes on Stravinsky's Requiem Settings' and 'Notes on Stravinsky's *Variations*'; Müller, 'Igor Strawinsky: *Movements*'; Kohl, 'Exposition in Stravinsky's *Variations*'; Paul Schuyler Phillips, 'The Enigma of *Variations*'; Van den Toorn, *The Music of Igor Stravinsky*, 427-55; Taruskin, *Stravinsky and the Russian Traditions*, 1653 *et seq.*

operandi during this final period of his career.

In Example 3, the prime form of the row, presented twice across the top of the chart, is divided in both instances into two hexachords expressing the same pitch-class set, as a result of the hexachordally combinatorial properties of the row[103]. The two left-hand columns, identified by the composer as α and β, are 'simple' rotations, creating systematic reorderings (beginning one pitch further along the hexachord in each successive instance, with the displaced pitches promoted to the end of the hexachord), but preserving the original hexachordal levels. Reading vertically down each column will also reproduce the hexachordal content and ordering of these rotations. These 'simple' reorderings are employed in the compositional fabric of *Movements* to a much greater degree than in any subsequent 'matrix' piece.

The right-hand columns (here designated as χ and δ rotations in the composer's nomenclature)[104] transpose each of the 'simple' rotations to commence on the initial pitches – in this case Eb and C – of each of the two hexachords. This procedure results in different hexachordal levels in many cases, so that reading across each rotation will not usually result in an aggregate (although in this instance there are two, viz. χ/δ II and V). Reading down each column results in chordal patterns, some with multiple pitch-doublings, which form the basis of Stravinsky's 'verticals'[105]. The significance of the resulting

[103] This serial property is standard, though by no means exclusive, in Stravinsky's late music.
[104] As will be seen, the significance of the designations (and the associated numbering of the rotations) does not remain consistent from work to work.
[105] Such verticals possess internal symmetries and relationships dictated by the individual properties of the source row. See Taruskin, *Stravinsky and the Russian Traditions*, 1657-9, and Müller, 'Igor Strawinsky: *Movements*', Anhang 1 (127 foll.), although these are not the actual verticals employed in the work (which are derived using a different method described below).

rotation-transposition matrix lies is its ability to be read in several directions as a systematic source of pitch material for the work, although analogous matrices may or may not be elaborated for other primary row forms of a given piece[106]. It was this type of matrix that Stravinsky principally exploited throughout his late-period works.

The resultant multiplicity of hexachordal patterns renders it often quite difficult to determine the serial derivation of many matrix-derived passages in *Movements*[107]. This situation is frequently exacerbated by the specific disposition of these patterns in the musical fabric: verticalisation of adjacencies, retrograde presentations, occasional reorderings and elisions all serve to obfuscate the precise serial derivation. It is frequently only through an inspection of the relevant sketch material, often superimposed with the composer's own detailed serial itemisation, that the compositional choices may be fully comprehended.

Although the *Movements* matrix is a mature example, in that it typifies all subsequent such constructions, the manner of its practical application within the sketch material for the piece was quickly superseded, although Stravinsky's methods in this regard were never wholly rationalised, and remained subject to variation from piece to piece[108].

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[106] The two P matrices discussed here, in conjunction with the 'simple' matrices elaborated for the I, R and RI forms, elucidate Stravinsky's rather misleading reference to 'five [*sic*] orders . . . rotated instead of four'.
[107] The composer's 'sixes' are evidently a reference to the individual hexachords. It becomes clear through an examination of the *Movements* sketches (particularly those for movement I) that the 'quadrilaterals' and 'triangles' are smaller segments drawn from independent rotations, which are then combined into larger structures, a procedure which is not actively pursued in later works.
[108] Cf. '. . . Stravinsky's late works are not only radically different from the early ones, but are highly individuated from each other as well. There is not a major work in this period in which Stravinsky did not try something new'. (Straus, 'Stravinsky's Serial "Mistakes"', 231-2).

In general, most of the *Movements* sketches employ the matrix as a reservoir from which to select appropriate material (Stravinsky's 'sixes, quadrilaterals, triangles, etc.'). Not until the sketches for the fifth movement (composed, in fact, prior to the fourth movement and all four of the interludes occurring between movements) did the composer attempt to use a systematic approach for generating the pitch material of a extended block, i.e. to determine not only localised incidents, but whole sequences of melodic and harmonic events. He did so, however, using an additional, independent matrix constructed by simply overlaying and aligning the four primary forms, (P, R, I and RI). Despite its different construction, the compositional treatment of this ancillary matrix is analogous to that of the rotation matrices invariably employed throughout the subsequent larger-scale works.

The compositional difficulties which Stravinsky later recollected encountering in this section were, no doubt, partly associated with the unprecedented appearance of hexachordal and vertical chains used as compositional determinants. Using these techniques, melodic and harmonic pitch-construction were extracted from the matrix by advancing systematically (or quasi-systematically) through the rows or columns in prescribed numerical order, unfolding or combining the constituent elements in forward or retrograde order or, more frequently, alternating both vectors (see glossary, below). Thus the movement, as published, incorporates three chains of verticals, each presenting a complete (but differently ordered) sequence of the twelve columns of the ancillary matrix, plus an additional sequence consisting of only six verticals, as well as extended passages

unfolding complete chains of χ/δ rotations (e.g. in the piano part from bb.158 through 165)[109].

One distinctive consequence of all these techniques lies in their unfailing generation of substantial pitch redundancy, within a fundamentally serial context[110]. Both because the first column of each rotated hexachord consists of the same pitch class and because of the variable hexachordal levels involved, any given chain of verticals or rotations inevitably produces pitch repetitions or doublings which may be exploited as required in a real-time compositional context.

That Stravinsky associated the use of the serial matrix with overall compositional dimensions is suggested by the fact that the smaller-scale compositions of these years (viz. *Epitaphium*, *Double Canon*, *Anthem* (*The Dove Descending*), *Fanfare for a New Theatre*, *Elegy for JFK* and *The Owl and the Pussycat*) without exception eschew the use of rotations, and are thus based exclusively on untransposed primary serial forms. In this respect *Introitus* falls into something of a unique intermediate category. It exceeds the average length of these works, yet remains considerably less ambitious in its internal dimensions than any of the other 'matrix' pieces, except for the contemporary *Variations*. It is, however, less concentrated in its time-scale than this latter, with the ritualistic character of its refrain-structure being something of a throwback to the less volatile and more leisurely-paced outlook of the shorter pre-*Movements* works. This is reflected in its

[109] See Example 5:1 in Vol. II.
[110] Cf. Krenek, 'Extents and Limits of Serial Techniques', 75, and the discussion under 'Stravinsky and Other Key Serial Figures', below.

technical basis, employing a less-extended matrix based on the rotation of tetrachordal groups, the only late piece to use this approach[111].

A Sermon, a Narrative and a Prayer (composed directly after *Movements* in 1960-61) is the first work in which the technical procedures discovered in *Movements* are used systematically throughout. Several refinements are to be noted; for instance, verticals are now generally presented in their chart-prescribed order, and almost exclusively as chords (simultaneities), whereas, in *Movements*, they are reordered and subjected to further expansion in time[112]. The distinction between the 'harmonic' and 'melodic' dimensions of the texture is now reflected in their derivation from separate aspects of the matrix, interestingly, in view of Stravinsky's assertion that

> The intervals of my series are attracted by tonality; I compose vertically and that is, in one sense at least, to compose tonally. . . .I hear harmonically of course . . .[113]

The elements of Stravinsky's technical serial procedures remained fairly consistent during the remainder of his composing life, although each work introduced new refinements in their implementation. Among those that have been documented are the rotation of the entire series (in addition to its usual hexachordal treatment) in *Variations*[114] and the juxtaposition of two independent series (and their respective matrices) in *Requiem*

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[111] Colour facsimiles of the *Introitus* charts are to be found in *SPD* (Plate 21) and Kunstmuseum, *Nachlass*, 178.
[112] See Chapter 5 for a full discussion of the treatment of verticals in *Movements* V.
[113] *Conversations*, 24-25.
[114] Jerome Kohl, 'Exposition in Stravinsky's Orchestral *Variations*', and Paul Schuyler Phillips, 'The Enigma of *Variations*'.

Canticles[115]. The sketches analysed in the present study expose a number of additional pitch-derivation techniques associated with the matrix, among which are the employment and combination of matrix diagonals in *Abraham and Isaac* and *Introitus*, and the systematic juxtaposition of independent rotation segments to create simultaneities in *Abraham*.

Although, as will be shown, template morphology is not related exclusively to the structuring of pitch material, the present study seeks to demonstrate that the template procedures observable in the sketches for these works are deeply interrelated with the idiosyncratic, and still only superficially understood, pitch-organisational *modus operandi* characterising Stravinsky's late work. The objective of the present dissertation is not simply to observe intervallic consistencies in Stravinsky's handling of pitch material, as is often encountered in earlier studies[116], but to expose the mechanics by which these consistencies were achieved. Indeed, it is by tracing the compositional sequence through the composer's serial choices, as revealed by the sketches, that many other aspects of template morphology emerge.

In this way, one consequence of the present study is a reassessment of the composer's serial credentials, not only by examining hitherto disregarded *modus operandi* (e.g. invariant substitution, diagonals, pitch collages and contour templates) but by attempting to advance reasons for his confident self-description as 'becoming not less but more of a

[115] Spies, 'Some Notes on Stravinsky's Requiem Settings', and Taruskin, *Stravinsky and the Russian Traditions*, 1665-73.
[116] E.g. Straus, 'The Progress of a Motif'.

serial composer' from the time of *Movements*. The reasons behind the composer's enlargement of choice through the introduction of the matrix (an approach which clearly eschews Webernian archetypes) are examined in relation to background template procedures. It will be demonstrated how such serial procedures work symbiotically with the treatment of templates as parallel tools for determining compositional choice, tools which may be observed as having a precedent in the pre-serial works.

Details of Stravinsky's habitual studio practices have been much less widely investigated than his serial methods, although some salient particulars have been recounted anecdotally in several sources. Vera Stravinsky's 1962 letter to Vladimir Ivanovich Petrov (a Moscow cousin), reproduced in *Themes and Conclusions*[117], offers an (apparently quite reliable) account of Stravinsky's habits at this period, including a general description of the layout of his piano music rack (one which corresponds closely with the photograph reproduced *in Selected Correspondence* II, taken at around the same time)[118]. However, as Stravinsky invariably composed behind closed doors,[119] one must approach with considerable caution more detailed 'first-hand' descriptions of his working habits, including those of Elliott Carter[120] and Robert Craft[121]. Craft's accounts that 'most sketch entries are dated and it is possible to determine in them what was composed on what date' and that 'instrumentation is outlined in all of Stravinsky's sketches' are wildly inaccurate, as Tucker has pointed

[117] *Themes and Conclusions*, 298-307.
[118] The plate is unnumbered and located between pages 338 and 339.
[119] 'I have never been able to compose unless sure that no one could hear me.' *Autobiography*, 57.
[120] Carter, 'Igor Stravinsky, 1882-1971', in *The Writings of Elliott Carter*, 302-3.
[121] See especially 'A Personal Preface', from which the following quotations are extracted.

out[122]. However, other information, such as the observations that 'early foundations, melodic and motival 'jottings' and sketches of patterns were usually written on small scraps of paper, a stage before the sketch book [*sic*] score; and also that the sketches themselves have been a good deal subject to erasure'[123], are essentially true and will be expanded in the discussions below.

As well as her general classification of potential sketch types[124], Tucker makes some explicit observations on the early compositional strategies of the major pre-*Movements* serial works, noting that 'Stravinsky's first notations often involved fragments later found in the middle of a movement, rather than at its beginning, in which an essentially melodic conception is developed into a twelve-tone series'[125] and speculating further on the origins of the series:

> It is a matter of debate whether Stravinsky's initial working out of his note-rows always depended on some prior thematic sketching . . . .The possibility of Stravinsky inventing a series 'from cold' for immediate compositional application must at least be acknowledged.[126]

Once again, these observations require some modification in the light of extant sketch materials for the later music. The earliest notations for *Movements*, *A Sermon*, *Abraham*

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[122] Tucker (1992), 34. Her own statement here that 'Stravinsky rarely dated sketchleaves other than those containing sketch drafts or full drafts, which generally contained whole movements or substantial sections of a work' is only partly accurate, however. As will be seen, the infrequent dating appearing in conjunction with more fragmentary sketch material is usually highly significant, and often associated with the inception of template models. Craft's misleading remarks on sketch datings are endorsed as late as 1999 (q.v. Straus, 'Stravinsky's Serial "Mistakes"', 235).
[123] Craft, 'A Personal Preface', 10.
[124] Tucker (1992), 'Modus operandi', 23-8.
[125] Ibid., 117. The *Requiem Canticles* 'concept' described above is, however, more evidently concerned with harmonic matters.
[126] Ibid., 68.

and Isaac and *Requiem Canticles*, if not originally conceived as sketches for their respective openings, are very closely affiliated with them in pitch, intervallic and rhythmic substance. Furthermore, in cases where the derivation of the row is not apparent (as with *Movements*, for instance), other evidence points to such explorations having been superseded by later layers of a palimpsest sketch. Tucker is also mistaken to imply that these early sketches are essentially 'thematic'. As will be seen, the primary function of such template notations is as an abstract, background compositional tool rather than as an outline of real-time compositional material. As such, they represent an aspect of Stravinsky's 'pre-compositional' establishment of melodic/harmonic relationships. Such procedures were apparently not exclusive to Stravinsky's serial music. Conspicuous examples of template morphology in the composer's pre-serial *oeuvre* are considered below as an introduction to the main discussion (see 'Template Archetypes in the Pre-Serial Music', p.76).

Stravinsky and Other Key Serial Figures

Robert Craft and the Second Viennese School

By the early 1950s, Stravinsky and Schoenberg, living only a few miles apart in the same city, had become firmly characterised as antithetical in both musical philosophy and personality. Stravinsky's conspicuous aversion to serialism was undoubtedly partly motivated by his association of the technique with Germanic musical traditions (an outlook

which Schoenberg was content to sustain in both his writings and music). Robert Craft has documented in some detail the circumstances surrounding Stravinsky's first direct encounters with serial technique, the composer's surprising lack of awareness of the serial repertoire and the prevailing musical outlook in the Stravinsky milieu at the time of his arrival in the household in the late 1940s[127].

Stravinsky's new awareness of Schoenbergian serial techniques, undoubtedly first stimulated by Craft's own musical interests, fortuitously coincided with his first visit to Europe for 12 years (since his emigration in 1939), for the preparation and premiere of *The Rake's Progress* in Venice in September 1951. This was followed by a two-month concert tour through Italy, Switzerland and Germany[128], providing the composer with his earliest opportunity to observe at first-hand the influence of the post-war European *avant-garde*, and exposing him to further examples of serial music[129]. In Italy, too, he encountered another significant serial figure in Luigi Dallapiccola. Although Dallapiccola hardly gains a mention in the later memoirs, Stravinsky's awareness of the Italian serialist at this crucial stage in his career is highly suggestive, and Dallapiccola must surely have interested Stravinsky, if only briefly, for several reasons. He was well known as an influential composer and pedagogue both in Italy and, after the mid-1940s, America, and was one of the first figures outside the immediate Viennese circle to have adopted extensive serial techniques in his music of the early 1940s.

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[127] See Craft, 'A Personal Preface' and 'Influence or Assistance?' in *Glimpses*, 33-51, also *Small Craft Advisories*, 173-176.
[128] Craft, *Small Craft Advisories*, 174.
[129] See Craft 'Influence or Assistance?' and *Small Craft Advisories*, 175. It was during this European tour that Stravinsky first heard, and was apparently impressed with, taped performances of Schoenberg's *Dance before the Golden Calf* (from Act II of *Moses und Aron*) and Webern's Op.30 orchestral *Variations*.

Like Stravinsky, he was an established composer who had absorbed serial techniques into his work at a relatively late stage in his career, having composed up to then in a neo-classical idiom analogous to that of certain other Italian contemporaries, such as Casella. In the mid-1930s he had encountered the later music of Webern, attending the first performances of the Op.24 *Concerto* and later *Das Augenlicht*, and in 1942 meeting Webern personally[130].

Dallapiccola's adoption of serial techniques intriguingly parallels that of Stravinsky about a decade later. For both composers it was a tentative and gradual process of absorption that betrayed heterodox viewpoints on accepted or standard serial procedures. In their earliest serial pieces, both composers made use of short rows, juxtaposed serial and non-serial elements and employed several independent rows in the same composition.

Stravinsky's library included at least one article on the Italian composer's dodecaphonic music,[131] as well as the piano score of *Il Prigioniero* – a pivotal work in Dallapiccola's serial development – with a dedication indicating that the two men had met in California (one presumes in Stravinsky's house) in, or before, 1952[132].

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[130] Hayes, *Anton Webern*, 188, 200, 205. See also Dallapiccola, 'Meeting with Anton Webern (Pages from a Diary)'.

[131] 'The Twelve-Tone Compositions of Luigi Dallapiccola' by Hans Nathan (*Musical Quarterly*, July 1958). This information is supplied in Craft 'Selected Source Material', 356.

[132] Now preserved in the Paul Sacher Stiftung. The dedication reads 'à Igor Stravinsky, en souvenir de notre rencontre en Californie, avec reconnaissante amitié, Luigi Dallapiccola, November 1952'. They evidently remained in contact, as the Stravinsky archives also contain a full score of Dallapiccola's *Tartiniana Seconda* with a dedication from 1958.

Back in Hollywood following the *Rake*, Stravinsky was in an ideal position to further acquaint himself, now at first hand, with key works of Schoenberg (*Serenade*) and Webern (*Das Augenlicht*) through Robert Craft's concert and recording engagements, which initially included performances of Schoenberg's *Septett-Suite* Op.29 – a transparent influence on his own *Septet* of 1952, which employs quasi-serial manipulations of non-dodecaphonic pitch sequences and reveals a similar preoccupation with densely contrapuntal textures.[133] The published row chart of the *Septet* demonstrates Stravinsky's cautious early attempts to manipulate the series: the derivation of the primary serial forms is explicitly detailed by brackets and criss-crossing lines, and the IR form has been cancelled on the composer's subsequent realisation of its direct transpositional relationship to RI[134].

By the mid-1950s, however, the influence of Webern had superseded that of Schoenberg. This is instantly clear in Stravinsky's published tributes to Webern, in which the Austrian composer is metaphorically sanctified as a new musical Messiah:

> Webern is for me the 'juste de la musique' and I do not hesitate to shelter myself under the beneficent protection of his not yet canonised art.[135]

> He [Webern] is a perpetual Pentecost for all who believe in music.[136]

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[133] Stravinsky attended twenty-five rehearsals of the Schoenberg work, in addition to performances. See *Small Craft Advisories*, 176. In *SPD*, 422, Craft observes that the series of Stravinsky's second-movement *Passacaglia* was modelled on that of Schoenberg's Wind Quintet, Op.26, the initial sketches having been entered on the verso of a page on which Craft had demonstrated aspects of the Schoenberg series and its harmonic deployment.

[134] See the colour facsimile in *SPD*, plate 14, between 400 and 401.

[135] *Conversations*, 127.

[136] *Memories and Commentaries*, 105.

The influence of Webern concurrently becomes more manifest in the musical surface of the works dating from this period, for example in the conspicuous use of canonic structures in *Canticum Sacrum* and *Threni*, and in the sound-world of the *Pas de Deux* from *Agon*[137], with its pizzicati, string harmonics and mandolin[138]. However, these works also preserve typically Stravinskian stylisations which are completely at odds with the work of Webern. *Surge Aquilo*, the second movement of *Canticum* and the opening of the *Querimonia* from *Threni* are explicitly decorative in their extensive and ornate pitch repetitions, for example, probably as an allusion to early Venetian Baroque models. In addition, the Coda to the first *Pas-de-Trois* of *Agon* (a section which combines serial and non-serial elements) clearly stylises Webern himself, and is arguably parodistic or satirical in intent[139].

Despite such evident influences, the question remains as to the actual extent of Stravinsky's awareness of, and interest in, the fundamental technical procedures employed in the serial work of Schoenberg and Webern.[140]

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[137] Despite which this movement is not, in fact, a dodecaphonic composition. As Tucker demonstrates (op. cit., 182-229), the movement is structured around various serial transformations of a tetrachordal unit.

[138] Despite Stravinsky's assertion that the 'sentiment [of the late Webern cantatas] is alien to me and I prefer the instrumental works' (*Conversations*, 127) the cantatas nevertheless appear to be the main influence behind the canonic vocal passages in *Canticum* and *Threni* (see Tucker, 139). Stravinsky wrote out his own brief serial analyses of the first and final movements of Webern's Op.31 (preserved in the Paul Sacher Stiftung, *Sammlung Robert Craft* as C90, (i)-(iii)). See also Scherliess, 'Strawinsky in Amerika' for a facsimile of Stravinsky's analytical notes on Webern's Op.30 *Variations*.

[139] Tucker (op. cit.) discusses the pitch organisation of this movement noting that its conjunction of non-serial and dodecaphonic serial elements is unique in Stravinsky's output (other works combine non-serial elements with non-dodecaphonic serial procedures). However, her characterisation of the movement's structure as ' A, A', B ' is curious (see her Figure 4:2). The third major division of the movement (beginning at b.236) surely acts as a timbrally refracted variant of the earlier sections, and does not present new material. Furthermore, although she notes that the pitch material of this third section is entirely serially organised, she fails to question the significance of this striking anomaly.

[140] Although Stravinsky would have been familiar with Berg's music, partly through Craft's performances (see *Chronicle*, 7, 93) and in particular the operas (see the indexed entries in *Chronicle*), the surface of the music clearly held little direct appeal for him. Techniques of permuting the series used in *Threni*, and discussed in Hogan, '*Threni*: Stravinsky's 'Debt' to Krenek', 24-25, perhaps suggest that Stravinsky was to some extent familiar with analogous serial procedures in *Lulu*.

The remnants of Stravinsky's library, preserved at the Paul Sacher Stiftung, show that he possessed a sizeable amount of theoretical writings on serialism and the Second Viennese School[141], among which the most recondite were doubtless the articles comprising the second volume of *Die Reihe* (1955 – effectively a Webern symposium) for which Stravinsky had provided a foreword, as mentioned above. This publication typified contemporary assessments of the Austrian composer's putative technical achievements as adumbrations of Darmstadt 'total serialism', views which must be considerably adjusted in the light of recent researches on the sketch material, now mostly housed in the Webern archives of the Paul Sacher Stiftung[142]. These studies indicate that Webern's approach to serial composition did not preclude a certain empiricism and was thus a considerably less systematic and prescient affair that the post-war Darmstadt generation liked to believe with regard to their favoured role-model.

Stravinsky was certainly aware of Schoenberg's discovery of combinatorial series and Webern's proclivity for constructing highly degenerate dodecaphonic rows from similar component cells, as exemplified by the celebrated 'SATOR AREPO' acrostic of the Op. 24 row[143]. Stravinsky's own late music, despite its prevailing use of hexachordally combinatorial rows, displays little interest in projecting such inherent serial properties through the musical surface, as is usually the case in Webern's work. For Stravinsky, the principle attraction of Webern's music appears to have been its brevity, concentration and

[141] Some of these are listed in Craft, 'Selected Source Material', 356-7.
[142] See especially, Bailey, 'Symmetry as Nemesis: Webern and the First Movement of the Concerto Op.24', 'Rhythm and Metre in Webern's Late Works' and 'Webern's Row Charts'; also Shreffler, ' "Mein Weg geht jetzt vorüber": The Vocal Origins of Webern's Twelve-Tone Composition'.
[143] The facsimile of Stravinsky's analytical notes on Webern's Op.30, in Scherliess, 'Strawinsky in Amerika', clearly demonstrates Stravinsky's awareness of the row's nuclear construction.

economy of gesture:

> He is the discoverer of a new distance between the musical object and ourselves and, therefore, of a new measure of musical time; as such he is supremely important.[144]

Other commentaries and remarks in the late conversation books show that Stravinsky was aware that his own serial music pursued distinctly different agendas from the work of the Second Viennese School and their post-war disciples. Several discussions on Viennese and post-war serial music highlight its essentially linear, as opposed to vertical, thinking:

> Every ordinary listener . . . has been troubled by harmonic hearing in the music of the Vienna school from circa 1909. . . . He hears all of the notes acoustically, but cannot determine their harmonic structure. The reason is, of course, that this music isn't harmonic in the same way.[145]

> The bass, too, is extremely difficult to bring out acoustically and harmonically in the [Schoenberg Op.31] *Variations*, because it is the lowest line merely, and not bass-ic.[146]

> We have all remarked a monotony (not in any pejorative sense) that we call 'oriental' in serial works, in Boulez's *Le marteau sans maître* for instance. But the kind of monotony we have in mind is characteristic of many kind of polyphonic music.[147].

Taruskin has, conversely, pointed out that '[Stravinsky's] late serial music is probably the most essentially harmonic – in the literal, vertical, chordal sense of the word – of any that

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[144] *Memories and Commentaries*, 103.
[145] *Conversations*, 128.
[146] Ibid., 29-30.
[147] Ibid., 26-7.

may be found within the borders of the dodecaphonic realm',[148] an observation that concurs with the composer's own affirmation of his harmonically-orientated mindset in *Conversations*:

> The intervals of my series are attracted by tonality; I compose vertically and that is, in one sense at least, to compose tonally. . . . I hear certain possibilities and I choose. I can create my choice in serial composition just as I can in any tonal contrapuntal form. I hear harmonically of, course, and I compose in the same way I always have.[149]

Stravinsky was almost certainly unaware of the full extent of the sophisticated and systematic technical procedures employed in Schoenberg's later serial compositions, something that the Austrian composer himself was distinctly reticent about discussing. It is likely, however, that he would at least have been familiar with Schoenberg's basic handling of row material (including combinatorial procedures) through a number of contemporary studies including Ernst Krenek's *Studies in Counterpoint (Based on the Twelve-Tone Technique)*[150]. Only since the seminal theoretical researches of Babbitt[151] and, later on, the sketch studies of Martha Hyde[152], has it become generally accepted that Schoenberg was

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[148] Taruskin, *Stravinsky and the Russian Traditions*, 1652-53. Both Babbitt ('Stravinsky's Verticals and Schoenberg's Diagonals' 19) and Taruskin (*Stravinsky and the Russian Traditions*, 1656-7) predicate a putatively Russian "attitude" to harmony in Stravinsky's work, which Pasler characterises as 'an attitude towards chords as sonic rather than functional entities.' (Pasler, 'Issues in Stravinsky Research', xvii).

[149] *Conversations*, 24-5. Stravinsky is typically punctilious here in distinguishing his 'vertically-conceived' music as 'contrapuntal', as opposed to the 'polyphonic' character attributed to *Le marteau*.

[150] Schirmer, New York, 1940. Stravinsky's copy, in which he has entered a correction in one of the musical examples (where a serially inadmissible pitch is found), is now in Basel. The book covers general and basic twelve-note techniques, including some discussion of row combination and special series such as symmetrical and all-interval rows. In addition, Stravinsky was probably familiar with Gerhard's 'Tonality in Twelve-Tone Music' and Babbitt's 'Some Aspects of Twelve-Tone Composition', which deal concisely with aspects of Schoenberg's and Webern's serial *modus operandi*, e.g. combinatoriality, aggregates, secondary sets and derived series. Both articles appeared in *The Score*, to which Craft was a regular contributor at this period.

[151] See especially Babbitt, 'Twelve-Tone Invariants as Compositional Determinants', 'Set Structure as a Compositional Determinant' and 'Since Schoenberg'.

[152] Hyde, *Schoenberg's Twelve-Tone Harmony: The Suite Op.29 and the Compositional Sketches*.

attempting to structure various parameters of his compositions (including harmonic and metric structures) through the exploitation of inherent row properties, particularly with regard to the systematic control of aggregate formations[153].

Once again, Taruskin has perceptively observed key differences between Stravinsky's approach to serialism on the one hand, and those of both Schoenberg and Webern on the other:

> For it is precisely the principle of strict intervallic order – the defining principle of serialism – that seems least relevant to Stravinsky's goals and predilections. Nor does he exhibit the least interest in exploring the twelve-tone aggregate "contrapunctically", whether by partitions, by juxtapositions of combinatorial row forms, or by "derivation" (i.e., the Webernian technique of embedding within the twelve-tone series trichords or tetrachords that are themselves related in intervallic contour). His hexachordally based (at times, as in the *Introitus* of 1965, even tetrachordally based) twelve-tone music shows a far greater affinity for what the pre-Schoenbergian atonalist Hauer would have called *Tropen* than for the Schoenbergian concept of a *Reihe*. When one observes him – in *Abraham and Isaac* for example, as well as in the Lacrimosa from the *Canticles* – threading his strangely dogged and fatalistic way through his rotation charts in all directions, up, down, and from side to side (and this must be what that inscrutable "crystal" metaphor was all about), one sees that his concept of serialism really had little to do with order as such, and everything to do with the perpetual arrangement and rearrangement of a fixed set of intervals around a center . . .[154]

Certainly, Stravinsky's adoption of rotation-transposition matrices in *Movements* and his succeeding large-scale works was a exercise calculated to distance his music further from the serial ideals of Webern and Schoenberg. In particular, Stravinsky's calculated use of row matrices to furnish an extended range of pitch choices and serial facets (working 'in all

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[153] A number of recent contributions to Schoenberg research are synthesised in Haimo, *Schoenberg's Serial Odyssey: The Evolution of His Twelve-Tone Method, 1914-28.* See also the critical review of this book by Hyde in *Journal of Music Theory* (1993), which expands on some of Haimo's examples.
[154] Taruskin, *Stravinsky and the Russian Traditions*, 1673-4.

directions, as though through a crystal' as he put it) and the use of affiliated 'verticals' to generate specifically-weighted harmonic material seems designed to contradict both Webern's late harmonic practice and his treatment and association of highly degenerate serial forms as a primary means of limiting compositional material. Furthermore, the use of rotation chains and verticals, with their concomitant internal doublings and redundancies, challenges the whole concept and purpose of the Schoenbergian aggregate[155]. Stravinsky's 'verticals' have occasioned particular difficulty in this respect for standard serial analysis, especially with regard to their substantive relationship to the original series[156]. The present dissertation examines how Stravinsky's seemingly heterodox serial *modus operandi* interacts with ongoing and established compositional procedures which, as the composer noted in the *Conversations* quote above, allowed him to 'create [his] choice in serial composition and . . . compose in the same way I always have.'

The influence of Krenek and the Post-War Generation

The sudden appearance of 'new serial combinations' and an 'advanced' surface idiom in *Movements*[157] was probably partly in response to recent encounters with the music and personalities of Krenek, Stockhausen and Boulez[158]. Robert Craft recorded *Le marteau sans maître* and *Zeitmasse* on 3 February and 7 April 1958 respectively, i.e. just before the

[155] For a succinct discussion of the ramifications of aggregate composition see Mead, *An Introduction to the Music of Music of Milton Babbitt*, 9-16.
[156] See Babbitt 'Stravinsky's Verticals and Schoenberg's Diagonals', and 'Order Symmetry and Centricity in Late Stravinsky'.
[157] *Memories and Commentaries*, 106.
[158] *Chronicle*, 68.

commencement of compositional work on *Movements*[159]. The composer heard a performance of *Gruppen* for the first time in October 1958[160] but was presumably by then already familiar with its general idiom and compositional principles from an early version of the score in his possession[161]. General resemblances between *Movements* and Stockhausen's *Kontrapunkte* have also been remarked[162] and the composer was familiar with, and apparently interested in much of Stockhausen's later music[163]. Both *Le marteau* and *Zeitmasse* initially received Stravinsky's enthusiastic commendation, notably with respect to their 'rhythmic innovations'[164]. The layers of irrational metrical subdivisions which emerge in *Movements*, distinguishing it sharply from the immediately preceding serial works, are surely a response to these innovations, and are symptomatic of his move away from the circumscribed textures and durational schemes that characterise Webern's later works.

There is indisputable evidence that the initial stimulus for the rotation matrices employed in Stravinsky's later music came directly from the theories of Ernst Krenek[165]. An outline of the basic rotation practice as it occurs in the post-*Movements* work is provided among a number of systematic serial procedures outlined in Krenek's paper 'Extents and Limits of Serial Techniques'[166]. This paper was delivered by the author at the Princeton Seminar in

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[159] Craft also discussed features of both works in his 1958 article for *The Score*, 'Boulez and Stockhausen'.
[160] See *Themes and Conclusions*, 25, note 2, also *Chronicle*, 68.
[161] This is now preserved in the Paul Sacher Stiftung's Stravinsky archives. I am grateful to Ulrich Mosch for bringing it to my attention.
[162] Cross, *The Stravinsky Legacy*, 58.
[163] See, for instance, his discussions of *Gruppen* in *Memories and Commentaries*, 118-21, *Carré* in *Themes and Conclusions* 25, and of *Hymnen* and *Stimmung*, ibid., 149. Boulez had also played Stockhausen's 'fascicular piano piece' (i.e., presumably, *Klavierstück* XI) for Stravinsky in August 1957 (*Chronicle*, 292).
[164] *Conversations*, 110.
[165] See Hogan, '*Threni*: Stravinsky's 'Debt' to Krenek'.
[166] Lang, ed., *Problems of Modern Music*, 72-94.

Advanced Musical Studies in August 1959, at which Stravinsky himself was present[167] although his visit post-dates the completion of *Movements* earlier the same month[168].

By then, Stravinsky was clearly familiar with the principles involved, undoubtedly through personal contact and discussion with Krenek himself[169]. Stravinsky evolved the extended framework of rotations first used in *Movements* from prototypes in Krenek's *a cappella* choral work *Lamentatio Jeremiae Prophetae* composed in 1940-41 (which, as noted, had already provided the subtitle and certain textural and procedural ideas for *Threni*)[170]. A score of Krenek's *Lamentatio*, preserved in the Paul Sacher Stiftung's collection from Stravinsky's library, bears a flyleaf dedication 'to Igor Stravinsky, master and friend, affectionately, Ernst Krenek, December 1957'[171]. Though its near-pristine condition suggests that Stravinsky did not pay the work the compliment of more than a superficial inspection, the Austrian composer's German preface to the score, in which the basis of his rotation system is succinctly explicated, contains additional pencil markings, tracing the procedures of the rotation-transposition formula, probably entered by Stravinsky[172]. This is

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[167] Ibid., 19. See also *Chronicle*, 75 and 'The Princeton Seminar in Advanced Musical Studies' in *The Score*, 26.

[168] The final interlude sketch (M319) is dated 16 August 1959.

[169] See *Dialogues and a Diary*, 103, also the correspondence from Krenek quoted in Hogan, op. cit., 22. A visit to Stravinsky by Krenek, during which systematic serial processes in his *Sestina* (one of the works analysed in the Princeton paper) were discussed, took place on 22 May 1958 (*Chronicle*, 68-69). The particell of *Movements* I is dated 9 July 1958.

[170] Like *Threni*, the Krenek work wears its Renaissance-influenced contrapuntal erudition very much on its sleeve, for example by employing duplex and '3-in-1' serial canons.

[171] Bärenreiter Ausgabe 3648. The material in Basel owned by Stravinsky also includes Krenek's *Studies in Counterpoint (Based on the Twelve-Tone Technique)*, Schirmer Inc., New York, 1940 (already mentioned), and *De Rebus Prius Factus*, Wilhelm Hansen Musikverlag. The latter contains a dedication 'for Igor Stravinsky *ad res faciendas*, affectionately, Ernst, May 3rd 1958'. It must be emphasised, however, that the Basel collection accounts for only about one-tenth of Stravinsky's library, which comprised in excess of 10,000 items (q.v. *Themes and Conclusions*, 299).

[172] A facsimile of this page, clearly showing the added lines, is reproduced in Scherliess, 'Strawinsky in Amerika'.

essentially the same text (in translation) later employed for the discussion of the work in the Princeton paper, and it reveals that the rotation principle 'was inspired by the construction of the Greek modal scales and their transposition into one "characteristic" octave.'[173]

Stravinsky may have initially been attracted to the technique by Krenek's explanation that

> The purpose of the operation was not so much to make the serial design stricter, but rather to relax it, insofar as the wide variety of available six-tone patterns made it possible to remain within the frame of reference of the twelve-tone serial technique without constantly having to use complete twelve-tone rows. Thus it became possible to give various areas of the composition distinctive harmonic flavors. At that time no attempt was made to organize serially the selection and succession of the rotational patterns.[174]

Certainly Stravinsky's subsequent modifications and expansions of Krenek's basic substructure emphasise flexibility of choice and the opportunity for characterful harmonic organisation within an essentially serial-based environment. These adaptations, including the concepts of verticals and rotational chains, do not form any part of Krenek's essentially 'modal' approach (as emphasised by the last sentence quoted above) and appear to originate entirely with Stravinsky himself[175].

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[173] Krenek, 'Extents and Limits', 75.
[174] Ibid.
[175] Cf. Babbitt, 'Stravinsky's Verticals and Schoenberg's Diagonals', 20.

A Definition of Terminology and Key Terms Used

From the time of his first encounters with serialism in the early 1950s, the composer applied his own highly idiosyncratic nomenclature to the various serial transformations. These may often prove confusing to the uninitiated, e.g. 'Riv' (the composer's abbreviation for 'riverse' [*sic*]) is employed in several collections of the early serial period to mean 'inversion', with 'canc[rizans]' being the affiliated term for the retrograde transformation. By the time of *Movements* however, 'Riv[erse]' invariably signifies the retrograde, (interchangeably with the still-favoured 'canc'), 'Inv' now being the standard the term for inversion (though the alternative 'miror' [*sic*] sometimes puts in sporadic appearances as late as *Requiem Canticles*)[176].

The following offers a comparison of the standardised terminology used in the present dissertation (given first) with the most consistent of Stravinsky's customary designations, as regularly found throughout the sketches:

P = 'O[riginal]'

I = 'Inv', sometimes 'miror' [*sic*]

R = 'Riv', sometimes 'canc' (or 'cancr'), occasionally 'back'.

RI = 'Riv-Inv'

[176] As this suggests, Stravinsky's English spelling was also highly idiosyncratic, several sketches from the late period featuring indications such as 'percution' [*sic*].

The glossary which follows provides further definitions of the principal terms connected with serial technique, sketch study, template theory and general musical features, in the specific sense in which they are employed in the present dissertation.

(a) *Terms pertinent to serial techniques*

Adjacencies. A group of pitch classes occupying consecutive order positions within a row statement.

Aggregate. A pitch collection (expressed vertically, horizontally or as a composite of both) containing all twelve pitch classes, each stated only once (disregarding immediate repetitions).

Alpha/beta/gamma/delta (α/β/χ/δ) hexachords. Stravinsky's nomenclature for the constituent hexachords of the primary row forms (in the case of *Introitus* for the tetrachords) and their simple or transpositional rotations numbered downwards in the chart. His designations remained somewhat inconsistent from work to work. In *Movements* the columns of 'simple' rotations for all four primary forms are described as α and β, with the transposed rotations (of P) labelled as χ and δ. In *A Sermon* the rotated forms are R (α, β) and I (χ, δ) – all transpositional – whilst in *Abraham and Isaac*, all rotations (elaborated for the P, I, R and RI forms) are labelled simply α or β. The latter, as is customary, signifies simply the first or second hexachord (or rotation) of the row in question. It should be noted, however, that in *Movements*, uniquely, a different criterion is applied whereby the α

and β designation are consistently attached to related intervallic configurations (thus the hexachords of R and RI are designated, in order, β, α).

Ausfall (plural **ausfälle**). An omission. A term employed by Bailey (though attributed by her to Hans Jelinek) which signifies a serial elision, whereby pitches absent from a row statement are supplied by another, simultaneously unfolding, row form.

Chain or spiral. A horizontal pitch sequence derived from the pitch matrix by some systematic (or quasi-systematic) method such as by tracking up or down the columns in numerical order whilst reading the constituent rows forward, in retrograde or alternating both *vectors* (see below). The resulting sequence (which may contain direct or proximate pitch repetitions) is invariably employed as a horizontal line within the musical fabric (e.g. as a solo vocal part).

Combinatoriality. A property defined by Babbitt as the capacity of a collection to combine with some transformation of itself to form aggregates. Theoretically all rows are retrograde-combinatorial in that they may combine with their R forms to create aggregates. (This application is observable in the second movement of Schoenberg's third string quartet, Op.30). In practice, the most frequently encountered form in Stravinsky's work (as in that of Schoenberg and Webern) is that of hexachordal-inversional combinatoriality. In such a row, the two constituent hexachords of the series form identical pitch-class sets, with the result that the row comprises interesting symmetrical properties. The majority of Stravinsky's late pieces employ rows of this type.

Diagonal. By analogy with Stravinsky's application of his own term *vertical*, this is employed to indicate the use of the (invariably) long diagonals of a matrix in generating pitch material. Only two works (*Abraham and Isaac* and *Introitus*) exploit diagonals to any extent.

Elision. The sharing of pitch classes between two or more row statements unfolded either simultaneously or consecutively. This treatment, whereby a single pitch class may function as a component of different rows, results in fewer redundancies, with a consequently faster rate of pitch-class replacement than would result from independent manipulation of each individual row. See also *Ausfall.*

Hexachordal level. The specific pitch content of a given hexachord without reference to its internal serial ordering. In *Movements*, the content of the corresponding hexachords of the primary row forms is identical for the P, I, R and IR forms. The hexachords of the RI form result in a transposition of the collection, which retains four pitch classes in common with the corresponding P-level hexachords.

Invariant (invariance). A relationship within a row form that is preserved when the row is mapped under a serial transformation. The invariance may be intervallic, pitch specific, or content related, and is a consequence of the intrinsic row properties.

Matrix/pitch matrix. A chart elaborated from the series by the vertical alignment of several serial transformations (normally rotations or rotation-transpositions) of the row. In

Stravinsky's post-*Threni* work the significance of such a matrix lies is its ability to be read in several directions as a systematic source of pitch material. See *vertical*, *chain*, *diagonal*.

Order position (o.p.). The numerical position of a pitch class within an individual row statement. In the present study order positions are numbered from 1 through 12, this being Stravinsky's invariable practice in the sketch material (thereby contrasting with the standard numbering 0 through 11).

Partitioning/isomorphic partitioning. Partitioning refers to the distribution of an individual series statement in the musical texture, e.g. by being allotted to several simultaneously unfolding voices or presented as a sequence of simultaneities. Isomorphically partitioned rows forms are those in which the corresponding order positions are distributed using an identical configuration.

Primary serial forms. The basic set or prime series 'P' (usually designated 'O' in Stravinsky's nomenclature) together with its untransposed transformations, e.g. inversion (I), retrograde (R), retrograde inverted (RI) and inversion retrograded (IR). This is Stravinsky's consistent practice: other serial composers and theorists (e.g. Babbitt) often regard RI as signifying the 'retrograde inversion' (retrograde of I) and IR as the 'inversion retrograde' (i.e. inversion of R). RI is, of course, simply a transposition of IR, but both are habitually employed as primary forms by Stravinsky, though he tends to heavily favour the RI (especially as the basis of a pitch matrix), presumably because it yields an independent pitch sequence. Stravinsky's smaller-scale works of the post-*Threni* period (i.e.

Epitaphium, *Double Canon*, *Anthem*, *Elegy for JFK*, *Fanfare for New Theatre* and *The Owl and the Pussycat*) are based exclusively on primary forms and eschew any use of rotations.

Redundancy. Apropos the rate of pitch class replacement/circulation, this expression denotes direct or proximate pitch repetitions engineered by the association of row segments with similar or identical pitch-class content/ordering.

Rotation and **rotation-transposition.** Permutational methods applicable to a series or individually to segments thereof, which Stravinsky initially derived from the practices of Ernst Krenek and which first appear in *Movements* (1958-59). Krenek defines rotation as 'a procedure in which the elements of a given series systematically and progressively change their relative positions according to a plan which in itself is serially conceived in that the changes occur in regular phases'[177]. In the post-*Threni* compositions, the technique is generally applied to hexachords, though very occasionally rotation of individual tetrachords and of the entire series is to be found. In applying 'simple' rotation, five permutations of the hexachord (for example) may be produced by successively transferring the opening pitch class to the end of the sequence e.g. 123456, 234561, 345612 etc. Stravinsky extended Krenek's practice by further subjecting each of these 'simple' rotations to transposition so that they all commence with the opening pitch class of the untransposed source hexachord. A matrix (q.v.) is formed by the vertical alignment of the resultant configurations. In the present dissertation, both practices are designated, for ease

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[177] Krenek, 'Extents and Limits of Serial Techniques', in *Problems of Modern Music*, ed. Lang.

of reference, simply as 'rotation' although rotation-transposition became the normative technique of elaboration in Stravinsky's post-*Movements* work.

Segment. An unspecified number of adjacent order positions within a series.

Topography. The general manner in which serial forms are distributed and/or partitioned. Following Bailey's practice, *linear* topography refers to rows unfolded for the most part horizontally (i.e. without verticalisation of adjacencies), either singly or in combination. In *block* topography, rows are stated successively, but are partitioned in such a way as to generate the complete texture of the music.

Vector. A directed quantity, used in the present instance to mean the direction in which pitch sequences prescribed by a serial chart are unfolded (e.g. rows within a chain, verticals, diagonals etc.).

Vertical. In the specific sense applied by Stravinsky to his works after 1958, this implies pitch complexes created by the columns of a matrix generated from the row by a permutational procedure, usually rotation-transposition. Verticals are usually projected as chords (i.e. simultaneities) in the musical fabric, often presented in the numerical ordering proposed by the source chart (or its retrograde). Pitch doublings are a common consequence of the derivational method (i.e. the number of discrete factors in the resultant verticals is variable), but such doublings may or may not be exploited in a real-time compositional context. Very infrequently, verticals may be subjected to further expansion in time, by presenting some or all of the pitches successively: significant instances of this

treatment are found in *Movements* V and sketches for an incomplete work dating from 1966.

Verticalisation of adjacencies. A standard serial technique whereby two or more contiguous order positions within a row are projected as a simultaneity in the musical fabric.

Terms pertinent to sketch study

Cannibalise. To adapt rejected or superfluous compositional material for use in a context other than that for which it was originally devised.

Clone. A sketch, musical event etc. which is closely patterned on, or derived from, some parameter(s), or element(s) of a previous sketch.

Filter. A musical apparatus, e.g. a template sketch, employed as a means of selecting material, by limiting or guiding choice in the creation of cloned material; a blueprint or musical desideratum.

Holograph. An inscription, manuscript (or section thereof), etc. in the handwriting of the person under consideration (in the present instance, invariably the composer).

Loose or **preparatory sketches.** Although virtually all the sketch materials for the period covered were entered on independent, unbound and unpaginated leaves, these terms are reserved for sketch materials other than particells, full scores or piano reductions, which normally present continuous musical text. Preparatory sketches are often palimpsests, and are usually distinguishable by, among other features, their fragmentary nature and hasty calligraphy.

Orthography. The practice of (correct) spelling, employed here in the sense of the composer's preferred notation for a given musical event, e.g. in the choice of enharmonic equivalents, beaming of rhythmic groups, etc.

Ozalid. An early duplication method necessitating the use of chemically treated paper. This forerunner of the present-day photocopy yielded a characteristic and instantly recognisable sepia-tinted print on a beige background page. The original copy was entered on transparencies (see below). Stravinsky used the method mainly in reproducing fair-copy scores for publishing production, rehearsal and performance etc. Although other uses are occasionally encountered, its use in the ongoing process of composition was limited.

Palimpsest. A manuscript in which an earlier layer or layers have been erased to make space for new writing. Many of the sketches under discussion in the present study reveal that the composer frequently made revisions or emendations directly onto earlier sketches or drafts for (invariably) the same passage. Such revisions may range from minor adjustments to extensive rewriting, with earlier layers often remaining visible to greater or

lesser extents. Even on occasions when it proves impossible to disentangle multiple earlier versions, or the detail of underlying layers remains largely illegible, such palimpsest sketches give important clues as to function and chronology within the compositional process.

Particell. Usually called 'summary sketches' in the composer correspondence, this is a condensed or short score (sometimes containing suggestions for instrumentation) of an extended section or complete movement of a work. The detail usually approaches the final version, though it may sometimes differ in minor details, and was often the direct source for the composer's piano reduction of orchestral works. Despite initial appearances, these particells are rarely late fair copies, but are normally palimpsests constructed in parallel with the loose or preparatory sketches, which they 'summarise' and augment. As such, they may occasionally contain marginal sketches or pastes as residual elements of the ongoing compositional process, and often include detailed indications of serial practice.

Paste. Used in the present context to mean a separate sketch fragment attached (by various means such as glue, tape or paper-clip) to a larger leaf, in order to extend the page length, to correct or amend underlying text or straightforwardly as a mnemonic or other referential item.

Pentimento (plural ***pentimenti***). An earlier layer (or layers), painted out of a picture, which becomes visible again, usually as a result of subsequent chemical changes. The term

has been employed in the present study with reference to discernible antecedent layers of a palimpsest sketch.

Rastration. The drawing of staves using a rastral (sometimes 'rastrum'), or five-nibbed music pen, hence *rastrated.* Stravinsky possessed several different sizes of these implements, apparently of his own invention (whimsically referred to by him as 'Stravigors'). Many of his sketches are assembled on blank pages of various paper-types and dimensions using these devices, and visible discontinuities in rastration act as useful guides to various compositional stages.

Reinschrift. A neat fair-copy as opposed to a working draft. The term is normally used of copies of the full score or its piano reduction, made late in the compositional process, but occasionally less extensive *Reinschrifts* may be found among earlier materials. For example, if the details of a passage have been sufficiently established (e.g. through extensive sketching), the corresponding particell segment may be a straightforward transcription collating the earlier material.

Reversed notation. A notation entered upside-down in relation to the main sketch or group of sketches on a page. This phrase is preferred here to 'inverted' notation in order to avoid confusion with serial nomenclature.

Scratchpad. A rudimentary sketch consisting of initial notations (usually templates) for a work or movement, containing fundamental configurations which are referenced regularly throughout the compositional process.

Sketchbook. By the time of the works under discussion, Stravinsky had long since ceased using the bound sketchbooks employed for earlier works, and habitually used independent leaves of commercially-available manuscript paper (which he trimmed to various dimensions), combined with self-rastrated pages. A number of sketch collections (e.g. *Abraham and Isaac*, *Variations*, *Requiem Canticles*, *The Owl and the Pussycat*) were subsequently preserved in loose-leaf ring-binders, pasted to background pages. These 'sketchbooks' seem to have been assembled following completion of the compositional process, and their organisation almost certainly does not reflect the actual compositional sequence of the sketch materials.

Template. A configuration which provides a conceptual model or reservoir for a number of subsequent musical events. Templates may range from brief capsules (e.g. single abstract row statements or musically-configured aggregates) to complete blocks of material. The constituent parameters of such templates may be treated independently and expanded in a variety of ways in subsequent 'cloning' processes. Templates are often visually isolated from surrounding sketch material and are infrequently contextualised into the finished composition (in which case they usually appear in a greatly modified form, i.e. they are not conceived as sketches for specific passages of the piece). The term 'concept' template is reserved for template configurations (usually extremely laconic) which appear

to represent independent initial ideas for a piece, movement or section (and thus have no discernible antecedent). 'Secondary' templates are manufactured for subsequent use from passages already existing in draft form, and thus preserve and propagate certain configurations.

Transparency. Sometimes referred to by the composer in his correspondence as 'onion skins', these membranous, commercially-available manuscript pages were used in the ozalid reproduction process, which involved photoduplication by means of transmitted light. Stravinsky normally entered the musical text in grey pencil. Most of the late-period full-score holographs in the public domain (including those given by the composer to the Library of Congress, Princeton University, and the Museum of Israel) are of this kind.

Other terms

Anaphora. A literary rhetorical device in which the immediately preceding words or phrase are referred to, or reiterated, hence *anaphorical.* In the present context it is used to signify a substantial degree of pitch redundancy, usually occurring at block nexus-points.

Block. An extended segment of musical time in which one or more parameters or features remain constant, e.g. instrumental timbre, harmonic events, serial practice, texture, tessitura etc. and which is thus recognisably self-referential and closed (to variable extents).

Transition between successive blocks is usually instantaneous. As such, the term corresponds closely to Stockhausen's concept of the 'moment'.

Contour. The profile or direction of a melodic line, or of the order positions of a series (whether linearly unfolded or otherwise) without reference to constituent intervallic quantities.

Parameter. One of the several variable quantities comprising a specific musical event, e.g. pitch, duration, timbre or volume.

Pitch class. Pitches related by octave equivalence or pitch name, without regard to specific registral delineation, e.g. the pitch class 'A' signifies this pitch occurring at any register.

Pitch priority. Referring to a pitch class or (less frequently) pitch collection which attains prominence through the manner in which it is projected, e.g. as a result of octave doubling, repetition, dynamics etc.

A Commentary on the Sketch Transcriptions

As stated in the preface, all hand-written transcriptions of sketch material reproduced in Volume II are diplomatic and attempt to reflect, as closely as possible, the composer's idiosyncratic orthography, layout and alignments etc. Editorial intervention was purposely kept to a minimum, except on occasions when it was considered necessary to illustrate or to clarify such issues as hand-rastration[178] and *pentimenti*, or to identify individual notations and sketch fragments in order to facilitate citations in the main text. The methodology adopted is outlined in the preface and, hopefully, remains readily distinguishable from the composer's holograph text.

It must be emphasised, however, that the visual impact of the holographs is striking and informative in a number of ways that a facsimile, and particularly a transcription, of the original cannot adequately represent. Partly because of this, it was considered necessary to make some attempt at compensation by conveying a number of additional salient features of the original sketch collections and by contextualising constituent sketches within the materials for individual pieces as a whole.

It is tempting to regard the sketch material as offering a consistent, exhaustive and more-or-less teleological record of the compositional process. The truth, as one might expect, is rather less clear-cut: the sketches are, of course, essentially an excrescence, or residue,

[178] A completely comprehensive realisation of the discontinuous and sometimes non-parallel staves of hand-rastrated sketches is unattainable in transcription. The present approach observes most of the conspicuous rastration breaks and occasional additional peculiarities, such as blank or short staves (the latter usually indicating that the material had been determined, at least in outline form, before its notation).

from the compositional process itself, and were thus never envisaged as being straightforwardly sequential or narrative. It was thus considered necessary to bear in mind the known environment in which they were conceived and to develop a rationale concerning tangential factors such as the role of the piano[179] and the composer's known studio practices.

The present study bases its approach on the perception that the composer habitually worked with repertoires or fields of sketches accessible on, or in close proximity to, his work area (generally the piano music rack)[180] and that sketches are thus rarely autonomous or independent, but reveal considerable and often quite intricate mutual interaction. It was thus decided to pursue a 'holistic' approach to the analysis of the sketch material, contrasting with the generally more expedient treatment of many antecedent sketch studies, which often restrict themselves to the more manageable exegesis of individual sketchleaves or the investigation of selected passages from sketch to score, thereby excluding, or dealing only superficially with, adjacent or interrelated material[181]. This is, of course, in many ways a perfectly valid and informative approach to an investigation of the sketches (particularly as many of these articles circumscribe quite different agendas to those of the present dissertation), but it frequently reveals only the more explicit procedures within what proves to be a remarkably complex compositional process.

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[179] See Walsh, *Igor Stravinsky: A Creative Spring*, 52-54, and 69-70 for accounts of Stravinsky's early aptitude for improvisation at the piano, and also Joseph, *Stravinsky and the Piano*, Chapter 7, 'The Piano as Stravinsky's Compositional Fulcrum', 232-272.

[180] This is unequivocally suggested by the photograph of the composer's piano reproduced in *Selected Correspondence* II (see plate between pages 338 and 339) and by the description provided in Vera Stravinsky's letter 'to a cousin in Moscow' (*Themes and Conclusions*, 298).

[181] Falling in to this category would be such brief papers as Taruskin's 'Stravinsky's Rejoicing Discovery', and many of Craft's articles (e.g. '*Histoire du Soldat*: Musical Origins, Second Thoughts' (*Glimpses* 358-369) and 'On the Chronology of the *Requiem Canticles*' (*Selected Correspondence*.Vol.2, 467-471).

The materials for the late works are for the most part not bound in sketchbooks or ordered in any systematic fashion by the composer, and thus provide only internal clues as to chronology and sequence, largely through transfer of material and modifications made in successive drafts of particular passages[182]. Only a thorough collation and comparison of all available materials can provide a proper perspective[183].

The breadth of the composer's template strategy emerges in full only through an *a priori* analytical approach involving the reconstitution of putative sketch repertoires, the attempt at chronological reconstruction of the material and the cross-referencing of notations appearing on single, or distributed across, different sketchleaves. Principal templates and their diverse transformations are normally sufficiently embedded in (and ubiquitously throughout) the ongoing compositional flux, and the transformations applied so predominantly oblique and widely dispersed, that the procedures are effectively concealed from any random or selective inspection of the materials. The processes of template morphology are thus inferable largely from evidence provided by the internal correlation of the sketch materials (e.g. the alignment, juxtaposition and chronology of constituent notations etc.), as a result of which only the most visually conspicuous templates or

[182] Classification of the sketch materials into a variety of artificial divisions, such as those furnished in Tucker op. cit., 29 foll., is useful for assimilation purposes but ultimately misconstrues the continuity of the compositional process. (Tucker herself admits the volatility of the characteristics she proposes as representative of the various stages). Approaches along these lines have usually led to the particell being disregarded as a relatively uninformative advanced copy of the score, rather than as a working draft.

[183] Indeed the composer's use of loose leaves in the composition of his later works, rather than the bound sketchbooks which are more commonly encountered earlier in his career, perhaps suggests the development of more flexible compositional processes, facilitating simultaneous access to a number of individual sketchleaves.

template-based materials have thus far invited any attention, although, paradoxically, they have often been interpreted as incomplete or abandoned sketches[184].

Though the present approach necessitates a very explicit and detailed analysis of the materials involved, it conversely endeavours to take a comprehensive view of the ongoing compositional process by rationalising the transfer of material, observing similarities of sketch configuration, and by identifying sketch groups and templates active throughout extended spans of the compositional process.

Determining the quantity of available sketch material to reproduce in transcription, and further deciding which specific sketches to use, was naturally a matter for serious consideration. It was ultimately reasoned that the best course of action would, in general, be to reproduce sketches that were referenced in any detail – in most cases a verbal description of the content would not suffice, or would have proved too cumbersome. This applied even to sketches that were considered in a peripheral or implicit manner in the text, in order not to distort the context or status of the material in question. Such secondary materials are thus made available to the reader for appraisal in relation to those involved in the principal discussion[185].

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[184] Describing notations appearing in conjunction with *Histoire du Soldat* materials, Craft 'wonders about the piece for which the music was originally intended' (*Glimpses*, 360). But a characteristic of many templates is their very obliquity to subsequently 'cloned' material, in that they are clearly not intended as compositional drafts for specific passages within the work concerned.

[185] The taxonomy of sketch material in Volume II of the present dissertation describes all the extant material referenced in relation to the present study. Only in cases where a sketch was very similar to the final version was a description furnished instead. Where avoidable, particells or other short scores (e.g. sketches for two-piano reductions) are not reproduced in full.

By the same rationale, in virtually all cases individual sketchleaves have been reproduced in full rather than through excerpts of individual segments. Many sketchleaves are composed of fragmentary independent sketches, often comprising non-consecutive passages in the final score, the association, graphology or alignment of which frequently offer information as to chronology, reciprocity of material and possible mutual origin.

An attempt has been made to convey graphological appearance. In conjunction with other information, graphology can provide important clues to, or endorse the function of, a particular sketch. Thus, evidence suggesting the early status of a sketch may be consolidated by its hasty appearance and tentative calligraphy, as opposed to a later, more confidently notated version.. Different thickness or shade of pencil may often draw attention to subsequent additions or to adjacent notations entered at different times. Even the dimensions of a sketch may provide ancillary clues as to its compositional role (see the discussion of this matter in Chapter 6). However, the diverse range of paper types in circulation – Stravinsky's use of the rastral meant that he habitually sketched on paper derived from a vast range of sources – restricts the use of this line of inquiry as a systematic analytical tool (although, for example, occasional sketches made on hotel notepaper may sometimes prove a useful guide to chronology if one can establish the composer's activities during the period under consideration).

In addition, unlike most earlier studies, the present transcription policy takes into account *pentimenti* as vitally important sources of information on the earlier layers (and thus compositional stages) of palimpsest sketches. Even the plentitude or paucity of sketches

for a passage can furnish interesting data (for instance, some sketches were entered directly into the particell, with little or no preliminary drafting).

The sketch materials for *Movements*, the defining work of the late period, are reproduced almost in their entirety, for reasons furnished above. This is also the case with the smaller-scale works of the period – the materials for *Elegy for JFK*, *Introitus* and *The Owl and the Pussycat* are few enough in number that the exclusion of one or two sketches would have severely distorted the overall significance of each extant sketch collection. In the case of most other extended works, such as *A Sermon, a Narrative and a Prayer* and *Requiem Canticles*, a more pragmatic view has been adopted; only the sketch sequences pertinent to the section or movement under discussion have been reproduced, along with a more limited selection of additional materials designed to elucidate later applications of the principal template apparatus.

Template Archetypes in the Pre-Serial Music

As a preface to the detailed investigation of ongoing template methodologies in Stravinsky's mature serial *oeuvre*, this section aims to illustrate prototypical instances of template procedures observable within earlier, pre-serial, sketch collections, using both published and unpublished sketch material. Of necessity, these examples will be brief and will thus focus principally on localised instances of such processes rather than attempting

to consider their connotations in the overall compositional development of the pieces concerned. A number of previous studies are referenced as a basis from which to observe template-like procedures that substantively resemble the more explicit methodologies employed in the late serial sketch collections discussed in the main body of the text.

Craft intriguingly notes that sketches for motifs relating to both *Les Noces* and the *Berceuses du Chat* are to be found together on the same page, noting that '...the first phrase of [*Berceuses*] so resembles the first phrase of the soprano in *Svadebka* [i.e. *Noces*] that one could have suggested the other – and perhaps did . . .'[186] He fails, however, to detail this source or even clarify whether the specific passages in question are in fact present on the sketch. The same writer's description of compositional methods of deriving new material from existing configurations, in sketch materials relating to *Histoire du Soldat* and the *Symphonies of Wind Instruments*, is considerably more convincing, and will be considered below.[187]

Symphonies of Wind Instruments (1918-20)

The *Symphonies of Wind Instruments* must rank among the most generously analysed of all Stravinsky's works. Its highly original and overtly non-teleological construction

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[186] Craft, *Glimpses*, 340.

[187] *Glimpses*, 358-369 and 370-381 respectively. The latter article, which reuses material from *Selected Correspondence* II, Appendix E (452-457), extensively references Baltensperger and Meyer, *Igor Stravinsky: Symphonies d'Instruments à Vent* (1991).

(underlined by its plural title) has ensured a profusion of articles attempting to uncover (or impose) some rationale underlying its unqualified *drobnost'* and *nepodvizhnost* character[188]. Edward T. Cone was an early trailblazer in this respect, introducing the concept of 'interlocking' hierarchical strata acting across the entire span of the composition[189] – an approach which he additionally advocated in relation to other Stravinsky compositions, including those of the late period[190]. Subsequent analytical studies of importance include those of Lázló Somfai[191], Jonathan D. Kramer[192], Pieter Van den Toorn[193], Christopher Hasty[194], Alexander Rehding[195] and Richard Taruskin[196] (in which, as a *tombeau* for Debussy, the construction of the piece is interpreted in terms of the *panikhida* or Russian Orthodox office for the dead). Many of these approaches, as well as those discussed below, are synthesised by Jonathan Cross, who otherwise attempts to place the piece in context with contemporary developments in the visual arts (particularly with respect to Picasso's analytical cubism)[197] and to trace a variety of putative influences on later composers[198].

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[188] Taruskin's terms respectively for ' "splinteredness"; the quality of being formally disunified, a sum-of-parts' and 'the quality of being non-developmental, non-teleological' (*Stravinsky and the Russian Traditions*, 1677).
[189] Cone, 'The Progress of a Method'.
[190] Ibid., 163-4. Arthur Berger suggests additional refinements to Cone's strategy in 'Problems of Pitch Organisation in Stravinsky', 150-1.
[191] Somfai, '*Symphonies of Wind Instruments*: Observations on Stravinsky's Organic Construction'.
[192] See especially 'Moment form in Twentieth Century Music', and *The Time of Music*, 221-285.
[193] Van den Toorn, *The Music of Igor Stravinsky*, 337-44.
[194] Hasty, 'On the Problem of Succession and Continuity in Twentieth Century Music'.
[195] Rehding, 'Towards a "Logic of Discontinuity" in Stravinsky's *Symphonies of Wind Instruments*'.
[196] Taruskin, *Stravinsky and the Russian Traditions*, 1486-1499.
[197] Cross, *The Stravinsky Legacy*, 17-28.
[198] Perhaps the most unexpectedly candid of which is to be found in the opening movement of Steve Reich's *City Life*; see Cross, op. cit. 170-2.

None of the above studies, however, deals in any way with the sizeable quantity of surviving sketch material for the work. For the moderate amount of literature referencing these materials, one must turn to publications by the Paul Sacher Stiftung[199], Robert Craft[200] and Stephen Walsh[201]. Although their agendas are somewhat dissimilar from those of the present dissertation, these writings are significant for the manner in which they parenthetically touch upon sketch relationships that become more meaningful with respect to the template morphology observable in the later serial music

Both Walsh and Craft outline a similar chronology for the work's earliest identifiable notations. It would appear that the so-called 'bell motif', which opens the work, was sketched amid notations for *Piano-Rag-Music*, perhaps as early as March 1918, i.e. shortly after (and thus possibly in direct response to) Debussy's death[202]. Other brief notations are found among sketches for the *Concertino* for string quartet further on in the same sketchbook. Another important fragmentary notation is identified by all three sources as an early sketch for the concluding 'chorale' (rehearsal cue 65 (39) foll.)[203], the first part of the score to have been completed, in June 1920, in response to the *Revue Musicale*'s request for a memorial piece for inclusion in its Debussy's memorial issue[204]. This notation is

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[199] Baltensperger and Meyer (eds.). *Igor Strawinsky: Symphonies d'Instruments à Vent: Faksimileausgabe des Particells und der Partitur der Erstfaussung.*

[200] Craft, ''Hymns of Praise for Debussy': Stravinsky's *Symphonies of Winds*', in *Glimpses*, 370-381; 'On the *Symphonies of Wind Instruments*' in *Selected Correspondence* II, Appendix E, 452-58, and *SPD*, 225-9.

[201] Walsh, 'Stravinsky's Symphonies: accident or design?'.

[202] See Craft, 'Hymns of Praise', 371, and 'On the *Symphonies of Wind Instruments*', 452. The sketchbook in which this is located is sketchbook V in the Paul Sacher Stiftung's enumeration. Craft's and Walsh's accounts (on which the present outline is based) differ somewhat from that proposed by Baltensperger and Meyer.

[203] References are given first to the 1947 revision, then (in parenthesis) to the corresponding point in the 1920 score.

[204] This (as well as the other notations) is transcribed in Craft, 'Hymns of Praise', 372, 'On the *Symphonies of Wind Instruments*, 453, and Walsh, op. cit., 54.

located in another sketchbook, among a separate group of *Piano-Rag* sketches, probably dating from the summer of1919, i.e. approximately a year before the actual completion of the work. The physical and temporal separation of these notations from the main body of sketches ('brouillons')[205] for the piece appears characteristic in the light of the composer's serial template morphology, as does their rather sudden and unexplained appearances among sketches clearly associated with other works-in-progress.

Walsh amplifies and expands on Craft's concerns relating to the complex textual history of the work, the numerous divergences between the 1920 and 1947 scores, the three sets of proofs for the intended original publication (one of them in fact representing a comprehensive revision of the 1920 holograph text), and apparent irregularities and mistakes in the published score. His main concern though, is with the circumstances of the work's genesis and realisation, and his perceptions of how the composer's empirical approach to its composition gave rise to the ultimately heterodox construction of the piece, an approach that appears to equate *modus operandi* with finished product to an uncomfortable extent[206].

In particular, Walsh believes that there was 'little early planning in the work's conception' basing his hypothesis on the scattered locations of the earliest sketches and the diverse content of the 'brouillons'. In discussing the latter, he emphasises that 'although every

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[205] Walsh borrows Stravinsky's own designation for the block of rough sketches in the Sacher Stiftung's Sketchbook VII. As he points out, the composer's title ('1ers brouillons pour mes *Symphonies d'Instruments à Vent*') is unquestionably a retrospective addition.

[206] In particular, Walsh deals at length with the evolution of the extended passage from rehearsal cue 15 (9) through 26 (15), restated between 29 (17) and 37 (20), showing how the multi-layered sketching methods involved various splices and interpolations.

essential ingredient of the *Symphonies* . . . figures in these 'brouillons', there is little evidence that Stravinsky saw them clearly at the time as belonging to a single work, and almost no evidence that he envisaged a work for wind'[207]. Walsh is also encouraged by the apparently expeditious assembly of the particell score, completed by 2 July 1920 – only twelve days after the composer had finished the final 'chorale' – to conclude that 'the rapid drafting of the work . . .was a piece of creative opportunism masquerading, no doubt, as the crystallisation of a previously dormant impulse'[208], even though elsewhere he admits that an 'important group of sketches seems to show that Stravinsky began to compile large sections of the eventual score even before writing up the chorale'[209].

Without denying in any way Stravinsky's empirical and heuristic approach to composition, it appears somewhat extreme to impute such meanings to the residual working materials for the piece[210]. After all, the appearance of fragmentary sketches for the *Three Japanese Lyrics* and Act II of *Le Rossignol* among sketches for *The Rite of Spring*[211] has not generally been interpreted as evidence that 'Stravinsky was in a state of artistic uncertainty . . . sketching material with little clear idea of its destination'[212], and, as will be shown,

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[207] Walsh, op. cit., 40.
[208] Ibid., 58.
[209] The latter observation, suggesting that the particell acted in parallel with the *brouillons*, is compatible with the *modus operandi* of Stravinsky's late period.
[210] The analogous account in Walsh, *Igor Stravinsky: A Creative Spring*, 316-17, is even more extreme in its denial of a considered structure to the piece. Here Stravinsky has been 'messing around with . . . ideas' and the '[order and architecture of the finished piece] seem to bear not the slightest relation to a coherent or organic plan.'
[211] Q.v. *The Rite of Spring, Sketches 1911-13*, and Walsh, *Igor Stravinsky: A Creative Spring*, 590, note 13.
[212] Walsh 'Stravinsky's Symphonies', 39. Similarly, in *Igor Stravinsky: A Creative Spring*, 298, Walsh sees the sketch materials of this period as 'evidence of a . . . rare uncertainty in creative aim'.

early template notations for the late works are frequently physically separated from their corresponding main sketch collections[213].

Scholars of the *Symphonies* sketches have, however, been intermittently aware of fundamental connections between its various materials, although their objectives are somewhat dissimilar to those of the present study. Craft touches on procedures which are central to the concept of template morphology, namely the invariance of certain gestures (not necessarily pitch material) across a number of independent sketches, noting that 'much of the melodic and harmonic materials of the opus derive from the chorale', though without elaborating on this statement in any detail[214]. Of particular interest though, are his remarks concerning the relationship of the so-called 'pendulum motif' (an early draft for the music after rehearsal cue 8 (5)) to a later, differently-textured sketch, in which he notes the 'same rhythm and number of beats, the [same] alternating B-F sharp and C sharp, and the [same] F-G trill'[215].

Walsh identifies connections between early sketches for his 'serpentine' music (rehearsal cue 15 (9)) and adjacent sketches for the song *Sektantskaya*, and also acknowledges connections between the early *Symphonies* sketches and the contemporary materials for the *Concertino*[216]. This treatment appears consistent with the extraction of 'secondary'

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[213] E.g. the 'concept' template for *Requiem Canticles*, found in the pocket sketchbook C115 (see above and also Chapter 12), is clearly designated 'for Princeton' and sketches for *Elegy for JFK*, in the same source, though based on a provisional series differing from that ultimately employed, are clearly underlayed with the text of Auden's poem.

[214] Craft, 'Hymns of Praise', 373.

[215] Ibid., with a transcription of the sketch. According to Craft (*SPD*, 227), this sketch originally appeared in place of the 'chorale' fragment at rehearsal cue 56 (34).

[216] Walsh, 'Stravinsky's Symphonies', 38-9.

template models from ongoing compositional material in the serial works. Most of Walsh's examples, however, are of direct and conspicuous connections between real-time compositional materials, for instance in his comparison of the 1919 'chorale' incipit with later sketches for the end of the work, and the transposed (partial) appearance of its first chord at rehearsal cue 1 in the scores of both versions[217].

One arresting, if more oblique, association between the early 'chorale' notation and real-time compositional materials found elsewhere in the score – not noted by any of the above commentators – strongly suggests that the original notation was at least treated (if not conceived from the outset) as an potential template, rather than as a straightforward draft for the 'chorale' opening. Further study of such relationships within the sketch material as a whole may offer a key as to how Stravinsky understood this material in relation to subsequent stages of his compositional activity on the piece.

Example 4 to the present introduction compares the 'chorale' incipit (a) to the music at rehearsal cue 6 (4) (Example 4, (b) and (c) – transposed here to the pitch level of the template). This is an important juncture in the score which introduces a strikingly new texture and timbre (three solo flutes in both versions) in conjunction with the first appearance of the 'tempo II' pulse (the sesquialtera of the 'tempo I', as Craft points out)[218]. As can be seen from the example, the melodic line in the first flute, something of its rhythmic configuration, and the initial vertical sonority (extended in the 1920 score by

[217] Ibid., 54. This example contains a misprint, however: the lower stave of Ex.2:4 (c) should be read in bass clef.
[218] Craft, 'On the *Symphonies of Wind Instruments*', 457.

largely parallel movement in the second and third flutes)[219] are all derived directly from a transposition of the 'chorale' incipit. The 'chorale' sketch is also clearly related to the discarded passage described above, and reproduced in *Glimpses of a Life*[220], which was subsequently replaced by an adumbration of the final chorale. There are also perceptible resemblances between the 'chorale' incipit and the opening 'bell motif' in terms of their repeated opening pitches and melodic profiles (Example 4(d)) – a connection that remains perceptible in the final score (cf. the opening with 65 (39) foll.).

The Rite of Spring (1910-13)

Richard Taruskin's monumental study *Stravinsky and the Russian Traditions: A Biography of the Works Through 'Mavra'* has convincingly demonstrated the principal ethnological musical sources of the *Rite of Spring* as *obriadnïye pesni*, or Russian ceremonial folk songs.[221] Stravinsky may have been influenced in using this source material by his collaborator on the ballet scenario, the painter and historian Nicolai Roerich, but, as Taruskin points out, these songs were also important musical sources for Stravinsky's former teacher Rimsky-Korsakov[222].

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[219] Cf. Craft, ibid., 458, which provides the transcription of a draft for this music.
[220] Craft, 'Hymns of Praise', 373. See also Baltensperger/Meyer, op. cit., 34-5 and *SPD*, 227.
[221] See Taruskin, op.cit., 891-933.
[222] Ibid., 893.

Taruskin compares many passages of the *Rite* with their respective source materials (derived on the whole from published folk anthologies) prefacing his study with the important observation that

> Some of the borrowings are revealed only by examining Stravinsky's sketchbook, for they were transformed beyond recognition in the process of composition. Here we have another reason why an account of the folk melodies in *The Rite of Spring* can never be exhaustive. The folk tunes in the sketchbook stand out only because in their initial form (that is, as first entered in writing) they are unlike the familiar music of the finished ballet. There are but a handful of such instances in the sketchbook, one of whose most noteworthy characteristics, as we shall see, is an economy that resulted from Stravinsky's well-known working methods. The real development of material generally took place at the keyboard, and by the time an idea was entered in the sketchbook there is no telling how many unrecorded stages of crystallization it had already gone through. Thus there is no telling whether elaborate transformation processes that effectively conceal a folk original stand behind the many motives and phrases that make their first appearance in Stravinsky's sketches in their familiar, finished form.
>
> For all these reasons, then, we may be sure that the dozen or so folk melodies to be treated here are not the only ones in *The Rite of Spring.* They are merely the ones whose initial appearance is sufficiently distinct from their ultimate form in the ballet, or whose specific musical features resonate sufficiently with the contents of the scenario, to put us on the scent.[223]

Remarkably similar processes are observable within the template morphology of the late serial-period sketches. Here too, one finds condensed ideas entered as referential templates in the sketch material. These 'capsules' are likewise often highly dissimilar from the substance of the final score, and physically or characteristically isolated from adjacent notations. Principal distinctions lie in the fact that the late-period templates are (one presumes) composed of original rather than borrowed material, and that the composer's

[223] Ibid., 894-5.

serial choices are in almost all instances determinable, thus providing a key to the study of more recondite transformations of template material not accessible in the case of the *Rite*.

Taruskin's study of both the *Rite* sketchbook and the composer's treatment therein of the folk borrowings reveals other approaches characteristics of later template methodologies. For instance:

> The theme destined for the Game of Abduction, though clearly labelled *Igra umïkaniya*, is entered almost two dozen pages in advance of the main body of abduction sketches, which begin on page 29, probably after Stravinsky and his family had returned to Switzerland – and evidently left Juszkiewicz [the folk melody anthology from which this material derived] behind, for no further entries from that source are found in the sketchbook.[224]

This treatment implies that the folk-music models, evidently used as templates, are essentially oblique to the active compositional process itself, and stand at a certain remove from it. Additionally, the unpredictable emergence of these template notations in the sketches suggests that Stravinsky could generate them at will, i.e. that they were not an organic outgrowth of any real-time compositional development. Taruskin, indeed, notes that the location of most of the borrowed melodies in the Juszkiewicz source (at the bottom-right corner of the book's openings) 'suggests a cursory riffling of the pages, eyes fixed on one spot, as Stravinsky's "method" of choosing from this dauntingly copious source'.[225] The late sketch collections confirm these idiosyncrasies; templates for later expansion are frequently extracted directly from ongoing sketch material, as and when

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[224] Ibid., 895.

[225] Ibid., 900. Taruskin offers facsimiles of a number of relevant pages from the Juszkiewicz source (see his Fig. 12.9 (a)-(c)) to illustrate his point.

required, and often towards the end of sketching on a particular movement or section.

An interesting instance of template methodology within the *Rite of Spring* materials is found on page 35 of the facsimile publication of the sketchbook,[226] at the beginning of 'the most interesting group of pages in the whole *Rite* sketchbook [showing] the evolution of the concluding number in the first part of the ballet, the Dance of the Earth'[227]. As discussed in Craft's accompanying commentary, these early sketches for the *Danse de la Terre*, already remarkably complete in detail, are preceded by a number of more fragmentary notations including a chorale-like melody, harmonised in parallel thirds, at the very top of the sketchleaf[228].

Craft's and Taruskin's suggestions that this may be a borrowed popular or folk melody seem plausible in view of the simplicity and metrical regularity of the music[229]. Craft explains that 'many of the composer's first notations [for individual dances in *The Rite*] were simple folk or folk-like melodies which he transformed by such devices as changing the note-order and grafting new rhythms and new characters of tempo'[230]. In the present instance, pitch connections with the sketches lower down the page for the movement are

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[226] Stravinsky, *The Rite of Spring, Sketches 1911-13: Facsimile Reproduction from the Autographs*. This consists of a main volume with separate appendix.
[227] Taruskin, op. cit., 923.
[228] *The Rite of Spring, Sketches*, appendix, 12. See also main volume, xxiii, transcribed in Taruskin, op. cit., 932.
[229] Taruskin (op. cit., 924) analyses the notation in some detail, showing its essential consanguinity with authentic folk practices, and even going so far as to suggest a possible source in the wedding dance-tune *Letal golub vorkoval.* This is interesting given its resemblance to (as Craft describes) parts of the 'Fifth Tone of the Quamennyi Chant', which seemingly furnished material for the music between rehearsal cues 50 and 53 in *Les Noces*. See Craft *Glimpses*, 347.
[230] Craft, *Glimpses*, 214. This article, like a number of others in the same collection dealing with *The Rite of Spring*, is a revised reprint of parts of the accompanying text to the sketchbook facsimile. Cf. also *The Rite of Spring* sketchbook facsimile, main volume, xxiii.

clear, especially in the rising whole-tone bass figuration (first sketched directly beneath the template and which eventually underpins the entire movement), the repeated chords which open both template and dance, and the melodic motion of the inner parts[231] (cf. especially rehearsal cues 72 through 74)[232]. The centrally-placed sketch (with *ossia*) for the horn ostinati entering later in the movement (rehearsal cue 73+4, then consistently from 74 foll.) recall material found in the *Jeu du Rapt* (cf. 37+3 and 44)[233] and is also related to the preceding *Jeux des Cités Rivales* (especially 60, 61 etc.) and *Cortège du Sage* (the ostinato in horns 1-4 from 67)[234]. The same sketch additionally looks ahead to the contours of the repetitive melodic phrases in the second part at 93+5 through 97. Intervallically similar notations for the string semiquavers (left-hand side, beneath the 'chorale') refer back as far as notations found on the first sketchpage of the present collection (cf. bassoons at 19 foll., also the main melody (in trumpets) between 28+5 and 30, heard again between 50 and 54 (in horns and violas), these latter two appearances at the same pitch as the *Danse de la Terre* sketch, and thus its probable source)[235].

A perhaps more interesting connection, not noted by either Taruskin or Craft, is that this template was also specifically employed in the composition of material for the

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[231] 'In the case of this example, Stravinsky metamorphoses a simple melodic-harmonic choral [*sic*] passage . . . translating the melody from the top to a middle voice; forming harmonic aggregates from it, superimposing the notes as if they were *appoggiature*; exploiting its whole-tone content . . . in an ostinato bass figure; and renovating the rhythm'. (Craft, *Glimpses*, 214). 'What seems finally of greatest moment in . . . the sketches for the Dance of the Earth is that such a basic structural factor as the underlying tonal progression – to say nothing of the form-generating ostinati – has been derived from a source that is all but certainly a genuine folk artifact: possibly even one taken down directly "from life" . . .' (Taruskin op. cit., 932)

[232] References are to the revised 1947 score.

[233] The latter is presumably the 'horn motif in the *Ritual of the Abduction*' also cited as a source by Craft in the sketchbook commentary (appendix to *The Rite of Spring, Sketches*, 12).

[234] For other suggested sources see Taruskin, op. cit., 924-6.

[235] The first sketchpage (p.3 of the sketchbook facsimile) is transcribed and discussed in Van den Toorn, *Stravinsky and 'The Rite of Spring'*, 139. Taruskin demonstrates that the bassoon figure at 19 foll. is derived from Juszkiewicz (Taruskin op. cit., 898-9).

equivalently-positioned movement in part II, the *Danse Sacrale*[236]. The principal melodic motif of the episode commencing at rehearsal cue 175 reproduces the whole-tone emphasis of the template, its rhythmic configuration and much of its contour (including the motif's opening pitch repetitions). This is especially significant in that the main sketches for the *Danse Sacrale* were apparently outlined at a considerably later stage of composition (and consequently occur much further on in the sketchbook), implying that, as non-consecutive sections, the referencing of the *Danse de la Terre* template was a purposeful methodology rather than simply a sequential organic outgrowth of the ongoing compositional process.

An independent sketch made at an incipient stage of compositional activity on the work, possibly dating from as early as 1910[237], reveals associations with the 'Auguries of Spring' chord first heard at 13 (the discovery of which the composer himself later recalled as having taken place in mid-1911)[238] as well as additional similarities of pitch and rhythmic configuration with the *Danse de la Terre* sketchbook template, such as the repeated chords at phrase beginnings, the whole-tone melodic bias and the general contour of the quaver groups[239]. As such, this would seem to suggest that the later sketchbook notation, whether or not it consists of original or borrowed material, is a secondary template calculated to

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[236] Though Craft notes an interesting instance of Stravinsky's 'recapitulatory treatment of figuration' in the return of motivic material from the first introduction immediately prior to the commencement of the *Danse Sacrale* (*Glimpses*, 215). Cf. rehearsal cue 11 (shared between D trumpet and first oboe) with clarinets at 140 foll., but there are further allusions involved here (e.g. the ostinato bass) which he does not consider.

[237] The sketch is reproduced, in the context of a critical discussion on Forte's *The Harmonic Organisation of 'The Rite of Spring'*, and with commentary on the dating, in Craft, *Glimpses*, 227, *SPD*, 597 (an earlier version of the same article) and Van den Toorn, op. cit., 134-6. See also Taruskin, op. cit., 946.

[238] Cited in Craft, *Glimpses*, 227.

[239] The intervallic configuration of the melodic line in b.7 of this example (together with the A in the preceding bar) is R-related to b.2 of the *Rite* sketchbook template.

encapsulate and particularise pitch and rhythmic gestures that had been fabricated earlier in the compositional process[240].

Three Pieces for String Quartet (1914)

The published sketch material for the *Trois Pièces pour Quatuor à Cordes* (later revised as the first three of the *Four Studies for Orchestra*) reveals a number of interesting template elaborations[241]. The early origins of the work – as music intended for the so-called '*David*-Projekt'[242], together with its various sketch groupings, stages of composition and early performances – are detailed in the inventories and articles accompanying the facsimiles and will not be further elaborated here.

A number of early sketch fragments found on the recto and verso of two pages in the Sacher Stiftung's *Skizzenbuch II* (hereafter sketchleaves 1 and 2) exhibit the sort of typically oblique relationships to later sketch materials that is characteristic of many template constructions[243]. A sketch appearing at the top of page 1v is clearly the basis for

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[240] As discussed by Van den Toorn (op. cit.), Taruskin (op. cit., 947) and Craft (*Glimpses*, 228), the 1910 template relates in a variety of ways to material located throughout the work.

[241] Paul Sacher Stiftung, *Igor Strawinsky, Trois Pièces pour Quatuor a Cordes*, facsimile.

[242] See Gordon, 'Streichquartett-Komponist "wider willen"' in the Sacher facsimile collection of the *Trois Pièces pour Quatuor à Cordes*, and also Griffiths, *Stravinsky*, 226, *Selected Correspondence* I, 78-84 and Walsh, *Igor Stravinsky: A Creative Spring*, 226-230, for further information on this proposed collaboration with Cocteau.

[243] Reproduced in the Sacher facsimile collection, pp. 21 and 22. A number of notations from these pages are subsequently transcribed and discussed on p.23 foll., and also in Taruskin, *Stravinsky and the Russian Traditions*, 1467-72.

the fanfare-like figure first heard in bb.4-5 of the second quartet piece. The early full-score and two-piano drafts of the piece both incorporated this notation in its original form in bb.45-6[244], extending directly from the more elaborately-orchestrated music for the abandoned '*David*-Projekt'[245]. However, the published score surprisingly revises the pitches at this place to conform to the configuration of bb.4-5.

Cyrillic rubrics associated with this and several others notation in the *Skizzenbuch II* sketches indicates that these ideas are probably not original conceptions, but transcriptions of popular music which had stimulated the composer's imagination. Thus the upper notation (in 5/4 metre) on sketchleaf 1r is designated 'lullaby' or cradle-song'[246] and is followed by a second notation in C# minor using similar pitch configurations and a comparable notational style. The identifying rubrics, diatonic simplicity of the melodic material, irregular rhythmic character of both sketches and the uncommon appearance of a key signature and repeat marks in the latter fragment would seem to indicate a folksong anthology as the most likely source for these notations. The latter notation, with its prominent descending tetrachord F#/E/D#/C#, is clearly the source from which the composer derived the overlapping cycles, employing the same pitches, in the second violin part of piece I[247]. The repetitive cycles here, and in the principal melodic line of the first

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[244] Sacher facsimile, two-piano reduction, p.14; sketchleaf E/22.

[245] Cf. Sacher facsimile, reproduction on p.113 (source D/1), where the figuration appears twice as part of a passage designated for [*cornet à*] *pistons* (cf. *Themes and Conclusions*, 42). The same passage is redistributed for cornet alternating with violin on p.115 (D/3).

[246] The source for this and the following Cyrillic text are the German translations given in the Sacher facsimile collection, p.23 and Taruskin's English translations in *Stravinsky and the Russian Traditions*, 1469.

[247] Details of these cycles (differentiated by the articulations of the indicated bowing), and indeed the cyclic nature of the entire piece, is discussed in Mosch, 'Musikalische Spurensuche', Meyer, 'Form und Struktur' (both included in the Sacher facsimile collection) and Kramer, 'Discontinuity and Proportion'. Sketchleaves B/1-4 in the collection demonstrate that Stravinsky experimented with different cycles to those of the final score (B/4 records the ultimate versions).

violin part (which occupies a similarly circumscribed pitch range) are already latent in the internal repetitions and general repeat marks associated with this notation.

The first notation, by virtue of its intervallic emphasis (only with the fermata does it exceed the compass of a minor third), muted character (as implied by the associated rubric) and ostinato basis, can be viewed as relating to the *pianissimo sul tasto* passages in the first twenty-six bars of piece III. This music provides the principal sense of progression within the section, being punctuated only by three identical short refrains (bb.8, 15 and 22), and, like the sketch, its melodic compass is expanded just over midway through its duration (b.17 foll.).

The third notation on 1r (and the only one occupying the bass register) is more chromatic, and rhythmically and texturally more complex, and is thus probably original. The semitone-shifted fifths gesture, underpinned by a constant low A, furnished the pitch material (in a slightly skewed regrouping) and general characteristics for the opening of the second piece, and, less directly, the pitch-field (excepting Db) for the melody at bb.17 foll.

This sketch is followed by a fourth notation in a diatonic F major, accompanied beneath by the Cyrillic text: 'And she danced, while a clarinettist in the rain sat on a rock and played this song with all his might'. This is identified by the composer (see text above sketch) as

a Breton folksong transmitted via Alexander Benois[248]. Further notations relating to this melodic transcription are found on sketchleaf 2r[249].

Sketchleaf 1v begins with the 'fanfare' motif and is accompanied by the text 'Dancing Girl: Bareback Rider'[250], a possible reference to the same circus performance in which Stravinsky encountered the clown 'Little Tich' whose 'movements and postures' he later cited as having influenced the music of the second piece[251]. The remaining sketches on this page, almost certainly original, are more involved, and can be related directly to specific passages of the quartet pieces. Thus the lowest sketch, arpeggiating a D-minor triad (though notated using E# (against the bass figuration F#)) above a bass ostinato with C#/G# fifth dyad, is ostensibly the source for the harmony at the opening of piece III. This two-component ostinato (a gesture associated with the notation sketched directly above) was later combined with the 'fanfare' motif (assigned to cornet) on sketchleaf D/1 (p.113) where its pitch material is exclusively furnished by the second dyad (A#(Bb)/F#).

The motif drafted on the right-hand side of 1v is related to the pitch material in the bass-clef sketch on 1r, and resembles in character the music at bb.31-32 of the second piece. A later version of this figure, on 2v, recalls the intervallic emphasis and rhythmic gestures of b.37 foll. Further gestural similarities are evident between the second left-hand notation on 1v and the upper sketch on 2r. Both fragments feature rocking minor-third ostinati in the

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[248] Q.v. Taruskin, *Stravinsky and the Russian Traditions*, 1469, where the former text is explained as describing 'the circumstances under which Benois had heard it'.
[249] Sacher facsimile, 23. These melodies are transcribed as *Beispiel* 1 and *Beispiel* 2 respectively. The intervallic and rhythmic configurations here suggest a potential source for the first violin material in quartet-piece I.
[250] Taruskin, *Stravinsky and the Russian Traditions*, 1468-9.
[251] *Themes and Conclusions*, 42.

upper voice with descending chromatic voice-leading in the bass suggesting an ultimate link to the *sul tasto* music of the third piece. The latter sketch reappears in this form in conjunction with early sketches for III (cf. b.32 foll.) on D/13[252].

Both these pages from *Skizzenbuch II* would therefore seem to consist primarily, if not exclusively of (often interlinked) short notations which were employed as template models for generating substantive material. Templates for all three pieces are found on the pages and a number would appear to consist of *objets trouvés*. In considering the correspondences between individual sketches, some of which might at first appear tenuous, Stravinsky's practice of composing at the piano must be borne in mind. The filtering-out of interim compositional, or exploratory, stages accomplished at the keyboard may give the impression of abrupt advances taking place between sketches. Also, while certain templates retained most of their initial characteristics or were incorporated directly (*vide* the 'Bareback Rider' fanfare), others were treated as repositories from which certain parameters and gestures could be individually detached and extracted for a variety of subsequent applications.

[252] Sacher facsimile collection, 125.

L'Histoire du Soldat (1917)

Robert Craft has detailed the origins of the work in notations made between 1915 and 1917, some of which were distilled from several abandoned projects dating to these years[253]. Materials originally intended as incidental music for Ida Rubinstein's production of André Gide's *Antony and Cleopatra*, together with sketches for an instrumental piece provisionally entitled *Etudes and Cadenzas*, were later diverted into *L'Histoire du Soldat* when that project materialised in February 1918[254].

Craft's sketch examples from these pieces, and from *L'Histoire* proper, are derived from materials now in the Paul Sacher Stiftung's Stravinsky *Nachlass* collection, including a 'sixteen page pocket-size *croquis*' and some 'detached' sketchleaves, both relating to *L'Histoire*[255]. However, much of the compositional work for the piece is recorded in a small sketchbook (c.23 x 17 cm), consisting of forty-three folios, located in the Rychenberg Stiftung, Winterthur, which originated as a gift from the composer to his Swiss patron Werner Reinhardt, who provided funds the work's premiere in Lausanne on 28 September 1918[256]. A description of the general contents of this sketchbook is provided in the taxonomy of sketch materials included in the appendix[257]. From this it can be seen that the

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[253] Craft, '*Histoire du Soldat*: Musical Origins, Second Thoughts' in *Glimpses*, 358-369. This article is a revised and abridged reprint of Craft's earlier '*Histoire du Soldat*: the Musical Revisions, the Sketches, the Evolution of the Libretto'. See also *Selected Correspondence* III, 461-474.
[254] Ibid., 358, 360.
[255] Ibid., passim.
[256] Ibid., 364. See also Walsh, *Igor Stravinsky: A Creative Spring*, 287-93, and Stravinsky's *Autobiography*, 70-77, for details of the work's genesis and first performance. The composer's drawing of René Auberjonois, who designed the sets and costumes for this performance, is located on the penultimate page of the Winterthur sketchbook, and is reproduced in Kunstmuseum, *Sein Nachlass*, 312. The accompanying chapter deals with the collaboration and reproduces a considerable number of Auberjonois' designs.
[257] Volume II, pp.40-41.

body of the sketchbook incorporates extended rough sketch material for the chorales, 'Marche Royale' (here entitled 'Pasa-doble'[*sic*]), 'March du Soldat' and the 'Tango' (sketched in blocks in that order). The beginning of sketchbook is taken up with more advanced compositional materials (continuity and instrumental drafts) for the 'Music to Scene I' and the 'Valse', preparatory work for which was evidently accomplished elsewhere. Between these latter drafts, fourteen pages (pp.11-24)[258] have been removed from the sketchbook, but back-references to this 'missing' section later in the book ('Rag – voir p.13' on the present p.18) give some indication of its contents and suggest that it identifies with Craft's *croquis*[259].

As defined by Craft, this source includes a large amount of sketch material for the 'Valse' and 'Ragtime' (continuity drafts for which directly follow the 'missing' pages) together with notations for movements not otherwise covered in the Winterthur sketchbook, i.e. the 'Petit Concert' and 'Danse du Diable'[260]. A single brief *croquis* notation for the 'Marche Royale' (as described by Craft) is later taken up at the top of p.27 of the sketchbook (i.e. the second page within the block of rough sketches for this movement)[261].

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[258] This pagination is in the composer's hand.

[259] A cover for this sketchbook (probably supplying the additional two pages in Craft's enumeration), with the title 'Soldat/croquis 1918/IStr' is reproduced in facsimile in Kunstmuseum, *Sein Nachlass*, 74.

[260] Craft, *Glimpses*, 363.

[261] Ibid. This figure is described as 'the beginning of the cornet part at [rehearsal number] 1 in the Royal March, albeit with the first note of the second bar [the quintuplet figuration] a step lower than in the final score'. Two dates within the sketchbook appearing either side of the 'missing' block ('6/IV/18' and '25 Juin/18' on pp.6 and 69 respectively) suggest that the date of 16 March which Craft implies for the 'Tango' sketches in the *croquis* may be a misreading for 'May' (in the original French) presuming that the notations were made in chronological order.

Craft offers several examples of how early sketches for the *Antony and Cleopatra* music (dating from towards the end of 1917) were later employed in generating specific material for *L'Histoire*[262]. The Winterthur sketchbook additionally offers an interesting instance of template morphology occurring between the end of the block of sketches for the 'Marche Royale' (*Pasodoble*) and the beginning of the ensuing block relating to the 'Marche du Soldat'.

The first page of sketches for the *Pasodoble* (p.26 of the present sketchbook) consists largely of pasted fragments, beginning with a version (a tone higher) of the music first heard two and three bars after rehearsal number 3 in the score, marked 'Refrain', together with an abridged *ossia* on the same paste[263]. Another version of this music occurs on the paste inserted directly beneath, scored for bassoon and clarinet. This shares the same rhythmic and triadic configurations together with a similar harmonic 'displacement' (b.2) and cadential gesture. The music at the bottom of the page, though rhythmically divergent, derives its pitch configurations from the same 'refrain' template, employing the template's alternative reading of C# (queried, in parenthesis, on the top paste). This sketch appears to have had no direct issue in the *Pasodoble* sketches, although its dotted rhythms and cadential formula (including an indication for percussion) are strongly suggestive of the 'Marche du Soldat'[264]. Minor variants of the 'refrain', however, are frequently found throughout the following pages of the sketchbook, as well as figurations which are

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[262] Ibid., 361-363.

[263] In the published score, the music after rehearsal cue 3 occurs a tone lower than in the sketch. Similar material recurs three bars before 9 (at a different pitch) and three bars before 20. This sketch bears a striking resemblance to the 'fanfare' motif found in the materials for the *Trois Pieces pour Quatuor à Cordes* (see facsimile p.21, sketchleaf 1v).

[264] The material diverted into the 'Marche du Soldat' from the *Antony and Cleopatra* music (eventually rehearsal cue 10 foll.), discussed by Craft in *Glimpses*, 361-363, shows no evidence of such dotted rhythms.

obviously derived from it, such as the bassoon *ostinato* commencing at rehearsal number 9, a version of which is already present on the second page of sketches (p.27)[265].

A continuity draft (including some instrumental indications), from the beginning of the movement through rehearsal number 7, follows fifteen pages of rough sketches. Sketches for the *Pasodoble* conclude on the following page (p.46) of the sketchbook with a draft for the music between rehearsal numbers 17 and 18+1. At the bottom of this page Stravinsky entered a brief melodic configuration (conspicuously isolated within the context of advanced short-score drafts for the movement) which was evidently intended as a template for the following block of sketches. These occupy pp.47 through 69 of the sketchbook and relate exclusively to the 'Marche du Soldat'. The derivation of this fanfare-like template from *Pasodoble* sketch material is readily apparent, particularly in its affinities with the 'refrain' template and its associated bassoon *ostinato* between rehearsal numbers 9 and 10. With the former it shares a similar anacrusis, triadic arpeggiation and similar intervallic and rhythmic correspondences towards the cadence.

The first leaf of the paginated block of sketches for the 'Marche du Soldat' (p.47 of the sketchbook) outlines a version of the music between rehearsal numbers 8 and 9 (still without dotted figuration), but the following page (p.48) features various manipulations of the 'secondary' template sketch. It appears unaltered in the top voice, assigned to '[cornet à] pist[ons]', syncopated across a comparable rhythmic scheme imposed on scalic figurations in trombone (similar to those found on the directly preceding sketchpage). This

[265] This is assigned to doublebass in the sketch. The music at 9 derives from the contour and pitches (including both inflections of C) in the last two bars of the 'refrain' template.

music, which is not incorporated in the ultimate version, is immediately followed by a variant of the template a tone higher in continuous semiquavers (assigned to clarinet, beginning on the upper right), which identifies with the cornet and clarinet 'fanfares' at rehearsal numbers 3+3, 4+2, 7+1 and 9. All of these appearances in the score are preceded or followed by the repeated-note anacrusis of the template.

Page three of the 'Marche du Soldat' block (p.49 of the sketchbook) shows several affinities with the early *Pasodoble* sketches. The sketch commences with the cadential minor triad of the *Pasodoble* refrain template (not the major triad of the template on p.46) before introducing dotted figurations for the first time. Although these notations are remote in detail from the published score, the entry at the top right is clearly related to the opening bars, possibly via the dotted figuration at the bottom of the *Pasodoble*'s first sketchbook page (p.26). (This source seems confirmed by later notations (top of p.57, or p.11 of the present block, staves 3-5) which combine the clarinet/cornet 'fanfare' rhythm with material which closely resembles the distinctive rhythmic figuration and pitch level towards the middle of the *Pasodoble* sketch at the bottom of p.26).

At the bottom of p.49 the composer entered another version of the cornet/clarinet 'fanfare' which shows further direct affinities with the *Pasodoble* refrain in its insistence on repeated semiquavers/quaver figuration at the extremities of the phrase (more extended than in the final score) and on the descending minor triad (at the beginning of the 5/8 bar)[266].

[266] The graphology here, as well as the extended repetitions, link this sketch directly to the development of the figuration on p.54 of the sketchbook (p.8 of the present block).

The Agon *Pas de Quatre* and the Fanfare for Three Trumpets (1953)

Tucker (1992) observes that the *Pas de Quatre* movement of *Agon*, which acts as both a prelude and coda to the ballet (bb.1-60 and 561-620), seems to have evolved from its initial source, a brief unpublished fanfare for three trumpets, composed in late 1953, via an astonishingly small amount of subsequent sketching[267]. Tucker's research demonstrates that the *Pas de Quatre* was drafted in an earlier form, expanding the short trumpet fanfare, at approximately the same time as the music that later became bb.81-95 of the published score. At this stage of development, work was suspended in favour of *In Memoriam Dylan Thomas* and *Canticum Sacrum*, and the evolution which Stravinsky's compositional outlook underwent during this hiatus necessitated considerable revision and instrumental expansion of the original version. In contrast to the fundamentally diatonic, non-serial, music of the fanfare, the textural elements of bb.81-95 derive almost entirely from a circumscribed group of short, independent, note-rows which are subjected to the standard serial procedures of inversion, retrogression and transposition, etc.

Tucker does not pursue the matter of why the later version of the fanfare did not require further extended sketching. The apparent ease with which the composer elaborated the much larger dimensions of the *Agon Pas de Quatre*[268] suggests that the 1953 fanfare acted as a template guide which provided rather more than basic compositional material and

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[267] Tucker, *Stravinsky and His Sketches*, 57 foll. A facsimile of the original 1953 *Reinschrift* of the fanfare for three trumpets, dated 'IStr, Dec[ember]/[19]53' has been published in Craft, *A Stravinsky Scrapbook*, 42. A working draft for the opening of the *Pas de Quatre*, with inserted extensions to some of the figuration, is reproduced in Kunstmuseum, *Sein Nachlass*, 160.

[268] Apart from the increased density of texture, the *Agon* movement lasts somewhat under two minutes in performance with the fanfare lasting around thirty seconds.

occasional surface detail for the published movement. Such direct associations between the pieces are obvious. The opening two bars of the fanfare, for instance, are expanded to provide almost the entire pitch argument (an eight-note diatonic collection)[269] for the opening block of *Agon* (bb.1-9). The instrumentation here, dominated by the trumpets and horns, and the treble-biased *tessitura* of the active contrapuntal lines (underpinned in bb.1-3 and 7-9 by static simultaneities) are also evident residues of the fanfare model. The contrasting block of mainly plucked sounds, which follows (bb.10-13), is clearly derived from a straightforward transposition of the same fanfare music a tone higher (a transposition that duplicates much of the same pitch collection)[270]. In certain details, such as the voice-leading in the harp lines and the octave spacing of the cello and doublebass/piano, this block is even closer to the constituents of the fanfare model.

Bars 16-22 and 23-25 of the *Pas de Quatre* are essentially varied repetitions of these two blocks. Beginning in b.26 however, the pitch collection is expanded to include all twelve notes (arranged in layered ostinati groups), a feature underlined by the addition of clarinets, flutes/piccolo and trombones to the ensemble[271]. This expansion and enharmonic treatment of key pitches, shown by changes in orthography, is latent in the 1953 fanfare (bb.3-4). Thus the pitch priorities and associations of the opening are reinterpreted between bb.2 and 3 of the fanfare, where, for example, the upward motion implied by the second trumpet's F# (b.2) is converted to the downward voice-leading of the Gb in trumpet three (b.3),

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[269] See Johnson, *Cross-Collectional Techniques* for a detailed discussion of Stravinsky's use of this collection (0245679e, or the '#4' ordering of the basic eight-note diatonic collection 0123578t) across a wide variety of pieces. See also Berger, 'Problems of Pitch Organisation in Stravinsky', which briefly discusses the implications and priorities of this collection in such varied works as *Petrushka* and *Agon*.

[270] Only the harp's G# and C# are new.

[271] The flute/piccolo here spatially transfer the preceding cello/doublebass pitches thereby opening up a new register.

where it is additionally sounded for the first time with F natural (cf. trombone I in *Agon* bb.29-30). The conspicuous return of the repeated-C fanfare motif in b.30 of *Agon* (though now in clarinets an octave lower that the opening) only serves to emphasise this reassignment of pitch priority, as does the new disposition of the punctuating wind chord in b.35. The brief restoration of the earlier collection in bb.33-4 – a sort of window within the ongoing context – parallels the conflict between the two areas in bb.4 and 5 of the 1953 fanfare, resulting in the striking vacillation here between D and Db in the first trumpet line (cf. b.33).

A clear rapprochement between these two collections is instituted in b.39, in conjunction with a striking departure from earlier textures. The metric structure here tends toward the establishment of a regular pulsation, with the full texture of previously polarised wind and string groups heard for the first time in totally synchronous formation[272]. The 'accordion' effect (emphasised by dynamics) of alternating back and forth between C- and Eb-centred pitch collections (distillations of the preceding pitch arguments) derives directly from bb.6-7 of the fanfare template[273]. The passage begins (b.39) with the C-centred collection acting as an upbeat lever to the more emphasised Eb-centred collection. However, this hierarchical status is modified in the consequent phrase (bb.41-42). Here, the collection I anacrusis is absent (with the associated dynamic curve automatically reversed), the alternations are more continuous, and the phrase accelerates (due largely to the activity of the bass line). This converts collection II into a strong anacrusis, making the return to collection I, in b.43, a point of major emphasis, especially in conjunction with the extended

[272] The 'plucked sounds' of the harp, mandolin, piano and pizzicato strings are phased out following b.25.
[273] The Eb-centred collection picking up directly preceding material in both instances.

return of fanfare elements (cf.b.2 of the 1953 fanfare). Although tension between the two collections represented by this passage is continued in b.43 foll.,[274] it is clear from bb.52-54, where the voice-leading resolves collection II directly into collection I (cf. fanfare bb.9-10)[275], that the latter is now re-established as the dominant collection[276]. Significantly, the stage directions at b.603 in the coda reprise of this passage (equivalent to b.43 of the *Pas de Quatre*), imply a resolution through the return to the visual tableau seen at the beginning of the work, and thus the initiation of a new cycle:

> The female dancers leave the stage. The male dancers take their position as at the beginning – back to the audience. [Full score, b.603].

It would thus appear, whether or not it was Stravinsky's original intention when drafting the piece, that the 1953 fanfare, in addition to supplying local material for the *Agon* movement, became a synoptic template for the overall pitch priority and 'collectional' strategy of the considerably larger *Pas de Quatre*. Rather than simply being incorporated as a passage within the later movement, it was 'ballooned' outwards by the expansion from within of its internal components[277]. This blueprint apparently enabled the composer to elaborate details of the *Pas de Quatre* at the piano, without recourse to extensive drafting.

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[274] Cf. b.51 with b.5 of the 1953 fanfare.

[275] This association of previously polarised material is equivalent to the technique of 'interlock' described in Cone, 'The Progress of a Method'.

[276] The title *Agon* therefore, in addition to its relevance to the ballet's underlying scenario of 'a competition before the Gods' (see Kirstein's letter of August 31, 1953, in *Selected Correspondence* I, 286-7) may also conceal a reference to the internal tensions and juxtapositions of the music. Tucker (op. cit.) demonstrates that, although the title was not fixed until a much later stage of composition, Stravinsky would have been fully aware of the word's etymology through a proposed project, based around T.S. Eliot's *Sweeney Agonistes*, of about the same time. (Eliot's unfinished poem concludes with a *Fragment of an Agon*).

[277] Leaving aside the very different methods of pitch organisation, there is an obvious parallel here with the early 'synopsis' sketches for Beethoven's C# minor string quartet Op.131 and D minor piano Sonata Op. 31 No.2, in which rudimentary outlines (often simply the principal tonal areas) of movements are delineated. See Winter, *Compositional Origins* and Cooper, *Beethoven and the Creative Process*, 177-196.

The unmistakable reliance on idiosyncratic template processes in sketch collections dating from as early as 1910-13 suggests that such procedures were an integral and ongoing component of Stravinsky's compositional *modus operandi* from early in his career, and were not simply incidental or localised features of his sketches.

Investigation of template morphology in the late music, which constitutes the main body of the present thesis, begins with a detailed account of the compositional gestation of *Movements* (1958-59), discussing its constituent sections in their order of composition as revealed by dated sketches and correspondence. As Robert Craft has outlined[278], the composer sketched the first three movements in order, followed by the present fifth movement. The work was completed by the addition of the fourth movement and, finally, by the insertion of the four interstitial interludes, all of which exclude the piano protagonist.

[278] *SPD*, 453. The overall chronology outlined by Craft (derived from the documentary evidence) is essentially correct, albeit with a characteristic latitude in the interpretation of the dated sketchleaves. Specific details of the chronology will be considered as appropriate in the main text, below.

CHAPTER 1

Movements: The First Half of Movement I (bb.1-26)

Source Materials for Movement I

Working materials in the *Igor Stravinsky Collection* (Stravinsky *Nachlass*) relating to the composition of the first movement may be readily separated into the following categories:

a) Sixteen sides of preparatory rough sketches entered on pages of various paper types and sizes, which include both printed manuscript paper (usually trimmed by the composer) and blank sheets ruled by Stravinsky's rastral. A small number of notations occupy the recto and verso of single leaves, but the majority utilise one side of the page only (see appendix table[1] for a description of individual sketchleaves).

b) A complete particell short-score working draft (bb.1-42c), with some instrumental indications, on three leaves taped together: M323 (bb.1-17 inclusive), M341 (bb.18-41) – both large sheets with rastrated staves – and M342 (bb.42-42c), a smaller sheet of trimmed manuscript paper[2]. A sketch for bb.33-6 (M343) is found on the verso of the third page. Page 1, designated "I" on the obverse, includes a pasted-down sketch for the entire flute solo, bb. 13-17, at the top of the page, notated four semitones lower than

[1] Volume II, 3-4.

[2] As this particell approaches many details of the final score, it is not reproduced in its entirety in Volume II. The pasted fragment on M323, however, is transcribed along with certain excerpted examples for comparison purposes.

in the final score. Four further paste-downs fill the page with divisions as follows (all bar numbers inclusive): bb.1-6, bb.7-10, bb.11-14, bb.15-17. The second particell page includes a single paste-down, bb.18-26, the rest of music to b.41 being entered directly onto the particell sheet. Figure 1:1 offers a schematic representation of the layout of this draft.

Erasures and alterations are visible on pages 1 and 2, but only two insignificant erasures are visible following b.27 (i.e. that section written directly onto the page). Pastes 2, 3 and 4 on p.1 and the paste on p.2 include detailed indications of serial orders in coloured pencil. The indication at bb.14-15 traverses the pastes, indicating that it post-dates the assembly of the pasted fragments.

Timings are provided at the end of bb.22, 26 and 30 (49", 6", and 14" respectively) and also for the whole first half ("with repeat = 98"), and the timings 43" and 2'31" are written at the end of b.41[3]. The last page bears the indication '0'16", the whole about 3'[4]. This page also includes the earliest available dating in the sketches for the work, "July 9th/58"[5].

[3] The timing 2'31" would appear to be an error for 2'41", to judge by the other figures, which add up to a total of 2'57", evidently prompting the approximation 'the whole about 3''.
[4] Throughout the particell, these timings (rarely found on loose sketchleaves) appear to represent estimated stopwatch timings, and are not metronomically deduced, despite the appearance of precise metronome marks (retained in the final score) as early as sketchleaf M363. In conjunction with evidence in the loose sketches, these figures are useful in determining the manner in which blocks of material were added to the draft.
[5] The work was commissioned in a letter from Nicholas Nabokov, March 11 1958. See *Selected Correspondence* II, 396-7.

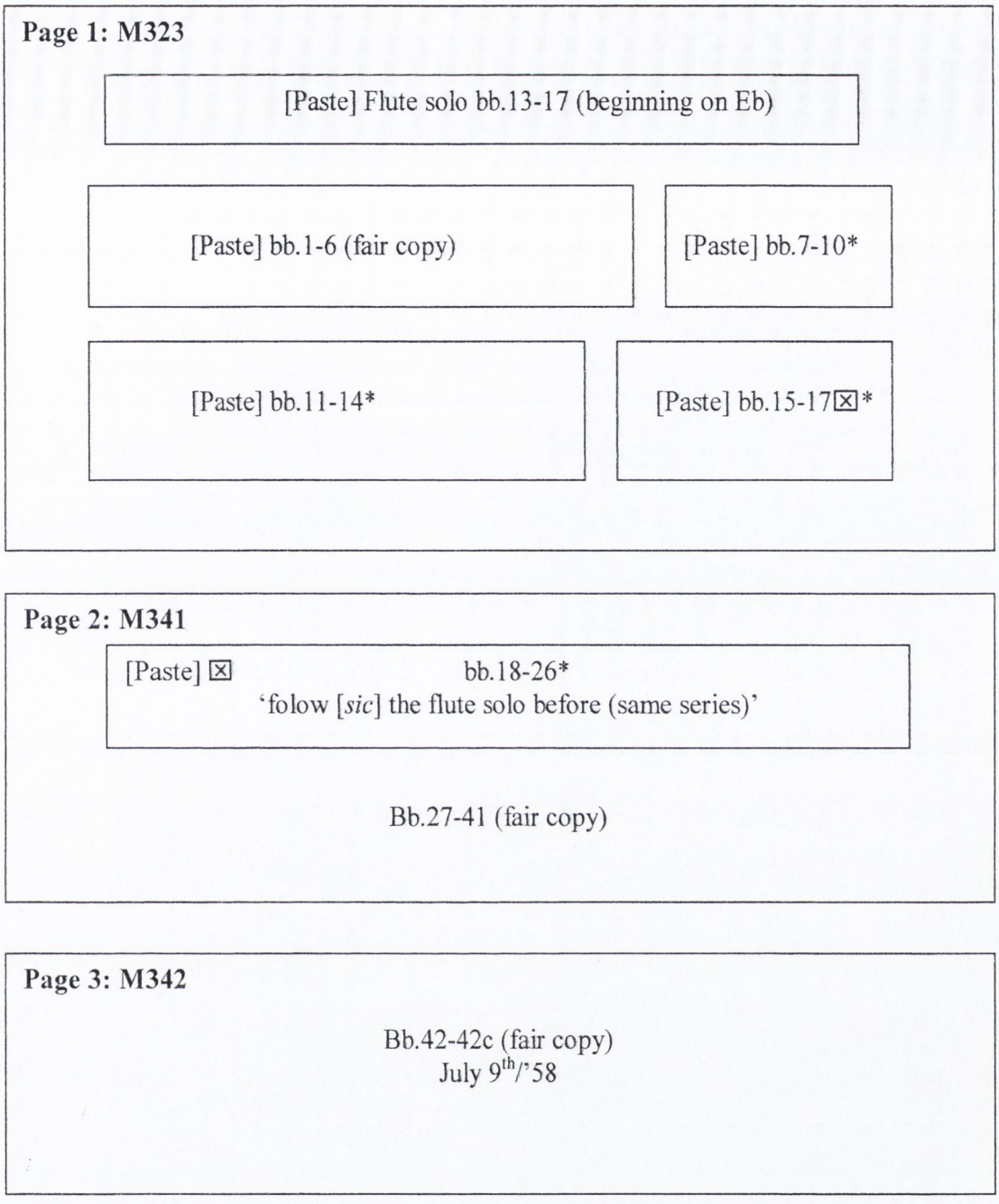


Figure 1:1 Schematic outline of particell of movement I

Passages marked with an asterisk include indications of serial orders and have been subjected to considerable erasure and reworking. ☒ indicates position on pastes of connecting rubrics

c) A draft, evidently clarifications for the two-piano reduction, occupying the recto and verso of a single leaf M325/6. Sketchleaf M325 contains notations for bb.5-6 (piano II only), b.39 (piano II), and M326 bb.40-41, all as per the final score.

In addition, complete full and two-piano reduction scores, (both holographs on transparencies), ozalid reproductions of same, and editions with holograph markings are located in the *Sammlung Margrit Weber* and *Sammlung Robert Craft*, and in the collection of the Library of Congress, Washington[6].

Apart from some sketches related to *Threni* on M334 (the verso of M335) and M329, none of the above sources contains explicit references to, or notations for, sections of the score other than the first movement, indicating that this section of the score was conceived and completed independently[7]. Although an early version of bb.31-33 appears in conjunction with sketches for the first half of movement I (M332, see below), there is no suggestion of overlapping or simultaneous development of the two halves.

[6] The Library of Congress holdings include a first edition of the full score and Robert Craft's copy of the score, together with ozalid copies of the full score and two-piano reduction, all with Stravinsky's holograph corrections.

[7] Cf. Craft, *Glimpses*, 205-218, and Tucker 1992, p.58. Both authors agree that it was not usual practice for Stravinsky to develop material for two sections or movements simultaneously.

The Function of the Particell Draft in the Compositional Process –

Preliminary Observations

Loose-leaf preparatory sketches exist for all sections of movement I, indicating that Stravinsky did not paste rough sketches directly into the particell, seemingly preferring to retain them for reference purposes during composition. This raises questions concerning the precise function of the above-mentioned pastes, particularly in view of the existence of several well-known testimonies concerning Stravinsky's compositional working methods[8] which suggest that such pastes identify with preliminary sketches, the succession of which was intuitively decided at a relatively late stage in the work's evolution[9]. Pasted fragments of this kind are, in fact, extremely uncommon among the sketch materials for the late works dealt with in the present dissertation. Apart from those on the first-movement particell, a paste containing the opening five bars of Movement III (bb.74-8) is the only comparable example to be found among the *Movements* materials. The particell drafts for *A Sermon* and *A Narrative* (4pp. and 6pp. respectively) include, in total, three pastes (bb.51-2, bb.72-81, bb. 82-90). It will be noted that, as in the *Movements* examples, the latter two pastes also present opening material (the first nineteen bars of *A Narrative*). As it seems highly unlikely that the relative positioning of these passages would have been uncertain, an alternative explanation must be sought for the presence of such pastes. A consideration of this issue is presented in Chapter 6.

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[8] E.g. Carter, *The Writings of Elliott Carter*, 302-303. Carter's anecdote is criticised in Craft, *Glimpses*, 322 for 'perpetuat[ing] a serious misunderstanding' of the composer's compositional processes.

[9] Tucker 1992, p.89, presents an interesting investigation of how pastes were used to add revisions over earlier cancelled layers in the particell for *Agon*'s 'Galliarde'. However, as Tucker notes, this appears to have been the result of an unusually expedited gestation, probably stimulated by the pressures of a deadline. The pastes noted above in relation to *Movements* and *A Sermon, a Narrative and a Prayer* do not appear to supersede earlier layers.

That the particell generally acted in parallel with the preparatory sketches, as an incremental working continuity draft to which material was progressively added as composition proceeded, is supported by a number of observations:

a) Early rough sketches are occasionally present on drafts. Most obvious among these is the 'flute solo' paste (using material originated on M363) at the head of page 1 of the first movement particell (M323), which was attached as a template for bb.7-22 (see discussion below). Stravinsky clearly intended from a very early stage to use this sketch for the derivation of other material, and referred to it throughout the composition of most of the first half of movement I, its template status being emphasised by its placement. The particells for movements IV and V, together with those for *A Sermon, a Narrative and a Prayer*, also show some evidence of ongoing preparatory notations[10]. In addition, dates entered in the particells of *A Prayer* and *Abraham and Isaac* confirm that the drafts were completed in successive stages in parallel with the ongoing preparatory sketching process[11].

b) Underlying layers (as visible incomplete erasures or *pentimenti*) on a number of drafts propose earlier versions matching, or similar to, those of preparatory loose sketchleaves. For example, in the first movement Stravinsky initially carried over a

[10] In the particell of *A Prayer* a number of preliminary sketches entered in the margins (and therefore presumably contemporary with the draft's main text) have been subsequently erased by the composer.
[11] In *A Prayer*, 'Jan 15/'61' at b.226, 'Jan 19/'61' at b.239, and 'Jan 31/'61' at the end of the draft. In *Abraham* (see the facsimile in Kunstmuseum, *Sein Nachlass*, 176-177), 'Jan 28/'63' for the section ending at b.128, 'Jan 29/'63 at the beginning of b.129, 'Feb 12/' 63' at b.181. A number of loose preparatory sketches bear dates of a similar vintage. See Chapter 10 for further discussion of this piece's chronology. Tucker 1992 (246) confirms that similarly dated entries are to be found in the *Threni* particell.

register for the Gb in b.22 (four octaves higher than the ultimate version) from M331 into the particell copy. M328/9 – recto and verso of the same sheet – presents a fair-copy version virtually identical to the final score. Presumably, therefore, Stravinsky used the particell as a continuity draft, to which he then proceeded to add layers of detail where necessary, sometimes resorting to further loose sketches as an intermediate stage. Some loose sketches may therefore postdate the initial layer of the particell draft (as would appear to be the case with M328/9).

c) Passages were occasionally worked directly onto the particell, and are not represented among the loose sketch material. This is true of many of the linking and supporting instrumental passages in *A Sermon* (bb.12-18, bb.45-50), and much of the instrumental detail in *A Prayer* (the small number of preliminary sketches for this movement are almost exclusively concerned with outlining the vocal parts)[12]. These passages have been heavily erased in contrast with surrounding material, which is in many instances virtually fair-copy. This abridged working method does not seem to have been employed in the comparatively denser compositional environment of *Movements*.

d) Indications of serial orders on the particell draft (which Stravinsky carried over from the loose sketches) are inconsistent, in general becoming progressively less detailed as the draft progresses. In the particell of movement I, the first six bars (fair-copy, and lacking serial indications – having been subjected to much re-drafting on M363) is followed by fifteen bars of detailed enumeration. The remainder of the draft, however,

[12] Only one of the eight individual sketches for *A Prayer* (SNP58(ii)) concerns the instrumental lines (for b.261 to the end).

lacks any indication of the serial provenance, indicating that it was essentially a fair-copy transcribed from the loose-leaf sketches.

The preparatory sketches, together with the timings entered in the particell, confirm that the composer habitually thought in terms of independent structural blocks, as the abruptly delineated individual 'moments' of each movement are, for the most part, sketched on separate leaves[13]. Not surprisingly, therefore, these autonomous musical blocks correspond directly to self-contained serial units, derived in the case of bb.1-26 exclusively from the P-related hexachordal charts[14]. Pasted segments on the particell, however, do not always correspond to the divisions of the same material within the loose sketches, once again indicating that the purpose of these pastes was not connected with doubts regarding continuity or succession. As an example, the passage between bb.7 and 17, which traverses three pastes in the particell, was principally sketched on two loose leaves (M330 for bb.7-12, and M327 for bb.13-17) in addition to the template paste added to the top of the particell (M323) which presents the entire flute solo from bb.13-17. This implies that Stravinsky must have added the three pastes to the particell simultaneously, with the desired continuity (indicated by the boxed red 'X' appearing on both M330 and M327) having been established in advance[15].

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[13] See Kramer, 'Moment Form in Twentieth Century Music' and Chapters 8 and 9 of the same author's *The Time of Music* (the latter of which deals with the 'moment' structure of Stravinsky's *Symphonies of Wind Instruments*).

[14] The chief divisions of bb.1-26 are delineated by changes in texture, musical type and instrumentation as follows: (i) initial P statement – piano framed by muted trumpet 'fanfares'; (ii) piano solo variation (b.3); (iii) *arco* strings joined by piano (b.5); (iv) series II (see below), first presentation at T2 – primarily monodic line for solo piano, punctuated at end by another short trumpet fanfare (b.7); (v) series II (second presentation at T4) – piano largely absent, flute/clarinet *bicinium*, with palindrome (b.13): (vi) series II (third presentation at T0) – piano with pizzicato lower strings, predominantly chordal texture (b.18); (vii) *prima volta* coda – piano with pedalpoint (cello harmonic) (b.23). Cf. also Tucker, 1992, 115, which discusses the similar demarcation of sections by fresh serial statement in the Coda to the first *Pas de Trois* of *Agon*.

[15] The same connecting rubrics appear again, this time in the particell, between bb.17-18.

Bars 1-6 were evidently copied from the preliminary drafts on M363 and added to the particell (M323) at the same time as the pasted 'flute solo' template, early sketches for which are found at the bottom of the same sketchleaf. The various transpositional levels which the composer essayed in the loose sketchleaves for much of the ensuing material of this first half would suggest that the establishment of continuity here was an ongoing and integral concern from an early stage of the compositional process.

The timings given on the particell (see above) are also rather revealing in respect of the composer's conception of the movement's proportions. According to these timings, the two halves of the work form an exact 2:1 ratio – 2x[49] +6+14: 43+16 seconds, i.e. 118:59 seconds. As these timings do not correspond to precise metronomic calculations, (probably having been estimated using the composer's stopwatch) it may be assumed that they represent ideal proportions towards which the composer worked[16]. Incomplete erasures, apparently numerical calculations, on the top right-hand side of M339 seem to show the composer taking account of music which had already reached a degree of completion (the upper figure appears to be 49, presumably the timing given for bb.1-22). In view of the timings entered into the particell draft, it seems likely that the composer was estimating the required proportions of certain as-yet-unwritten passages, probably the *seconda volta* (bb.27-30) and possibly also the end of the movement (from b.41 or b.42 through to the end of the movement at b.42c). As will be seen in Chapter 2, these passages were the last to have been composed, with the first template notation for the *seconda volta* occurring

[16] Tucker 1992 (50-57) discusses the use of a pre-compositional structural plan (including specified timings) for *Agon*.

directly beneath these numerical calculations[17]. However, it will also be shown that the external structure of the movement, enclosing a 3:2 pulse relationship within a 2:1 proportional format, was not a pre-compositional premise and was devised late into the compositional process, probably in conjunction with the composition of the *seconda volta* music.

Establishing a Text for Movement I: Conflicting Readings in the Source Material

Stravinsky made a number of alterations to the text of movement I subsequent to the completion of the preparatory sketches, which in most instances has the effect of obfuscating the serial provenance of the passage in question. As a result, many previous serial analyses of the work (made without access to the sketches) have adopted extraordinarily complex and circuitous readings in an attempt to offer a serial rationale for every note[18]. Alterations appearing between the loose-leaf preparatory sketches and the final layer of the particell draft are as follows (notes in all cases are adjacent):

(i) C and B are eliminated from b.3 (cf. M363).

[17] The remainder of M339 presents advanced continuity drafts for bb.31-36 and for bb.31-39 (with timing 30" at the end of this draft).
[18] E.g. Müller, 'Igor Strawinsky: *Movements* for Piano and Orchestra' and Maconie, correspondence (reply to Spies) in *Tempo* 105.

(ii) C and F are eliminated from the end of b.6 (cf. M363).

(iii) B and C are eliminated from the end of b.10 (cf. M330).

Although the exact reason for these changes remains unclear, it would appear that the composer considered the eliminated notes to be superfluous to the principal pitch or voice-leading arguments at these locations. This would appear to be the case in the first two instances, where an essentially monodic line is restored, and the remaining pitches in the simplified texture may be more easily contextualised by the ear. Thus the pseudo-retrogression of b.2 in b.3 and the echo of b.4 at the end of b.6 are projected with greater efficacy. As for b.10, Stravinsky may have been concerned with increasing the pitch redundancy here (the twenty-one successive notes from the second half of b.9 to the end of b.12 present only eight different pitches) to emphasise the cadential nature of the passage. In all cases, these later adjustments betray a tension between real-time compositional dynamic and the serial organisation.

In addition, Stravinsky made a number of other changes in the text of the first movement at a subsequent stage of composition, between the particell draft and later copies of the score. These inconsistencies are tabulated below:

(i) b.1: the demisemiquaver Ab appears as A natural in the full-score *Reinschrift* holograph. This is clearly a clerical error, as all other sources (except for an ozalid

copy of the *Reinschrift*, in which the offending note is encircled and questioned)[19] give the correct reading.

(ii) b.5: the first semiquaver (the cello Ab in the published score) is given as A natural (the serially authorised pitch) in both the sketches and particell, and also in the fair-copy holograph two-piano score, but is altered to Ab in the *Reinschrift* holograph full-score[20].

(iii) b.20: an initial acciaccatura F (cf. M331) is eliminated (though the pitch is retained in the trichord).

(iv) b.30: the fourth and fifth semiquaver F and C in the right hand are both sharpened in the sketches and particell (once again, the serially authorised reading), but are natural in both the two-piano and full-score holograph *Reinschrifts.*

Evidently (ii) and (iv) represent significant last-minute 'improvements' to the score, possible reasons for which will be inferred below[21]. The alterations in point (ii) would further appear to indicate that the two-piano score was the first of the *Reinschrift*

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[19] This ozalid is located in the *Depositum Margrit Weber* at the Paul Sacher Stiftung.

[20] The alteration was presumably made in order to effect the rising bass prolongation (Ab/G#) between bb.3 and 6. Much of the writing in *Movements* frequently implies an underpinning bass function – the low G in b.2 is the first of many bass-orientated phrase-endings and beginnings (cf. b.5, 9, 13, 26, 33 etc.). The presence of an active harmonic bass – the absence of which Stravinsky remarked in Schoenberg's *Variations,* calling it 'the lowest line merely, and not bass-ic' (*Conversations*, 30) – is surely one aspect of the composer's approach to composing "vertically" and "hear[ing] harmonically" (*Conversations*, 128), as he seems to imply in the discussion of harmonic ('vertical') hearing in *Conversations*, 128-129.

[21] Such prevarication about detail is not uncommon in Stravinsky's output. See, for example, Stephen Walsh's account of the different versions of *Symphonies of Wind Instruments* in 'Stravinsky's Symphonies: accident or design?'

holographs to be completed as an intermediate stage between the short-score and full-score[22]. Thus adjustment (iv) was instituted at an earlier stage than (ii).

Establishing Early Compositional Strategies: the M363 'Concept', the M332 'Scratchpad' and the Origins of the 'Flute Solo' Template M323

The first group of preparatory sketches which Stravinsky completed appears to have comprised M309/10 (the principal row charts), M332, M363, M323 (the flute solo paste on the particell), and M324.

The large sketchleaf M363 (ca.12 by 18 inches)[23] with rastrated staves, contains numerous small independent sketches for bb.1-6 on its upper staves, which are assimilated into a continuous draft on progressing down the page (see Figure 1:2 for a schematic representation of the layout). This type of large sketchleaf with multiple, dissociated notations, usually indicates the working-out of early ideas. A visually very similar page (M362) relating to the fifth movement contains a dated template in its top right-hand corner and the nature and contents of this page unequivocally propose it as a draft of first ideas for V[24]. It would appear that such dates (found infrequently throughout the sketches and

[22] Stravinsky posted instalments of both scores to Margrit Weber, with movements I, II and III (12 pages of full score and 14 pages of piano reduction) being sent on 24th February 1959. The letter in which he informs Frau Weber about this material (dated 23rd February 1959) is preserved in the Stravinsky *Nachlass*, with the postmarked envelope in the *Depositum Margrit Weber*.

[23] The dimensions and paper-type of this page are identical to those habitually employed by the composer for his particell drafts during this period.

[24] See the detailed discussion of M362 in Chapter 5.

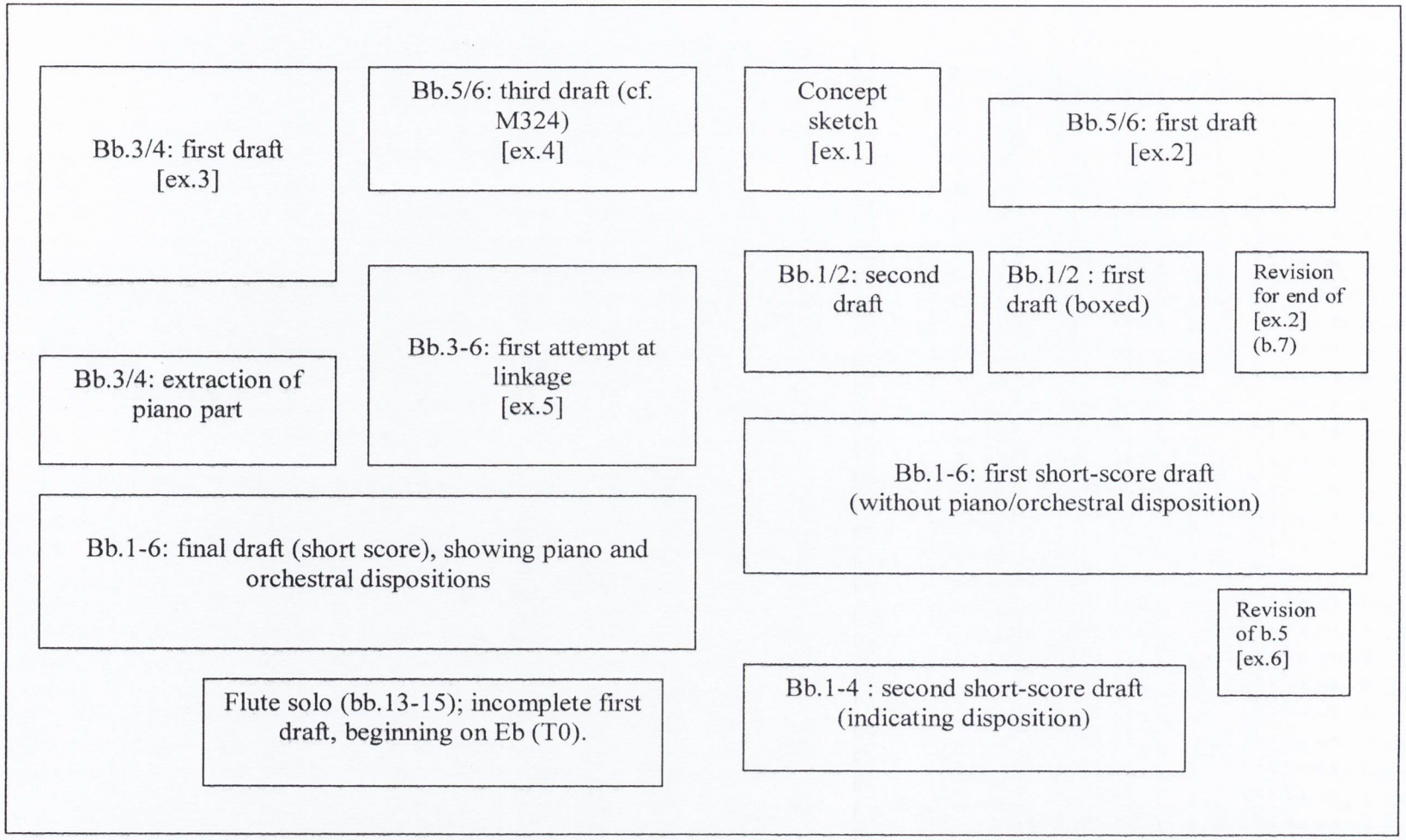


Figure 1: 2: Schematic outline of sketch layout on M363

particell) indicate important advances in the compositional process, such as the initiation or conclusion of work on major sections. Their inconsistent use (for instance the adjacent dates in the *Abraham and Isaac* particell)[25] demonstrates that they are not primarily designed to provide a chronological account[26].

A large division in the rastration down the centre of M363 suggests that the page was initially folded in two, with the first notations being added to the right half. This right-left reading is supported by the appearance of some later drafts of right-side notations on the left-hand side of the page (e.g. that of bb.1-6). The first notation (appearing on the top left of the draft's right-side division) would appear to be the partitioned hexachord (alternating dyadic and tetrachordal segments) in Figure 1:2, ex.1. Displaying an evident pianistic basis, its referential positioning and direct association with many of the ensuing sketches, on this page and on satellite sheets, indicates it status as a 'concept' template[27].

The proximity of the unordered hexachordal pitch collection here (pitch-class set 6-Z17 in Forte's nomenclature)[28] to the 6-7 source hexachord of the row suggests that this may have been Stravinsky's initial idea for the piece and that it represents the first stage in the evolution of the work's series. Table 1:1 demonstrates how the M363 'concept' template relates to the definitive row. As the notation stands, it clearly relates to the content of the RIα hexachord. It should be noted that while the final row is highly degenerate, the M363

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[25] See note 11 above.
[26] The single-page particells for *Epitaphium* (109:403) and *Elegy for JFK* (217:0274) each offer two dates (located respectively towards the top and bottom of each draft). Presumably these annotations (14th and 16th May 1959 for *Epitaphium* and March '64/1st April '64 for *Elegy for JFK*) indicate the starting and concluding dates respectively for the pieces.
[27] The figuration does not appear directly anywhere in the work itself.
[28] Forte, *The Structure of Atonal Music*.

template hexachord is non-combinatorial. A similar percentage of the pitch content of the P α hexachord, together with the first order-position (C) of the β hexachord, can be formed from a transposition (T5) of the template.

M363 template hexachord, T(0): Eb E A B Bb G:

RI(0) (definitive series): F Eb E A B Bb / Ab Db D C F# G:

M363 template hexachord, T(5): Eb E Ab A D C:

P(0), order positions 1-7: Eb E Bb Ab A D C:

Table 1:1: a comparison of the pitch content of the M363 'concept' template to the definitive *Movements* series.

(The pitches of this 'concept' template also correspond to a concatenation of order positions 1-3, χ hexachord, first rotation, together with order positions 4-6 of the δ hexachord, second rotation, as found in the main row charts M309/10). As will be shown below, Stravinsky constructed the middle blocks (bb.7-22) of movement I's first half[29] exclusively from material obtained from the χ and δ rotations, directly referencing the 'flute solo' template added to the particell (M323) which emphasises rotations 1 and 2 at its extremities. The boundary pitches outlined in the M363 template sketch evidently played

[29] I.e. the section enclosed by repeats.

an important role in this selection process, as will become evident in the following discussion.

As the remainder of M363 refers explicitly to row forms and concomitant rotations found in the M309/310 row charts, Stravinsky must have drafted the definitive row away from this sketchpage. Although no extended exploratory work is recorded for the definitive *Movements* row[30], what appear to be attempts at a definitive ordering, particularly concerning the β hexachord, are visible as underlying layers (incomplete erasures) on M332(i). As the 'concept' template on M363 is only a short stage away from the final source hexachord, the internal hexachordal content of the row was presumably decided quite rapidly, given the composer's predilection for working with hexachordally combinatorial series[31]. The internal ordering of the hexachords was then presumably arranged to produce further symmetries and consistencies[32].

M332 contains the only identifiably early notations for the work in which the hexachordal divisions are clearly indicated (with vertical dashes above the stave), and a ballpoint ink marking in the top left-hand corner (the rest of the sketches on this page are in pencil) would appear to link it with the row charts, as the use of ink is infrequently to be found in the sketches. M332 also makes use of serial designations which do not correspond directly with those used on the row chart (e.g. 'Ia' for the untransposed P form), further implying

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[30] Cf. the process of row formulation in the early sketches for *A Sermon, a Narrative and a Prayer*, outlined in Chapter 8.

[31] Tucker, 1992, 117-118, discusses the evolution of the series from melodic sketches, in the 'Coda' to the first *Pas de Trois* of *Agon*, and also considers underlying similarities with the series of the *Surge Aquilo* movement in *Canticum Sacrum*.

[32] Babbitt, 'Order, Symmetry and Centricity in Late Stravinsky', 253. Also Babbitt, 'Stravinsky's Verticals', passim.

its early status. This sketchleaf consists of four separate notations (annotated as (i) to (iv) on the accompanying transcription), three of which (all notated in the bass clef) present versions of P together with some simple (i.e. α or β) P rotations. The fourth entry, reversed in relation to the other three (suggesting the possibility of a later addition), diverges somewhat from this pattern in its more extended *tessitura* and use of χ and δ rotations, with clear links to the 'concept' template on M363. The sketch can thus been viewed as a 'scratchpad' not only for the definitive row of the piece but also for rudimentary early configurations extrapolated from that row.

The two sketches entered across the top of the page (M332 (i) and (ii)) present different dispositions of the complete P form. Nevertheless a number of direct correspondences are evident between these versions, such as the identical contour and registral assignments associated with order positions 6 through 9, and the immediate repetition of pitches within the row statements, generating in both instances a total of fourteen attacks. (The repeated pitches are different: B/C# in (i), Ab/A in (ii)). These cloned configurations indicate that template-based methodologies were already being applied at this incipient stage of composition. The draft in M332(iii) is a variant (using 'simple' rotations, and therefore internally reordering some of the pitches) of M332(i).

A variety of associations are apparent between these 'scratchpad' notations and configurations in the published work. For example, although the top left-hand sketch (M332(i)) is ostensibly an early notation for the clarinets and bassoon in b.39 (M336, on which this passage is developed, carries over the lower left-hand expansion, M332(iii)), it

also served as a template model for the final string, harp and piano passage of the work (bb.187-193 – see Example 1:1), and, perhaps less obviously, for the flute solo bb.13-17. Although the pitches in M332(i) are different, its characteristic leaping compound intervals, and steady semiquaver pulsation, against which irrational divisions are measured out, represents a prototype model for b.13 through 17. The ultimate barring of the flute solo in groups of seven semiquavers (already latent in the M363 and M323 preliminary sketches) would also appear to be directly connected with the metric patterning of the fourteen-note template row statement[33].

The reversed notation M332(iv) – ostensibly a sketch for bb.31-33, though a semitone lower than the final score[34] – also relates directly to the flute solo (compare the end of this notation with the end of the flute solo at its initial pitch level on M323, and to the 'concept' on M363). Like M332(i) and the flute solo M323, this sketch exhibits the use of equal pulsations. This is also true of the passage for piano and harp in b.42-42c, the opening pitch-contour of which appears to derive from the top right-hand sketch M332(ii). Thus it would appear that the polarity of musical types governed respectively by equal and irregular pulsation was an important conceptual factor in the early construction of this movement[35].

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[33] Cf. Griffiths, *Stravinsky*, 177-178.

[34] This sketch subsequently formed the starting point for a sequence of drafts outlining the second half of the movement (bb.27-42c), as discussed in Chapter 2.

[35] The irregularly-pulsed music, most evident in the clarinet counterpoint to the flute solo (b.13 foll.), and polyphonic lines in b.39, is already suggested by the M363 concept template.

The Composition of Bars 1-6

The first six bars of movement I were sketched and brought to an advanced stage of completion on M363. In addition, one small notation (an early version of b.6) appears on the lower leaf of M324[36]. The placement of the sketches on M363, and their dissociation, suggest that the relative positioning of individual sketches was initially uncertain, and additionally that bb.3-4 (top left-hand corner) were last to have been composed. On the top right-hand side of M363, next to the 'concept' template, Stravinsky entered two notations, for bb.5-6 and beneath it bb.1-2, the latter of which the composer has designated as employing "O" (i.e. the P form of the series) and encircled, suggesting a referential significance. The registers of the lower sketch are identical to those of the final score, but rhythmically the sketch is rudimentary, its uninterrupted semiquaver motion suggesting an association with M332(i)[37]. The ultimate rhythmic configuration of the pitches, however, has closer affiliations with M332(ii), which also contains the compound interval Eb/E, as the source of the "scotch snap" figure Ab/A (though in the opposite direction), the downward-biased triplet motion in b.2 (here associated with different pitches) and the rhythmic configuration and contour of the phrase ending (b.2) – see Example 1:2.

The upper sketch, an early version of bb.5-6 (Figure 1:2, ex.2), clearly relates, in this early form, to both the 'concept' template and to M332(i). In the first hexachord (labelled in

[36] M324 consists of two small leaves stapled one beneath the other. The upper fragment consists of a rudimentary outline of the *prima volta* coda (bb.23-26).
[37] The addition of grace notes here anticipates the character of the flute solo template, M323.

green pencil "I-3R" (i.e. [PαIII]r)[38] the initial Bb together with the following high A (now coupled with a G#) and adjacent E/Eb pairing are obviously legacies from the 'concept'. (See Table 1:2 for a schematic representation of serial deployments in bb.1-26). Moreover, the less-than-straightforward hexachordal choice seems to have resulted from an attempt to duplicate the pitch configuration of M332(i), which combines P with a secondary contrapuntal voice beginning with PαII (also commencing with Bb). The second part of the sketch, constructed from 'II: 1 & 4', (i.e. Pβ rotations I and IV), demonstrates that Stravinsky was aware of some interesting properties of the series, in this case the invariant dyadic groupings produced by the combination of rotations three levels apart in the charts (e.g. the unrotated P and rotation III, rotations II and IV, III and V). Here Stravinsky uses this property to create multiple pitch-class redundancy (the same dyadic groupings are preserved), most noticeably the B/G dyad, which is also a feature of the 'concept' template (the pitches occur in the same registers between the alternating note groups)[39].

[38] The curious nomenclature here (I=α, II=β), relating the sketch directly to M332, clearly predates the full elaboration of the definitive chart nomenclature. The remaining sketches follow the chart designations.
[39] The same invariant dyads are formed (for the β hexachord only) by overlaying P and I, and occur again (outlined in red pencil) in this form in Stravinsky's ancillary chart for Movement V (sketchleaf SNP/0 – see Chapter 5).

b.1	bb.3/4	bb.5/6	bb.7-12
P	Pβ5*	[Pα3]r / Pβ1&4*	series II (T2)*
	Pα5		

bb.13-17	bb.18-22	bb.23-26
series II (T4).....	series II (T0)	Pβ/[Pα]r
P: δ1/χ1/δ2/ [δ2]r/[χ1]r		

Table 1:2: deployment scheme of serial orders, bb.1-26, from superscriptions in the sketches. 'Series II' indicates the collage of χ/δ fragments, with T0 representing the pitch level of its first appearance on M363 (commencing on Eb). Passages marked with an asterisk contain some revisions or elisions made subsequent to the preparatory sketches.

From the outset, then, Stravinsky viewed the hexachords as identifiable and distinct musical phenomena. The final version of this passage (bb.5-6) emphasises the dichotomy with the addition of the piano for the double statement of the β hexachord[40]. Example 1:3 traces a number of subsequent stages of development for these bars, which involve early regrouping of pitches (M324), development of rhythmic definition, the re-distribution of registral deployments (throughout all the given sequences), and (at the particell stage, not shown in the present example) the elimination of a number of pitch classes as noted above.

[40] It should be noted in this connection that the composer's row charts are highly idiosyncratic in their attachment of hexachordal labelling to the series-forms. The denominations α and β are consistently associated with the same intervallic deployment within the hexachord: thus the first hexachord of the R and RI forms is called β.

The sketch directly underneath the M363 'concept' presents the final version of the two opening bars. Stravinsky then apparently migrated to the left-hand side of the sketchleaf and began adding notations in the top left-hand corner for a linking passage connecting bb.1/2 and 5/6. These notations derive, as in the previous sketches on this page, exclusively from P α and β rotations.

On the top left-hand side of M363, Stravinsky entered a sketch for the link using P rotation V (α and β hexachords), thus picking up the F from the end of the opening P statement. The hexachords unfold simultaneously, creating a dense, active block that preserves clear connections to motivic gestures and pitch configurations established in the earlier sketches on M363. The C#/F#/G figure derives directly from the sketch for b.2, and recalls the contour of the same pitches together with the rhythmic configuration associated with the Bb/Ab/A in b.1[41]. The ultimate source of the 'link' configurations is thus M332, an observation reinforced by the explicit reference of the lower voice (Pα5) to M332(ii), the evident source of the pitch repetitions on Ab/A and of the contour associated with the Bb/Ab/A group.

The sketch directly below this draft (marked 'piano') is an early attempt to allocate instrumental distribution, extracting the encircled pitches from the Pα5 hexachord along with the final three pitches of the Pβ5 (identified in green pencil). This proposed distribution was not carried through to the final score.

[41] Stravinsky later changed the emphasis of this group through the registral alteration of the G (b.4).

It would appear that Stravinsky's compositional strategy in this opening block involved the creation of forward kinesis by means of a series of intervallic and pitch-class permutations (with associated rhythmic configurations) that invite direct comparisons. In b.3, for example, as pitch and rhythmic configurations begin to repeat, large-scale comparisons and connections are made possible. The repeated Ebs in this bar, though in a lower register, clearly allude to the opening gesture and launch a more extended re-statement of the opening pitch sequence. Stravinsky's first sketch for bb.3-4 (top left of M363) has close intervallic and rhythmic associations with b.2. Its final revision, with the G octave transferred and a number of constituent pitches eliminated, alters perception of priority: F#/C# are now closely associated, with the G isolated as a weak aftershock. The Ab (b.4) occurs in the authorised position within the prime row (as defined by bb.1-2) but the three piano pitches in b.4 conform to a later part of the row sequence, giving the impression of a truncated presentation. This fluctuation in the rate of pitch circulation is reinforced by the rhythmic precipitation at this point, which introduces the strings with a symmetrical harmonic layout (b.5). The intervallic manipulations set in motion in bb.1-4 may be traced further, with the C#/F#/G complex re-appearing in different contexts and with different emphasis in b.6, b.9 and finally b.12 (note how the changing orthography parallels the functionality of the pitch collection). Other collections undergo similar treatment, e.g. the Eb/E dyad is reversed in priority in b.11 (cf. the collection in b.3-4 with b.11-12).

In this way, similar pitch configurations are subjected to different types of emphasis, with successive pitch events perceptible as variants of previous events, thus contributing a sense of linear motion. Babbitt has succinctly termed such an approach to pitch manipulation as

"a vestigial, if highly refined, manifestation of ostinato technique"[42]. In another pertinent remark in *Conversations with Stravinsky*, the composer stated that

> Rhythm, rhythmic polyphony, melodic or intervallic construction are the elements of musical building to be explored today....Apart from the series notes are nothing, but in the series their recurrence, their pitch, their dynamic, their timbre, and their rhythmic relation determine form. The note functions only in the series. The form is serial, not only some or all of the elements that compose it. The individual note determines the form only as part of its group or order[43].

Formulating a Twelve-Tone Frame: the Evolution of the *Prima Volta*

M324 is a composite sketch consisting of two identical small white sheets stapled together, both with rastrated staves. The lower leaf presents a draft of bb.5-6 virtually identical to (and thus presumably contemporary with) that on the upper left-hand division of M363 (the registers associated with the G/G# dyad are exchanged). The incipit indicating the proposed continuation (with treble and bass clefs implied) is once again clearly based on pitch material, partitioning and intervallic configurations proposed by the M363 'concept', and has clear gestural affinities with the ultimate version of b.7, despite a considerable divergence in pitch material. The physical evidence of the stapled-together sketch

[42] Babbitt, 'Remarks on the Recent Stravinsky', 172. The same author also observes (with reference to the manipulation of the non-dodecaphonic series employed in the 'Ricercar II' of the *Cantata*) that the 'combined constraints of pitch content and pitch order reflect a continuation of the Stravinskyan concern with the time rate of change of pitch replacement' (ibid., 172).
[43] *Conversations*, 109.

fragments implies that the upper draft, a first attempt at the *prima volta*, bb.23-26, is also contemporary with M363. It would therefore appear that the 'framing' twelve-tone statements of the opening bars and *prima volta* coda (both employing P-related material) were in place before the development of the central blocks (bb.7-22), which unfold three statements of a thirty-four pitch 'series' ('series II') manufactured by juxtaposing fragments drawn from the χ and δ rotations (see below).

The sketch for the *prima volta* begins by unfolding the Pβ hexachord and continues with a retrograde presentation of the Pα. Once again, aspects of the contour and rhythmic configuration associated with these pitches were influenced by the M332(ii) template, a feature especially evident at the extremities of the block. The C#/F# occupy the same register as the template, with identical rhythmic patterning (including the grace-note F# preceding the lower register G), whilst the contour and intervallic structure of the [Pα]r is clearly derived from the opening of the template (the acciaccatura A at this point is apparently a further legacy from the template)[44]. The subsequent draft of this passage (M331), approaching the detail of the final score, makes additional alteration to some of the registers, which reveal the ongoing influence of the M332 templates. The revised spacing of the B/C# dyad corresponds to that of both M332(i) and (ii), whilst that of the G/F pair replicates the example of the M332(i) model[45]. Example 1:4. demonstrates the

[44] *Pentimenti* visible on the *prima volta* sketch indicate that the composer experimented with different octave positions for the Ab and A.

[45] Stravinsky later emphasised the final Eb through repetition. The particell draft (M341) emphasises the pitch priority here through the addition of a 'hairpin' crescendo/diminuendo to the first Eb (not retained in the final score). Both these additions serve to create a direct link to the work's opening gesture (Example 1:4).

relationships between the opening, *prima volta* coda and M332 template.

A third draft of bb.5-6 appears toward the top of the left-hand division of M363 (Figure 1:2, ex.4), which, like the contemporary M324 notation, greatly revises the alignment and registral assignments of the first draft (Figure 1:2, ex.2), although it remains several stages away from the reading of the published score. Beneath this (Figure 1:2, ex.5) comes a first attempt at assembling the segments sketched across the top of the sheet for bb.3-6 into a continuity draft.

The three further continuity drafts occupying the lower areas on both divisions of the page are: (a) (right-hand side) a short-score draft (without indication of instrumental disposition) of the entire passage, bb.1-6, with serial orders and definitive metronomic rate indicated; (b) (directly beneath, bottom of right-hand division) a supplementary draft giving piano/instrumental division (though no specific instrumental indications) for bb.1-4; and (c) (left-hand side) a draft for bb.1-6, incorporating the revisions made in (a) and (b) and with the piano and instrumental lines (as per the final score) distributed on different systems.

Draft (a) marks the first appearance of the ultimate registral disposition for the string 'interlude' of b.5, with the spatial distribution of the hexachordal pitches projecting harmonic packs of superimposed fifths. Because of their identical hexachordal content, the P, I and R forms articulate the same trichords. The IR form, which has different hexachodal levels, adjusts the patterns by exchanging one element of each trichord (Example 1:5).

Trichords within each hexachord are separated by interval class 4 (a major third) whilst a stack of pure fifths is produced by a juxtaposition of trichords II and III, occurring between the hexachords. The spatially-patterned sets first heard in b.5 are recalled to varying degrees later in the composition, usually as a means of articulating major block divisions. Allusions to IR trichords II and IV are found at bb.12-13 (more prominently in the early sketch M330), but especially prominent references mark the transition between the *seconda volta* coda and the second part of the movement beginning in b.31. In Stravinsky's original version of b.30 (see above), P trichords III and IV were unfolded in the spacing of Example 1:5, followed by an E/D dyad in b.31 which suggests P trichord II. The second section contains further allusions to this registral deployment (especially bb.31-36 – see Chapter 2) as does the coda which ends the work, bb.187-193. As described above, this latter ultimately relates back to the M332(i) template model (Example 1:1) and centres around a polarised projection of P trichords II and III, again in the spacing of Example 1:5 (i.e. a stack of pure fifths) into which the remaining pitches are 'resolved' with strongly directed voice-leading.

The Composition of the 'Series II' Blocks: bb.7-22

At the bottom left-hand side of M363, directly underneath the final continuity draft for bb.1-6, Stravinsky entered the first tentative notations for the flute solo, b.13 foll. (minus its accompanying contrapuntal voice). The opening pitches of this notation, which appears four semitones lower than in the final score, are ostensibly derived from the 'concept' notation. The sketch becomes gradually less confident as it proceeds, eventually breaking off towards the end of what later became b.15. Stravinsky revised and completed the notation on a separate, rastrated, strip which was subsequently pasted onto the top of the first page of the particell draft (M323), an indication that he intended to use it as a referential template. The completed version of bb.1-6 was transcribed (in fair copy, without indications of serial orders) on a separate paste positioned immediately beneath.

This first outline for the flute solo was clearly developed, as noted earlier, from the consistent semiquaver pulsation, metric groupings and vaulting contour of M332(i). Although the chronology of M332(iv) is not certain (though it would appear to postdate (i) to (iii)) explicit connections are evident between this notation and the completed flute solo block on M323 – compare the final five pitches of both passages, which are virtually identical in their contour, intervallic assignments and rhythmic plainness. The extremities of the block (three pitches at either end) are delineated by the pitches (additionally preserving some of the intervallic quantities) of the M363 'concept'. The sequence of thirty-four pitches in the flute solo as a whole is consciously 'manufactured' by an apparently *ad hoc* juxtapositioning of various χ and δ segments, consisting primarily of

three and four notes, as clearly indicated on M323 (Example 1:6)[46]. As well as appearing directly in a transposed version (at T4) between bb.13 and 17, Stravinsky additionally employed the succession as a template from which he cloned the pitch material, together with some of the concomitant gestures of the surrounding blocks, i.e. bb.7 through 12 and bb.18 through 22[47]. A verbal indication in the particell (M341 – see Figure 1:1) that bb.18-22, 'folow [sic] the flute solo before (same series)' clearly reveals Stravinsky's treatment of the flute solo template as a greatly expanded 'row' (henceforth referred to as 'series II'). Bars 18 through 22 present the complete template 'series II' at its original M323 pitch level (T0), with much verticalisation of adjacent order positions, while bb.7 through 12 employ yet another transposition (T2). Sketchleaf M330, to be discussed below, reveals how this latter block was expanded directly from the M323 'flute solo' template, initially at T4 (the ultimate level of bb.18-22), before its final transpositional level was determined. As with the earlier template processes observed between M332 and M363, a number of residual rhythmic and contour components were also transferred from the M323 source to the sketches for the extrapolated blocks (see the template master chart in Example 1:7).

The following discussion of the sketches relating to these passages will consider the purpose of these transpositional experiments, with particular reference to the composer's exploitation of row properties and handling of serial choices (which in many cases cannot

[46] These segments presumably exemplify the "triangles and quadrilaterals" to which Stravinsky refers in his programme note for the piece, republished in *Memories and Commentaries*, 106. See also White, *The Composer and His Works*, Ex 167, p.506, where the sequence is parsed without direct reference to the χ/δ rotations and is described as a 'free montage of trichords and tetrachords drawn mainly from the original version and inversion of the series – sometimes in their original position, sometimes transposed' (ibid., 505).
[47] This manipulation of the template has confounded many analysts of the movement, e.g. Müller op. cit., 131-2.

be correctly deduced without recourse to annotations in the sketches)[48]. It will also deal with the manner in which the internal structure of 'series II' was manipulated and exploited by the composer through several sequences of drafts.

The choice of pitches in the M323 template itself, though not derived in a systematic way from the χ and δ arrays – see Example 1:6 – contains striking pitch repetitions, due to multiple presentations of certain segments – particularly rotation 1 of both χ and δ – which are subsequently exploited in the sketches for the derived blocks. A number of these repetitions occur with similar registral dispositions (X and Y in Examples 1:6 and 1:7).

M331, a rastrated sketch for bb.18 through 26 (i.e. incorporating the *prima volta*, elaborated from M324) retains the original pitch-level (T0) of series II, and may thus represent the earliest extrapolation from the 'flute solo' template. The registral assignments at the beginning of the draft (b.18) clearly recall the configuration of the M363 'concept' template. The thirty-four pitches of series II are then stated throughout in the same order, but the introduction of a new rhythmic configuration, together with the verticalisation of adjacencies, creates a variety in the articulation which has the effect of relegating some pitches (e.g. as acciaccaturas) and emphasising others. The cloned variants of the 'flute solo' template are undoubtedly linked directly to the composer's

[48] The transpositional relationships of the χ and δ hexachords to the pitch levels and configuration of the original row are important factors in the approach to set-choice and usage, particularly in the second half of the movement, where rotations II and V (the only χ/δ rotations which form aggregates) are employed. [χ/δ II] T1, acting as a fundamental template for the second half of the movement (see Chapter 2) restores the hexachordal levels of P (P[δII]T1 being a rotation of Pβ), whilst χ/δV identifies with the hexachordal levels of the RI form, itself brought into play for the first time towards the end of the movement in bb.40-41 (flute). The RI subsequently plays a major role in the second movement.

predilection for composing at the piano, which evidently provided a means not only of aurally approving his material but also offered an empirical approach to the extrapolation of fresh material from a basic template model. In this way the template became a model for improvisation at the keyboard, explicating some of the more extensive transformations (as well as residual similarities) which occur between successive sketch stages[49]. Although the M331 sketch has been subjected to much reworking (as is evident from the number of incomplete erasures visible as underlying earlier layers), many direct registral, rhythmic and gestural connections with the M323 template can be traced[50]. Visible incomplete erasures confirm the part played by the M323 template (Example 1:8(b)).

As the only subsequent preliminary working for the music on M324 (bb.18-26) is an exploratory draft for b.18 through the beginning of b.20 on M327 (continuing from the main draft of bb.13-17), it would seem that the details of this material were finalised in the particell draft at a later stage of the compositional process[51]. The relative mutual positioning of the three 'series II' blocks was evidently determined in parallel with the preliminary sketching process, with the exploration of transpositional levels apparently linked to concerns of local pitch continuity[52]. Other gestural features, such as the continuous semiquaver motion of b.10 foll. (sketched on M330),[53] which adumbrates the

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[49] Cf. *Poetics*, 55: 'A composer improvises aimlessly the way an animal grubs about. Both of them go grubbing about because they yield to a compulsion to seek thing out.' Also: 'In the course of my labors I stumble upon something unexpected .... The aforementioned assistance of the unexpected .... is a collaboration which is imminently bound up with the inertia of the creative process and is heavy with possibilities which are unsolicited and come most appositely to temper the inevitable over-rigorousness of the naked will.' (Ibid., 53-54).

[50] Cf. especially M323 with the four bracketed segments in Example 1:7(e).

[51] M328/9 are clarifications, probably made subsequent to the initial particell layer.

[52] See also Chapters 2 and 8.

[53] This is conspicuous in the finished piece as the first extended passage of steadily pulsed music (all preceding phrases accelerate), which is then picked up by the flute figuration in b.13.

configuration of the flute solo commencing in b.13, suggest that the context of the music here was determined by an early stage of drafting. M327, containing a more advanced version of bb.18-20 than M331, confirms that the appearance of the transposed 'flute solo' template M323 (at T4) post-dated the first layer of sketching for b.18 foll., and reinforces the probability that the choice of transpositional level was associated with localised pitch events at the block nexus point between bb.17-18. It is evident that the composer was concerned with achieving localised anaphorical allusions of pitch at the block nexus points within the three presentations of series II, as evinced by the transpositions of the template model[54]. Very little immediate pitch-retention is encountered between the end of the series II block (b.22) and the beginning of the *prima volta*.

M327, consisting of a detailed draft for the full text of bb.13-17 (now including the clarinet parts) and a partial draft of bb.18-20, and M330 (for bb.7-12) interact, and must therefore be considered together.

M330 is a key draft within the sketches for movement I, revealing much of Stravinsky's strategy concerning the use of the M323 template source, as well as his general approach to block continuity. Figure 1:3 schematically outlines the content of this complex page, which reveals two transpositional levels, T4 and T2, for series II. It appears that the composer began sketching at the top of the page with an already well-developed variation of M331 (see Figure 1:3, ex.1), which had probably been subjected to much trial and error at the piano. The rhythmic and intervallic configuration of the draft clearly indicates that

[54] Note also that the string configuration at the junction between bb.5 and 6 is echoed in the piano in b.8.

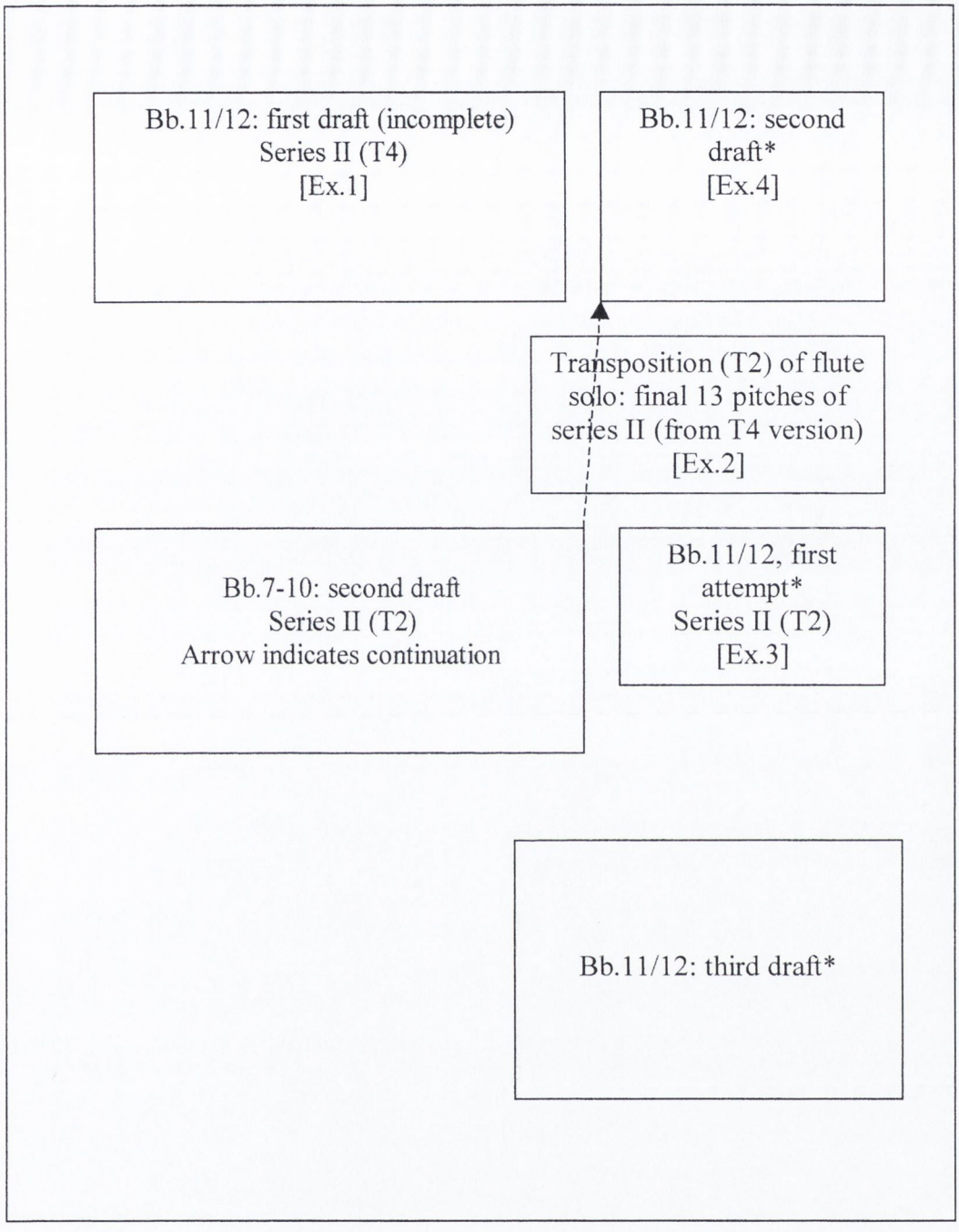


Figure 1:3: abstract schematic outline of sketches on M330

*All three drafts of b.11/12 include pitches eliminated in particell draft and subsequent materials

Stravinsky was using M331, and not M323, as his immediate template source. A transposition of the M330 draft to the M331 level (T0), as shown in the accompanying master chart (Example 1:7), reveals many of the influences from M331. These are most apparent at the extremities of the block, where order positions 2-5 and 27-34 duplicate a high proportion of the model's rhythmic and intervallic features[55].

Stravinsky's initial attempt at bb.7-12 employs T4, but the draft becomes less confident about halfway across the system, using mnemonic noteheads only, and was eventually abandoned. After some regression – preliminary explorations for the end of the block and the link at bb.12-13 (down the right-hand side, Figure 1:3, exx.2, 3 & 4) – the composer recommenced with a transposed version of the passage at T2. Evidently the difficulties that the composer was experiencing with the draft primarily concerned the link between presentations 1 and 2 of series II rather than the junction with the preceding block (b.6-7).

Elements of the chronological sequence of the series II blocks, together with compositional strategies involving further template methodology, may be deduced from these interim notations for the T2 version. The noteheads in Figure 1:3, ex.2 conclusively demonstrate by their registral disposition and orthography that the composer derived the end of the block by transposing directly from the ultimate pitch level of the flute solo – series II, T4 – as it appears on M327. The intervallic profile here precisely replicates that of the final

[55] Other features of M330 also appear to be directly influenced by M331, although they appear in conjunction with different pitches (generally displaced by one order position). Thus the acciaccatura at order position 8 in M331 seems to occasion the similar gesture at o.p. 9 on M330. Order positions 20 and 21 in M330 (condensing the acciaccatura at the equivalent point in M331) are followed by a rising minor ninth (o.p. 22 and 23) which recalls o.p. 23 and 24 of M33.

thirteen pitches of the 'flute solo' template (with the acciaccatura in order position 27 denoted by the marking placed directly above the notehead pitch)[56]. However the orthography of the Cb and Fb would surely not have been used if the notation had been transposed upwards from T0 on M323 (which would logically have furnished simply B and E respectively). The composer's deliberate use of the flute solo (in its T4 version) as a template model implies that at least the top stave of M327 must have been in place by this stage, being the only representation of the flute solo at T4 among the loose-leaf sketches. The sketch directly below the notehead transcription of the T4 template on M330 (Figure 1:3, ex.3) represents a first attempt to elaborate the model (equivalent to bb.11/12 of the published score). This follows the model very closely with rhythmic elaboration apparent only for the end of the block (final five pitches) – clearly the composer considered it important to establish the link at the block nexus point before clarifying details of the preceding music.

The sketch reveals how the composer set about elaborating fresh material from template models through octave displacements of certain pitch collections. Here the registral assignments of order positions 26 through 29 of the template model (the noteheads in Figure 1:3, ex.2) are retained, whilst those of the ensuing o.p. 30 through 32 are octave transposed *en bloc* downwards. The two final pitches (o.p. 33 and 34) are similarly displaced by two octaves. The later draft for b.11-12 on the top system, right-hand side (Figure 1:3, ex.4), begins to approach the detail of the final version, and makes further registral adjustments, with the end of the block reverting to the intervallic configuration of

[56] The gesture associated with this order position is retained into the final version of bb.7-12 and thus appears as a grace note in all three 'series II' blocks.

the 'flute solo' template. Order positions 27-33 are a direct transposition of the template, with the exception of o.p.28 and 29, which are transferred an octave lower (compare with the notehead model directly beneath)[57]. The final order position C (o.p.34) is absent from this draft and is used to create a serial dovetail by appearing as the first note of the clarinet presentation at b.13. This contrapuntal lower voice, although a later addition, observes the rhythmic configuration proposed in the early M332(i) template, which opens with the same pattern of four-against-three semiquavers as found in b.13. Thus, although the constituent layers of the block were composed independently, the overall texture and rhythmic alignment of the music had been established in the initial 'scratchpad' template, M332.

M327, the only loose-leaf sketch for these bars, demonstrates a further concern with the linkage of bb.12-13. Here the composer can be observed working out the link by searching for a hexachord containing Gb, Db and C in contiguous order positions (see the noteheads on the bottom right of the sketch). These pitches are the final three order positions (o.p. 32-34) in the T2 presentation of series II ending in bb.12-13. The link from M330 to the lower-voice addition of M327 is clarified by the insertion of identical connecting rubrics (boxed Xs) on both sketches.

The clarinet counterpoint of bb.13-17 is derived exclusively from χ and δ rotations used in the construction of series II, viz. δI, χI, δII / [δII]r, [χI]r . The line is therefore mainly a pitch palindrome (in which all registers are fixed) with the retrograde presentation employing rhythmic diminution. The incipient δ1 hexachord lies outside this palindrome,

[57] Cf. also the registral assignment of o.p.30/31 (G, Ab) with those of b.21.

and functions as a buffer between the first and second series II presentations (Table 1:3). This transitional role is clarified by the eventual involvement of the piano here (b.13). The first entry of the clarinet (Gb/Db, bb.13/14) echoes the trumpet 'fanfare' at the end of the preceding block (b.12), although its intervallic spacing indicates that this was originally conceived as a response to the early version of b.12 sketched at the top right-hand side of M330. Stravinsky presumably made the subsequent alteration to b.12 in order to emphasise local pitch association (G/Db) between it and the beginning of the flute solo (at T4) in the following bar. On M327, the attacks of these two pitches on their occurrence in b.19 (with the same spacing and now back in the registers of the M330 model) are precisely aligned beneath those of the clarinet (an octave lower) in bb.13-14.

The end of this block, as at its beginning, elides with the following series II presentation (the Eb of the piano statement in b.18 supplying the final pitch of the last [χI]r presentation). This means that the nexus-points of each block are marked by the initiation of new serial statements commencing in each case with the 'unison' hexachordal boundary pitches Eb or C. Stravinsky's choice of rotations was apparently guided by the intention to create anaphorical pitch fields at block nexus-points. Thus the palindrome's final [χI]r hexachord (b.17) adumbrates the third series II presentation (at T0) which opens with a partial presentation of χI^{58}.

[58] The intervallic configuration here seems to support this observation (cf. the clarinet G/A in b.17 with the same pitches in b.18). Certain pitches in b.18 are also foreshadowed by the end of the flute solo (b.17).

The three hexachords employed in the piano/clarinet counterpoint in bb.13 through 17 (δI, χI and δII) are prominently employed at the extremities of the 'series II' template (at T0)[59]. The centre of the palindrome emphasises the δII hexachord (with the Bb as fulcrum) which anticipates the end of the following series II (T0) presentation (cf. bb.15-17 with the pitch content of b.22). This is perhaps one reason for the *espress[ivo]* indication emphasising the palindrome (though not the δI 'buffer').

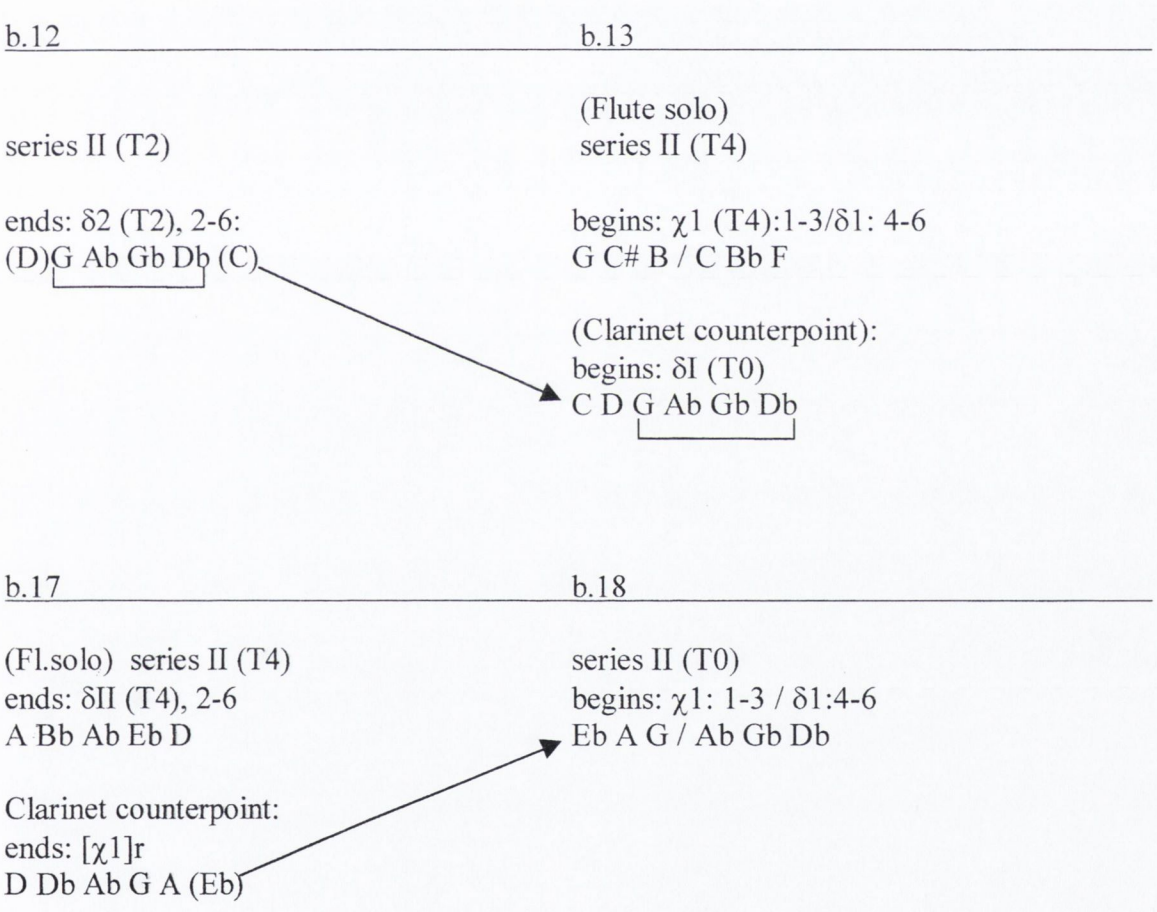


Table 1:3: serial elision between 'series II' blocks.

[59] χI and δII ultimately relate to the pitches of the M363 'concept'.

The Final Draft of bb.18-22

The particell paste incorporating bb.18-22 (on M341) shows considerable evidence of erasure and reworking. Earlier layers of this paste, occasionally visible as *pentimenti*, appear to correspond closely with the details and general layout of the concomitant preparatory sketch on M331 (see Example 1:8(d)). As the revisions (bottom of M327 together with M328/329)[60] appear to post-date the composition of bb.7-17, Stravinsky's subsequent alterations may have been intended to reflect some of the events introduced in these bars.

The definitive version of bb.18-22 employs many more simultaneities than the almost single-line preparatory sketch on M331 – Stravinsky eventually verticalised the adjacencies enclosed in the editorial boxes in Example 1:8(a). This texture is particularly striking in view of the rarity of struck chords in the preceding blocks. Although sketchleaf M331 groups a number of pitches in implied relationships (as dyads, acciaccaturas, etc.), there is little precedent for the extreme telescoping of pitch events present in the final version, suggesting that the composer reconsidered the original function of the block following the elaboration of bb.7-17. M327, which indicates the evolution of an increasingly vertical dimension for the passage, was evidently completed after the sketching of bb.13-17. The first two bars of the lower sketch on this page approach the ultimate version whilst preserving all the registral assignments of the M331 model (as far as the Db). The

[60] The reversed sketches on the left-hand side of M329 are early notations for the final choral passage of *Threni*.

configuration in the third bar also employs the M331 sketch as its model. Here the anacrusis C together with the E, Gb and G (series II, order positions 7, 9, 11 and 16 – cf. Example 1:6) are octave transferred: the remaining pitches all occur in the same registers. Certain rhythmic features of M331 are retained (the repeated Cbs) or are directly influenced by the associations of the model, the grace-note figures in order positions 8/9 and 12/13 being compacted into struck dyads.

In the final version of this block, Stravinsky created a condensed presentation of series II by realigning (and verticalising) the pitches of M331, eliding repeated pitches, and altering some registral distributions[61]. Four distinct sub-phrases are apparent here. Three similar gestures (bb.18-21) create a registral expansion – rising in the treble register, descending in the bass – and are each punctuated by a *sforzando* chord doubled in pizzicato lower strings in the second half of each bar. In the fourth phrase (b.22) a solo piano arabesque imitates the configuration of the preceding gestures (b.22).

The first major revision to the block was the simultaneous presentation of order positions 7-10 of series II, with registral alterations introducing a bass dimension not present in the M331 model. Order positions 12-15 are also verticalised, with the Cb lowered an octave, and the two Fs elided (the particell acciaccatura was later eliminated). The registers of order positions 16 through 19 (the end of the second phrase in b.20) are subjected to

[61] Cf. Babbitt, 'Remarks on the Recent Stravinsky', 168: 'Finally, there was that conjunction of Stravinsky's concern for recurrence, pitch rhythm, and intervallic distribution, in the domain of the speed of circulation of pitches and pitch classes, an issue of central importance for twelve-tone composition, where such speed of circulation is significant not only for the total progression but for the assignment of pitches instrumentally and registrally, and for the assignment of immediate repetitions'.

substantial registral adjustment. Nevertheless, residual features of the M331 model are observable in the overall contour and in the retention of the Ab/Db dyad (o.p.17-18) in the punctuating bass chord. Phrases three and four (bb.21-22) are closely based on the registral and intervallic assignments of the M331 model (the Gb, o.p. 31, was originally transferred to the particell unaltered from its register in M331 and M323)[62]. The four-factor chord in b.21 was formulated by intensifying the already conspicuous rhythmic compression of order positions 25 though 28 (in M331, a dyad followed by grace note figure)[63]. Stravinsky assigned the Ab/Db dyad to the bottom of the chord, creating a clear prolongation of the directly preceding bass chord in b.20. The ultimate version of the passage thus exploits the invariant pitch formations embedded within series II (q.v. 'X' and 'Y' in Example 1:6).

The rhythmic placement of the three punctuating chords also contributes significantly to the developing dynamic of the block. Chord I (b.19) occurs on an emphasised beat, but chords II and III (bb.20, 21) create increasingly irregular and unpredictable pulse-patterns, destabilising the initial phrase archetype and requiring resolution through the introduction of a new event, provided by the pedal point C of the *prima volta*[64].

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[62] In phrase four (b.22), Stravinsky originally retained all pitches (o.p. 29-34) in the particell as per the registral distribution of M331, but at a later stage transferred the Gb four octaves lower into the bass register. This revision creates a link with the immediately preceding phrase constructions, although the bass punctuation here is comparatively very weak.

[63] The grace note Ab in the M331 sketch (o.p.27) is a legacy from the M323 'flute solo' template.

[64] This pedal-point, though unprecedented in the preceding blocks, is somewhat foreshadowed by the increasingly close pitch repetitions created by the density and registral disposition of series II in bb.18-22, which produce a cadential feeling of stasis within the volatile texture of the music thus far.

Summary

The particell was employed as a parallel compositional mechanism to the preparatory sketches, acting as an incremental working draft which was initially used mainly to fix the essential sequence of events and eventually, through ongoing revisions and alterations, to provide a detailed short score of movement, from which the full and two-piano scores were derived. As such, it comprises numerous pastes and erasures with discernible underlying layers of pencil sketches. Some of these earlier layers were originally identical or similar to approximate outlines provided by certain preparatory sketches.

Numerous initial sketches for the movement were entered on the large sketchleaf M363 as well as on a group of smaller satellite sketches. Although a 'concept' sketch appearing on the top right of M363 approximates the content of the *Movements* series' source hexachord, it would appear that the details of the final row were determined on an earlier layer of the palimpsest 'scratchpad' M332. The uppermost layer of this sketchpage comprises four individual notations (three aggregates derived from the α/β chart and one (a reversed notation) from χ/δ) that were to exert considerable influence, as templates, on the movement as a whole and on certain configurations within subsequent movements.

The central portion of the first half of the movement (bb.1-26) is elaborated from an extended template, partially drafted on the lower half of M363 (and displaying evident associations with the M363 'concept'). This was later completed on an independent strip pasted to the top of the first particell page (M323) as a referential guide. This template is

manufactured from the linear juxtaposition of segments drawn from the matrix of χ and δ hexachords, and appears (transposed) in approximately this form in the flute, between bb.13 and 17 of the published score. Each of the three constituent blocks of the middle section unfolds the resultant thirty-four pitches of the template at different transpositional levels, treated somewhat in the manner of an extended series (e.g. with verticalised adjacencies), and all three additionally share common rhythmic, gestural and intervallic properties. Rough notations on M330 demonstrate how Stravinsky explicitly referenced the 'flute solo' template in constructing the very differently-textured passage that precedes it in the finished score.

CHAPTER 2

The Second Half of Movement I (bb.27-42c)

Preliminary Observations

As discussed earlier, notations on M332, made at a very early stage of composition, relate to music which opens the second half of movement I (b.31 foll.). However, the sketches reveal no evidence to suggest concurrent development of both sections of the movement. Particell and sketch evidence – for instance, the practically fair-copy condition of the particell draft for b.27 foll. (made directly onto page two), and the subsequent addition of the reversed notation to M332 (M332(iv))– would appear to confirm that bb.1-26 (hereafter "part I") were completed independently before the elaboration of b.27 foll. Nine preparatory sketchleaves relate specifically to bb.27-42 (c) (hereafter "part II"). This total includes the 'scratchpad' sketchleaf M332 which, in addition to its use as a template for part I, relates directly to a number of passages in part II.

As with the sketches for part I, general chronological succession, though not immediately apparent, may be deduced by tracing the migration of a circumscribed number of template notations and through observing alterations in pitch deployment, rhythmic values, etc. between successive drafts. A putative compositional chain, grouping into the following four sequences may thus be proposed for discussion:

Sequence 1: *M332*, M335, M343, M337, *M339*

Sequence 2: *M332*, M336, M333

Sequence 3: *M339*, M386

Sequence 4: *M386*, M338

As can be seen from this table, several sketchleaves (italicised) participate in more than one of the sequences. The 'scratchpad' M332, as discussed, contains material relating directly to at least two passages in part II. Sketchleaf M339 has a pivotal role within the sketch material for this section of the movement, its function being both forward- and backward-looking (in terms of the movement's ultimate temporal succession of events), consolidating and embryonic. Thus it contains rough sketches for bb.31-36, an advanced draft of bb.31-39, indications for the proportional tempo change between parts I and II, and incipient sketches for the immediately-preceding *seconda volta* (bb.27-39), as well as the apparent calculations of timings to which reference was made in the previous chapter (Figure 2:1). The obverse (M338) contains sketches for the remainder of the movement (bb.40-42c)[1]. It therefore seems likely that M339 occupied a nuclear position on the composer's music rack during the ongoing compositional work on part II.

Several preliminary observations regarding chronology may be deduced from M339. Firstly, Figure 2:1, ex.2 reveals that the *seconda volta* bars were composed after the sketching of b.31-36. The final dyad of this hastily-sketched example identifies with the opening dyad of b.31, and the pitch-material and contour paraphrases the first three bars of

[1] The sketchleaf M338/339 thus functions as a provisional particell for part II.

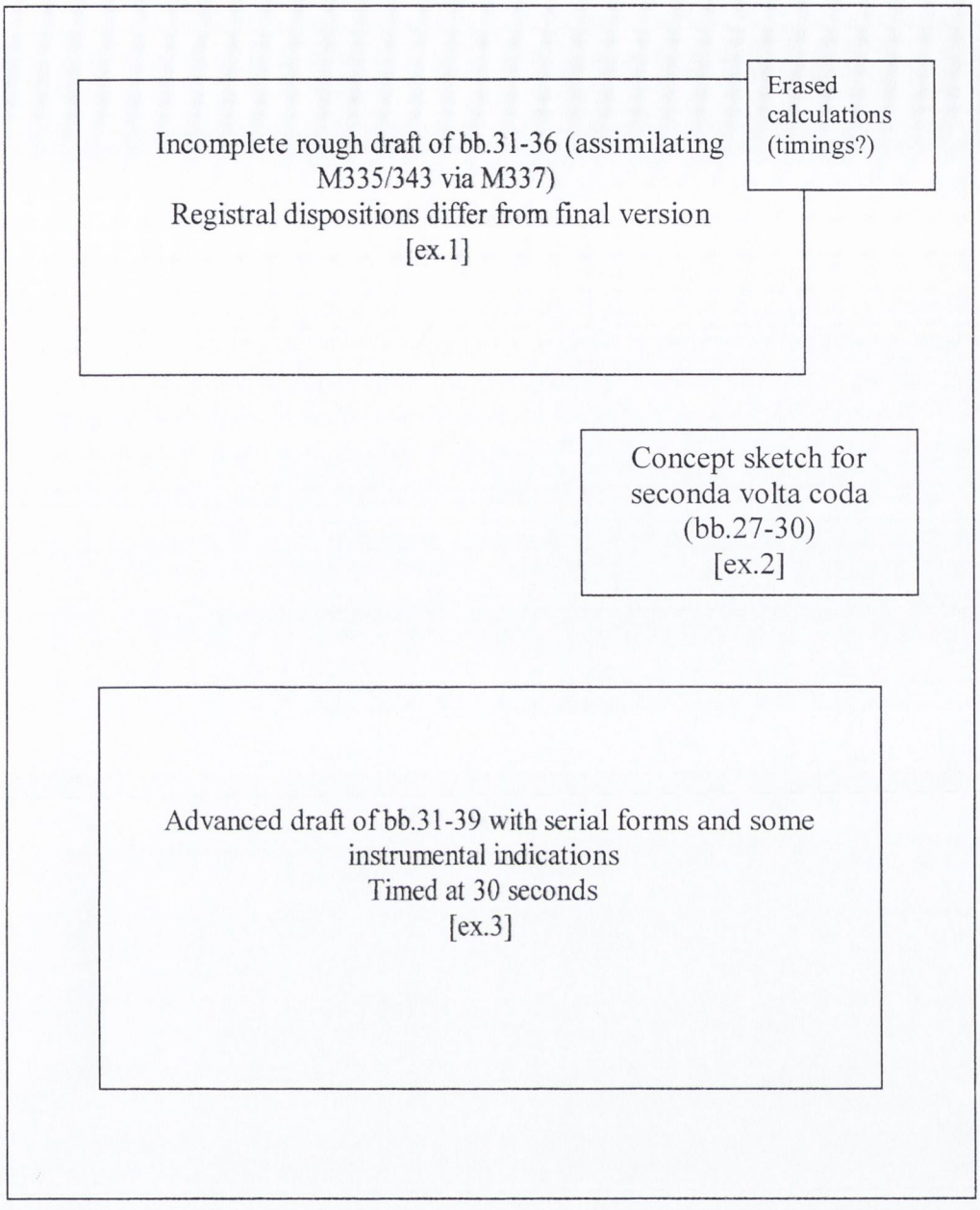


Figure 2:1: schematic outline of the contents of sketchleaf M339.

the draft in Figure 2:1, ex.1[2]. The notation was later employed as a template in the composition of the *seconda volta* bars, explaining their inclusion within the present discussion of part II. Secondly, bb.31-39 ostensibly form a large, self-contained block within the composition, as they are copied out in Figure 2:1, ex.3 and timed (30"), thus supporting the idea of a major structural division between b.39 and 40. Thirdly, this block is bisected at bb.36-37, as shown by the incomplete notation in Figure 2:1, ex.1, with bb.31-36 appearing first in the compositional chain. These observations are supported and elaborated by other drafts among the preliminary sketch material.

Sequence I: The Composition of bb.31-6 and the Origins of the χδII Template

As with the middle blocks of part I, Stravinsky restricted the opening material of part II (bb.31-36) to deployments of the χ and δ rotations, in particular the complete unfolding of rotations II and V. As the sketches demonstrate, these rotations were subsequently retained as a template for the succeeding passage, bb.37-39 as well as for the *seconda volta* bars. Although this procedure is made explicit in the sketch material for both of these passages, the template itself is not incorporated directly into the ultimate version, but rather acts as a basis for serial and gestural expansion. The initial stimulus for the choice of the χδ rotations II and V evidently lay in the fact that both these rotation-transpositions, and only

[2] Note that the template identifies with the first version of the draft above, derived from M337 (itself recalling the configuration of b.2). The red-pencil octave signs, presumably later additions, already indicate an intention to modify the sketch.

these, create aggregates (i.e. retain all twelve pitches-classes without duplication). Both rows necessarily retain Eb and C in order-positions 1 and 7 as per the original series, but alter the hexachordal levels, and thus the internal relationships, of pitch-classes together with some of the intervals. Bars 31-38 therefore unfold the most extended passage of least pitch-redundancy in the composition thus far, the rate of pitch-replacement paralleled by slower tempo and note values, a more regular metre, and the moderate pacing of instrumental interactions.

The choice of rotations here was, of course, adumbrated by the early version of bb.31-33 (the reversed notation) added to M332. The end of this notation is closely related both to the 'concept' sketch on M363 and to the first version of the 'flute solo' (M323), as discussed in Chapter 1, suggesting that it is approximately contemporary with these early notations. The pitch level of the M332(iv) sketch, a semitone lower than the final score (thus emphasising Eb priority) is retained in both the first developmental sketch M335[3] and on the later working at the top of M337.

The first draft of bb.31-33 on M332 deploys χ and δ II in a registral arrangement close to the final score. The adaptability of this template in furnishing material for both the opening of Part II and for the end of the flute solo is emphasised by the alternative reading given here for the duplicate Fb/E in order position 10. As the remainder of the sketch follows the orthography of the row chart M309 in the matter of accidentals, the treble Fb may be regarded as the original reading (thus confirming an affiliation with the contour of the

[3] The verso of M334, containing serial permutations relating to *Threni.*

'flute solo' M323), with the low-register E as a secondary or subsequent suggestion.

Order positions 5 and 6 are reversed on M332, and the problem of satisfactory presentation of these pitches resulted in the apparent pitch duplications on the first developmental sketch M335. Here the pitches of the M332(iv) template are carried over as numbered and beamed pitches in red pencil and ballpoint ink. Isolated unnumbered notes appear in green or grey pencil, with the exception of the numbered Ab beneath the lowest stave (pencilled over in red), and clearly represent later experiments[4].

The curious distribution of the sketch across a number of staves reflects the composer's preoccupation with the hexachordal division, with the beamed pitches of the δ hexachord presented exclusively on the upper part of the sheet. The division is further clarified by the red-pencil serial designations and the vertical slash added beneath the sketch. The final orchestral distribution for this passage respects this division by doubling piano with trombones for the χ hexachord, with solo piano/harp coupling stating the δ hexachord (bb.31-34). However, the appearance of some δ hexachord pitches (F, E) among the later notations on lower staves initially appears problematic. A glance at the later clarification of this sketch on the top of M337 demonstrates that the composer's conception here was that of a two-part texture, with the upper voice in regular quaver pulsations (entirely in red pencil) presenting order positions 1, 3, 4 and 6 of each hexachord, against a more irregular

[4] Some erasures are visible in this area, and the colours were evidently added over light pencil sketches, inviting speculation that the composer jotted down an underlying preliminary version during experimentation at the piano.

lower voice presenting the remaining order positions 2 and 5. The initial Eb functions as a focal point for both lines[5].

Although no template appears to exist from which the rhythmic and registral deployments of M335 (and its later continuation on M343) may have derived, certain factors suggest a further affinity with the 'flute solo' passage (bb.13-17). Both are essentially *bicinium* textures with an irregularly pulsed lower voice measured against a periodic upper voice, and M335 again includes the initial rest which characterises all previous passages deriving from the M323 'flute solo' template (cf. Example 1:7). Furthermore, the number of semiquaver time-points scored in on M335, M343 and M337, though varying slightly between sketches, is remarkably close to the number of semiquaver pulsations in the flute solo[6]. As Stravinsky did not enter a specific metronome speed for this music until the short-score draft on M339 (Figure 2:1, ex. 3), by which stage he had completed in detail up to b.39, it is unclear whether or not the early drafts for part II were initially conceived as possessing a 1:1 relationship with the tempo of part I[7].

The M332(iv) template, along with the later developmental sketches on M335 and M337, emphasises a strong Eb priority, with order position 1 isolated and prolonged (in all three sketches it is notated as a breve). The register of this Eb suggests a direct link with the conclusion of part I, and invites speculation that Stravinsky originally intended this passage

[5] Passages originating as independent overlapping voices, each pursuing its individual rhythmic trajectory, re-appear within the sketch material, most notably in movement II (see Chapter 3).
[6] Thirty-six at the top of M339 (fig. 2:1, ex.1) as opposed to thirty-five in the flute solo, including the incipient semiquaver rest.
[7] The proportional tempo change (recalling the *Symphonies of Wind Instruments*) was first calculated in conjunction with the addition of the *seconda volta* bars (see below).

to follow on directly from b.26, i.e. without a *seconda volta* transition[8]. This immediately raises additional questions as to the status of the part I repeat, which is not indicated or implied in any of the preparatory sketch material, suggesting that it may have been a late addition directly linked to compositional problems in part II (see below).

Stravinsky's subsequent semitone transposition of bb.31-33 (on M337), following a considerable amount of sketching, could not have been dictated by the as-yet-unwritten *seconda volta* bars. This leaves three possible areas of enquiry: the direct connection backwards to the *prima volta* ending of part I, the reproduction of motivic pitch groupings from earlier in part I, and the continuation in bb.34-36, sketched on M343 and subsequently combined with the transposed version of bb.31-33 on M337.

Close investigation shows that all three possibilities are satisfied to some extent by the transposition effected. As rotation takes place within each hexachord only, a rotation-transposition scheme preserving a dodecaphonic series, as here, could be restored to the hexachordal levels of the original series through transposition. As χδII is equivalent to the hexachordal content of P(T11), the semitone transposition employed by Stravinsky results in what amounts to Pα/β with internally re-ordered hexachords:

P(0): Eb E Bb Ab A D / C B C# F# G F
χδII(T1): E D Eb Ab A Bb / C# F# G F C B

[8] Cf. also the Eb registers in templates M332 (ii) and (iv).

Although the transposition of bb.31-33 undermines the immediacy of the pitch connection between b.26 and b.31, it serves to greatly increase the overall pitch retention between the independently drafted bb.31-33 (M335) and bb.34-36 (M343). In the transposed concatenation on M337, Rβ/α [9] is therefore followed by Pα/β re-ordered as 2,6,1,4,5,3/9,10,11,12,7,8. The hexachordal similarities are emphasised by the distribution of pitches and timbre (already latent in the visual layout of M335)[10].

Stravinsky equivocated about the registral deployment of a number of pitches in the later drafts for bb.31-36. M339 incorporates the deployments and refines details of the M337 concatenation (see Figure 2:1, ex.1), but many of these were altered when the composer drew up the more extended short score on the lower half of M339. The subsequent alterations have important ramifications for the listener's perception of voice-leading and intervallic patterning (and hence pitch priority). It would thus seem that Stravinsky's conception of the music altered somewhat between the notations entered at the top and bottom of M339. Between these versions he had composed the succeeding passage, bb.37-39 (sketched on M336 and M333), and taken the decision to add a *seconda volta* buffer. Example 2:1 compares the final score of bb.31-36 with the upper draft on M339.

Stravinsky originally employed a registral arrangement in b.32 that recalls both b.2 and b.24. The provenance of this disposition seems to be the (ultimately reworked) first draft for bb.3-4 in the top left hand corner of M363[11]. The music emphasises the P-trichord III

[9] In the unorthodox nomenclature of Stravinsky's chart, i.e. preserving the original ordering of R.
[10] Thus the dyads E/Eb (D#), A/Ab (G#) etc. are juxtaposed as in b.1/2 and the *prima volta* coda.
[11] See Figure 1:2, ex. 3.

presentation in the third bar (b.33) through a palindromic segment creating considerable pitch stasis[12]. The final registral dispositions (indicated by the superimposed red-pencil octave signs) have more affinity with the final-score versions of b.4 and b.12. The composer also experimented with, and temporarily cancelled, the ultimate register of the E in b.35, opting for an intervallic configuration recalling the opening gesture[13].

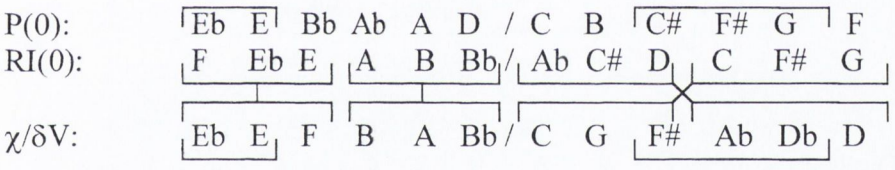
The near-final version of the passage on M339, incorporating the continuation (bb.37-9), shows a clear shift of priorities within a structure preserving many familiar pitch groupings. The final version projects an E-based, rather than Eb-based, priority through bb.31-9 via bass prolongations in bb.31[14] and 35 and outer-voice emphasis in b.38. Presumably it was this localised change of emphasis (which must first have crystallised during the composition of bb.37-39) and the resulting voice-leading dislocation between bb.26 and 31 which necessitated the insertion of the *seconda volta* transition, bb.27-30, to mediate between the two halves of the movement. This choice may also have marked the point at which the composer decided on a direct repetition of part I.

The isolation of the notations for bb.31-33 on M335 and on the upper part of M337, neither of which gives any hint of a continuation, suggests that the composer developed these bars independently of bb.34-6, the preliminary workings for which appear on M343 and on the lower half of M337. Close investigation reveals the M337 sketch to be the earlier of the

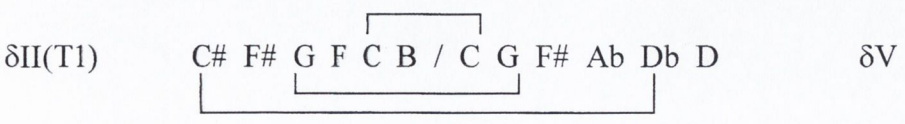
[12] See Example 1:5. The (ultimately rejected) idea, on M337 (lower sketch), of introducing the two flutes at this point is possibly intended as an allusion to the flute entry in b.13, where the same pitches (C, G) are struck.
[13] This temporary intervallic/rhythmic gesture was utilised instead in the piano at the end of b.38.
[14] This is voice-led to the 'auxiliary' harp F in b.33, a gesture forecast on the upper draft of M339, where the low register F occurs considerably later, at the end of b.35.

two, being less detailed than M343 (especially towards the end of the sketch), as well as calligraphically less confident, and consisting of several overlaid layers of lead and coloured pencil. Unlike M343 it also indicates precise enumeration of order positions.

For bb.33-6, Stravinsky employed the only other dodecaphonic χ/δ rotation, (χ/δV), though with the hexachordal presentation reversed. This at once indicates a concern with a real-time context and dynamic, and confirms that the primary reason for the transposition of bb.31-33 was a specific concern with the linkage of the two blocks at bb.33 and 34. As can be seen from the following comparison, the χ/δV rotation preserves RI hexachordal levels with similar trichordal structuring:



It would thus appear that the composer's choice and deployment of row forms at the nexus point of the two serial presentations was designed to create a P-trichord III-type harmonic set at the midpoint of the arch-like phrase. The hexachordal reversal was instigated in order to exploit the pitch duplication between δII(T1) and δV:



In the upper draft of M339, Stravinsky's notation seems to suggest the reiteration of the duplicate pitches. Later drafts of this passage further refine the emphasis here; the harmonically extraneous B in b.33 is relegated to a grace note between the two principal drafts on M339, and the immediately preceding F is promoted through octave transference to the bass register (coupled with a change of timbre in the final score). The re-appearance of P-trichord III in b.33 is thus emphatic enough to balance the similar spacing and sonority of bb.5-6 in part I.

The Chronology and Compositional Strategy of Part II

As indicated above, Stravinsky entered a template for the *seconda volta* bars directly under, and to the right of, the sketch concatenating bb.31-36 on the top of M339 (see Figure 2:1, ex. 2). The principal development of this passage took place on M386, a page that also reveals several additional aspects of chronology for later sections of part II. Here a developed sketch of bb.27-30, differing in only minor details from the final score is followed by an incipit for part II (b.31) which clearly derives from the lower continuity draft on M339 (Figure 2:1, ex. 3), as shown by the similar instrumental distributions (still a stage from the final score) and the 3/8 time signature that first appears in conjunction with the M339 draft. The lower section of M386 is given over to the evolution of bb.40-41, in two drafts, both preceding the virtually finalised appearance of this passage on M338 (the

verso of M339)[15]. This confirms that the composition of the *seconda volta* took place between the sketching of bb.31-39 and bb.40-41. Sketchleaf M386 also includes the calculation of the proportional tempo relationship between parts I and II, subsequently added to the continuity draft on M339[16]. The surprising appearance of the metronomic speed for part I (quaver = 110), over the preliminary sketch of the *seconda volta* on M386 (upper left side), suggests that preceding notations on M335, 343, 337 and 339 were also conceived in the tempo of part I, and that the idea of a dualistic temporal strategy had not been established at the outset of compositional work on part II[17].

The entire segment of bb.27-41 was added directly onto the second particell sheet, beneath the single paste for bb.18-26[18]. The level of detail that had been attained in the loose sketches for these bars accounts for the relatively neat and unblemished appearance of the particell draft at this point. It seems that the remainder of the movement, bb.42-42c, although drafted beneath the almost finalised version of bb.40-1 on M338, was composed and added as a separate block after the assembly of this second particell page. Stravinsky timed the entire piece (2'31") as far as b.41, and attached bb.42-42c on a small sheet of trimmed manuscript paper, which was then timed separately (0'16") and added to the preceding total ("the whole about 3'").

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[15] Interesting associations between the two non-consecutive passages on M386 are discussed below.
[16] Unlike the published score, both indications employ a rhythmic notation (a beamed semiquaver group) to clarify the relationship.
[17] The analogous tempo ratios in *Symphonies of Wind Instruments* also appear to have evolved only in the course of sketching. See Walsh, 'Stravinsky's Symphonies: accident or design?' 68-9.
[18] See Figure 1:1.

The sketches for part II reveal strategic pitch connections closely allied to the chronological succession of composition rather than that of the assembled score. Pitch constructions in bb.36-39 derive from a template based on the same transposition (T1) of the χ/δII rotation that Stravinsky ultimately employed for the opening block, bb.31-36. The template for the *seconda volta* on M339 (Figure 2:1, ex. 2) demonstrates that the composer was still pursuing the same serial template, consisting as it does of a presentation of δII(T1) together with the first two pitches of the concomitant χ hexachord), and M386, elaborating this notation, seeks closely related serial forms within the rotation matrix of the I form. This use of the inversion and its concomitant rotations, hitherto ignored (all previous events in both parts being derived from P-based rotations, both simple and transpositional)[19], links this music with bb.40-41, sketched on the same page (M386), which exclusively employs I- and RI-related pitch structures. Bars 42-42c utilise all four primary forms of the series (presented in the order P, RI, R and I)[20]. The provenance of these serial manipulations and derivations is especially interesting for the information which it furnishes on the composer's thought processes, involving a reciprocity between order of composition and serial structuring based on templates. As regards the application of serial invariants in generating new material, the composer sometimes appears to have been initially less concerned with the real-time dynamic of the extrapolated material or its precise context within the sequence of the final score. It would appear that cross-references were often reinforced or manufactured in this work through the extensive (and

[19] The 'simple' R rotations replicate serial structures identical (in retrograde) to Pαβ.
[20] Stravinsky's apparent concern with limiting the derivation of independent blocks to specific serial forms was such that he frequently indicated a pitch construction as deriving from the same form as associated surrounding material, even when it is more logically obtainable from another form. This is, of course, also a consequence of ongoing template morphology.

seemingly laborious) subsequent manipulation of surface detail, as observed in the sketches for part I and the beginning of part II. Significantly, the works composed after *Movements* generated considerably fewer sketches relative to their overall duration, perhaps suggesting an ongoing refinement in the handling of templates and cloned material.

Sequence II: Further Applications of the χδII Template

Apart from material carried over from the 'scratchpad' M332(iii), planning for bb.37-39 took place exclusively on the two sketchleaves M336 and M333. The former page consists of trimmed manuscript paper, the latter of two smaller pieces of manuscript paper pasted together, apparently in order to extend the upper page. Figures 2:2 and 2:3 present schematic representations of the content of both these pages, together with indications of serial choices based on the composer's sketch annotations. This section takes the chronology and evolution of these sketchleaves as a starting point for examining Stravinsky's approach to block continuity, the continuing influence of the χδII template and possible justifications for contravention of the prescribed serial ordering.

Close investigation reveals a high degree of mutual interaction between the two sketchleaves. Figure 2:3, ex. 4, showing an isolated serial indication on the bottom right verso of M333, indicates that this lower leaf originated as part of M336. This latter page, now approximately square, would presumably have originally been identical in proportion

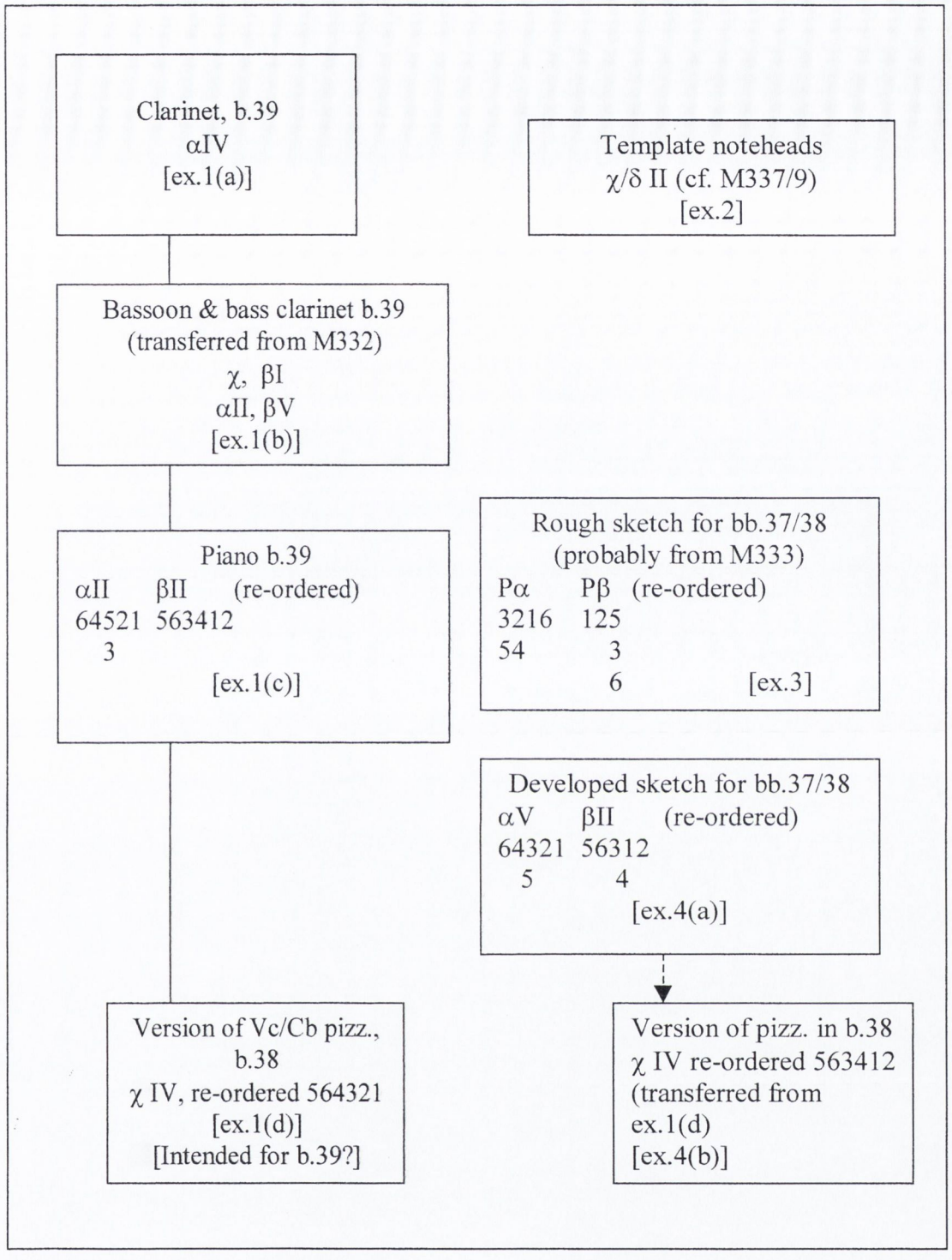


Figure 2:2: schematic representation of contents of sketchleaf M336, with serial forms and re-ordering based on Stravinsky's indications.

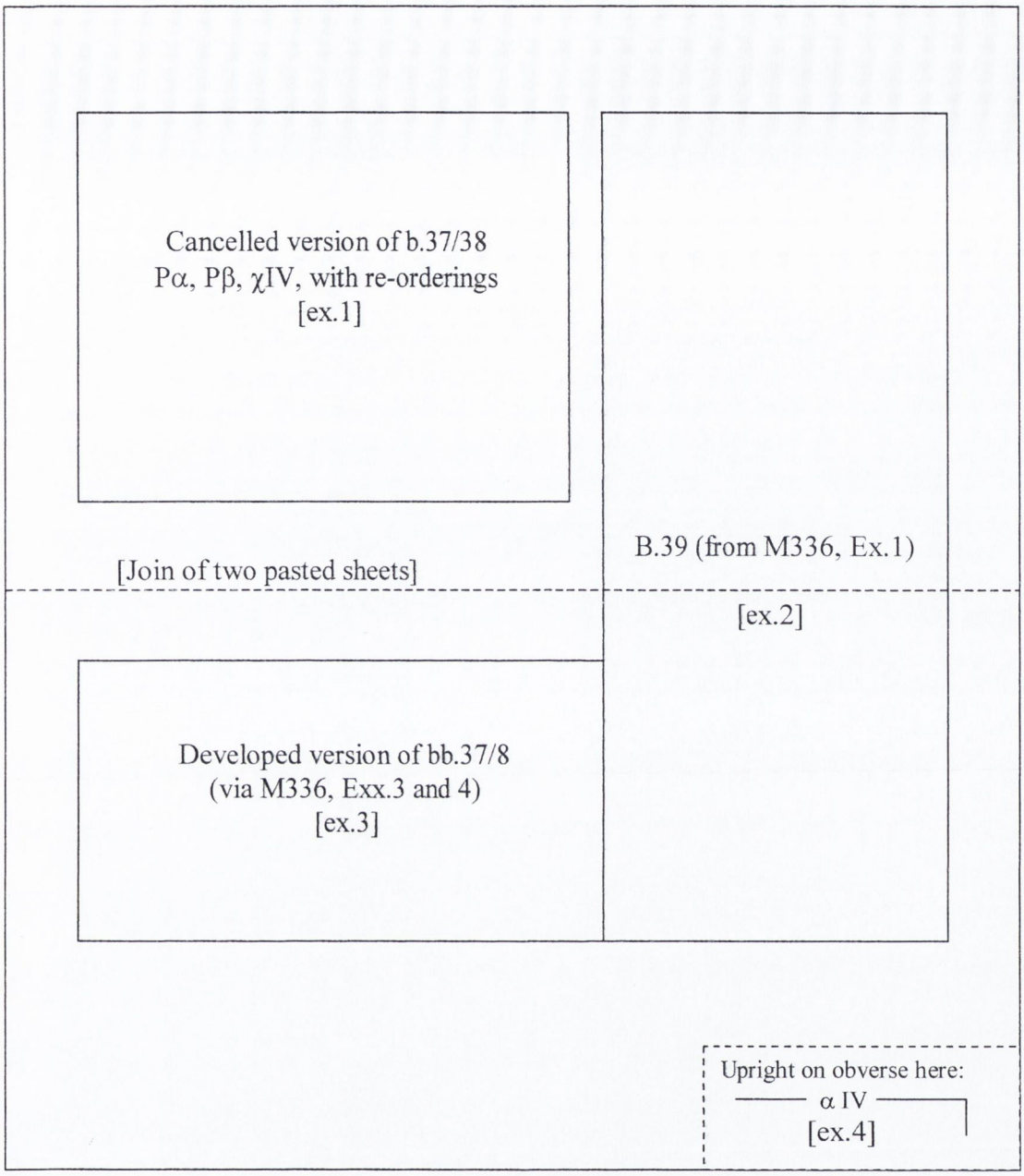


Figure 2:3: layout of composite sketchleaf M333.

to the rectangular sheets of score paper M338, M339 and M337 (all sketches for part II). Furthermore, M336 indicates the only use of αIV to be found within the sketch material for movement I (top left-hand corner – see Figure 2:2, ex.1(a)). Stravinsky must therefore have removed the top of the page (along with part of the serial incipit, which he relocated) at some point after sketching Figure 2:2, ex.1, and reversed it in order to extend M333. This suggests that b.39 had already been drafted down the left-hand side of M336 before the composition of the 'link' bars 37-38 on M333.

The composer transferred Figure 2:2, ex.1(b) directly from M332(iii), exx. 1(a), (c)[21] and (d)[22] being subsequently layered in as additional strands of the polyphonic texture. The template noteheads at the upper right (Figure 2:2, ex. 2) were evidently a contemporary addition, as demonstrated by explicit connection (e.g. the incipient E/D dyad) with Figure 2:2, exx. 1(c) and (d), as well as its prominent referential positioning to the right of ex.1. This template consists of χδII(T1), the serial form and transpositional level finally employed for bb. 31-33, corroborated by Stravinsky's indication above the second hexachord. The template nature of this notation is emphasised by its hasty appearance and by the fact that it is not incorporated directly in the sketches for this (or any subsequent) passage. The remaining sketches along the left-hand side of M336 (Figure 2:2, exx.3 and 4) postdate the cancelled draft on M333 (Figure 2:3, ex.1), and represent successive stages in its reworking. That the rough sketch in Figure 2:2, ex.3 probably postdates the cancelled

[21] The semiquaver beaming of the triplet note values in Figure 2:2, ex.1(c) reveals the sketch to be earlier than M333. Early attempts at ex.1(c) appear as faint erasures beneath ex.1(a)).

[22] Though later extracted and treated as an independent entity (see below), the alignment and quintuplet configuration of the χIV hexachord (bottom of page) implies its exact synchronisation with its 'simple' counterpart, αIV, at the top of the sketchleaf.

Figure 2:3, ex.1 may be deduced by noting its greater proximity to the sketch beneath, and thus to the final score. An advanced sketch for bb.37-38 was added beneath the cancelled sketch on M333 using the excised segment of M336, rendering the assembly of the draft on the lower half of M339 (Figure 2:1, ex. 3) a more-or-less straightforward exercise in transcription.

The χδII Template as Compositional Determinant

With the exception of the template and the retrograded χIV hexachord at the bottom of the page, all serial orders on M336 are derived from simple (i.e. non-transpositional) P rotations, and consequently all correspond to the hexachordal levels of the template, i.e. that of the untransposed P^{23}. As this also holds true for the otherwise extraneous δIV hexachord, it may be assumed that the choice of this level was a prescribing factor in the selection process.

The initial choice of P-level hexachord, in the case of Figure 2:2, exx. 1(c) and (d) and exx. 3 and 4, (all subsequently re-ordered) was apparently motivated and limited by direct or transpositional (T6) equivalence with the δII(T1) template ordering:

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[23] The χ hexachord in the bassoon part (Fig. 2:2, ex. 1(b)) is, of course, identical to the first hexachord of the row, Pα. Stravinsky seemingly regarded the nomenclature in the case of the two unrotated series to be interchangeable here.

δII(T1) = βII (1-6), i.e. identical ordering

χII(T1) = αII (T6)[24] = χIV (re-ordered 561234)

χIV = α IV (T6)

χII(T1) = αII (re-ordered 645231)

= αV (re-ordered 312564)

Stravinsky's initial selection of hexachords from the chart was apparently made, in addition to content, on the basis of matching boundary pitches and internal pitch contiguities. Checking down the chart on the right- or left-hand side of each hexachordal group easily assessed compatibility with the template guide. Thus, α and β II (the only hexachordal groups employed twice on M336) were presumably initially selected because βII is identical in content and ordering with the template δII (T1), and because αII retains the Bb and E boundary pitches of the template χ hexachord[25]. Such direct connections are less apparent with αV, although being three rotations apart in the chart, αII and V exchange triadic groupings. αII and IV share an Ab/Bb at the hexachordal extremities. χIV preserves the dyadic groupings of χII (T1) with the E/D dyad now occurring at the opposite hexachordal extremity (order positions 5/6). αIV retains the same interval sequence as χIV[26].

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[24] This holds true for all equivalent α and β, χ and δ rows. All hexachords permute (retaining identical internal content) at T6. See Babbitt, 'Stravinsky's Verticals and Schoenberg's Diagonals', 22-24.

[25] A transposition at T6 of the α/βII 'simple' rotations results in the content and ordering of the $\chi\delta$II(T1) template.

[26] The χIV pitches are replicated (in retrograde) at T6.

Stravinsky's use of the row charts was thus eclectic, an expedient means of pitch selection based on a small number of pre-ordained criteria. 'Choice', as he later remarked apropos the derivation of chord structures in *Introitus*, 'was more important than any principle of seriation'[27]. This process of relatively high level selection – the pre-compositional determination of pitch repertoires without specific implication for articulation and deployment – necessarily resulted in a certain randomness among other pitch factors which required 'composing out', as reflected in the hexachordal re-orderings found on these pages. In this manner, many of the above relationships, both implicit and explicit, were projected and emphasised as surface features of the music (see below), even if the fundamental serial ordinance was thereby violated and the criteria of the original selection obfuscated.

The serial re-orderings on M336 (Figure 2:2, exx.1(c) and (d)) would appear to be allied to the further projection of the incipient E/D dyad with which the $\chi\delta$II template (and consequently part II) begins[28]. The re-ordering of the αII hexachord in Figure 2:2, ex.1(c) – 64[53]21 – is closely patterned after the template χ hexachord: the ordering 645231 would have replicated the template ordering. The hexachords in Figure 2:2, ex.4(a), a sketch approaching the detail of the ultimate version of bb.37 into 38, derive from ex.1(c) by a process of isomorphic partitioning in which αV is substituted for αII (the content,

[27] *Themes and Conclusions*, 66. See Chapter 11.

[28] Note that the intervallic spacing of the E/D dyad is preserved between bb.31 and 39, although the sketch for the latter (Figure 2:2, ex.1(c)), presents it once again in a context recalling b.5, suggesting a reversion to the pitch priority of part I. The 'rit . . . a tempo' indication at this point in the score (significantly the only *rubato* marking in the entire score, and already present on the provisional M339 draft) was seemingly intended to emphasise this turning point.

ordering and much of the intervallic configuration of the β hexachord remaining constant)[29].

Sketchleaf M333 clarifies certain aspects of these processes. The lower portion of Figure 2:3, ex.2, a working sketch for the clarinet and bassoon figurations in b.39 showing considerable evidence of erasure, extends from Figure 2:2, ex.1(b). Although this notation may have been partially formulated on the upper segment of M336 before its removal, the visibility of notations (as incomplete erasures) for the αI hexachord (replacing the M336 reading, βV) on the upper portion of the collage, together with the positioning of the clarinet's α IV hexachord traversing the join, suggests an extension of the sheet upwards. The piano phrase on the top portion of Figure 2:3, ex.2 contains very few erasures and was transferred with little alteration from M336. The multi-layered erasures visible in Figure 2:3, ex.1 confirm its role as the principal preparatory working for the link passage bb.37-38. Although later cancelled and extensively re-worked on M336 (Figure 2:2, exx.3 and 4), Stravinsky employed the cancelled version as a template, carefully retaining its consecution of hexachordal groups and internal re-orderings as well as its assignment to solo piano[30]. Example 2:2 shows this passage with editorial serial orders based on the re-working found on M336.

Stravinsky began by deploying a re-ordered version of Pαβ, which, like the re-orderings in Figure 2:2, exx.1(c) and (d), emphasises template pitches, in this instance the A/Bb dyad

[29] See Tucker, 1992, Chapters 5 and 9, for discussions of comparable numerical permutations in *Canticum Sacrum* and *Threni*.

[30] As the events of part II run parallel to those of part I, this timbre was required to form an analogy with bb.7 through 11, the trumpets in b.12 being paralleled by the pizzicato lower strings' entry in b.38.

which ends the primary χII(T1) template and also (as the final dyad of χV) the immediately preceding block ending in b.36 (see M337, lower sketch)[31]. The re-ordered Pβ hexachord lacks its fourth order position F#[32]. χIV, now detached and displaced sideways from the complex of b.39, and slightly re-ordered from its appearance in Figure 2:2, ex.1(d), completes the link.

In addition to these retrospective references, the cancelled version pre-empts features of b.39 (e.g. the interval spacing of the Bb/Ab in piano/bass clarinet, and the E/D piano dyad (with registers preserved)) and recalls gestures from earlier in the movement. The repeated notes in trochaic rhythm (cf. b.12) and the descending low-register cadence recalling bb.2 and 9, for instance, parallel the return of the P-trichord I and II complex (c.f. b.5) that straddles the bar line. Bar 39 marks a decisive restoration of the irrational polyphonic subdivisions that characterised b.13 foll.[33]

The revision on M336 (Figure 2:2, exx.3 and 4) occurred in two stages. The tentative first notation (Figure 2:2, ex.3) preserves key elements of the cancelled M333 notations, including most of the registral assignments and rhythmic configuration (e.g. acciaccatura and triplet) of its opening hexachord. As in the cancelled model, the second hexachord

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[31] These serial duplications at the nexus point of the two blocks seem to have inspired the tremolo that opens the cancelled sketch on M333. A different version of this pitch repetition is retained into the published score between bb.36-37.

[32] The high registral deployment of the G picks up from b. 33.

[33] The timbral combinations here are remarkably close, with the flute re-entering in b.40. The rhythmically independent wind writing of these passages was almost certainly influenced by Stockhausen's *Zeitmasse* which Craft had recorded on April 7, 1958 (*Chronicle*, 68, see also Griffiths, *Stravinsky* 177-178). Although he did not attend a performance of *Gruppen* until October 1958 (see *Themes and Conclusions*, 25, note 2), i.e. following the completion of the first movement, he would been have familiar with the work through an early version of the score in his possession (included in the Stravinsky *Nachlass*). I am grateful to Ulrich Mosch of the Paul Sacher Stiftung for bringing the existence of this score to my attention.

excludes the F# in order position 4. Between this and the second draft, still some distance from the final score, considerable keyboard experimentation must have occurred. The later sketch (Figure 2:2, ex.4) reassigns a large number of the registers and also reverts to a χIV configuration closer to the first appearance of this hexachord in the polyphonic complex on the left hand side of the same sketchleaf. Nevertheless, residual elements of the cancelled M333 draft remain in the ultimate version of the passage in b.37-38 (e.g. the previously mentioned Bb/A pitch repetitions, the E/Ab acciaccatura and the triplet figure with following acciaccatura).

Sequence III: The *Seconda Volta*: New Modifications of the χδII Template

Planning for both the *seconda volta* (bb. 27-30) and bb. 40-41 took place on sketchleaf M386, the verso of which was later employed in developing bb.62-67 (Movement II). A schematic outline of this sketchleaf is presented in Figure 2:4.

Stravinsky's referential starting point for the *seconda volta* bars was the 'secondary' template sketch (Figure 2:1, ex.2) added to M339 between the rough draft for bb.31-36 and the more developed draft for bb.31-39. This once again derives from the same χδII(T1) template that permeates the sketches for bb.31-39, unfolding δII(T1) together with order positions 1 and 2 of χII(T1), the register and spacing of the latter dyad manifestly identifying with the beginning of part II (b. 31). The template's contour, rhythmic

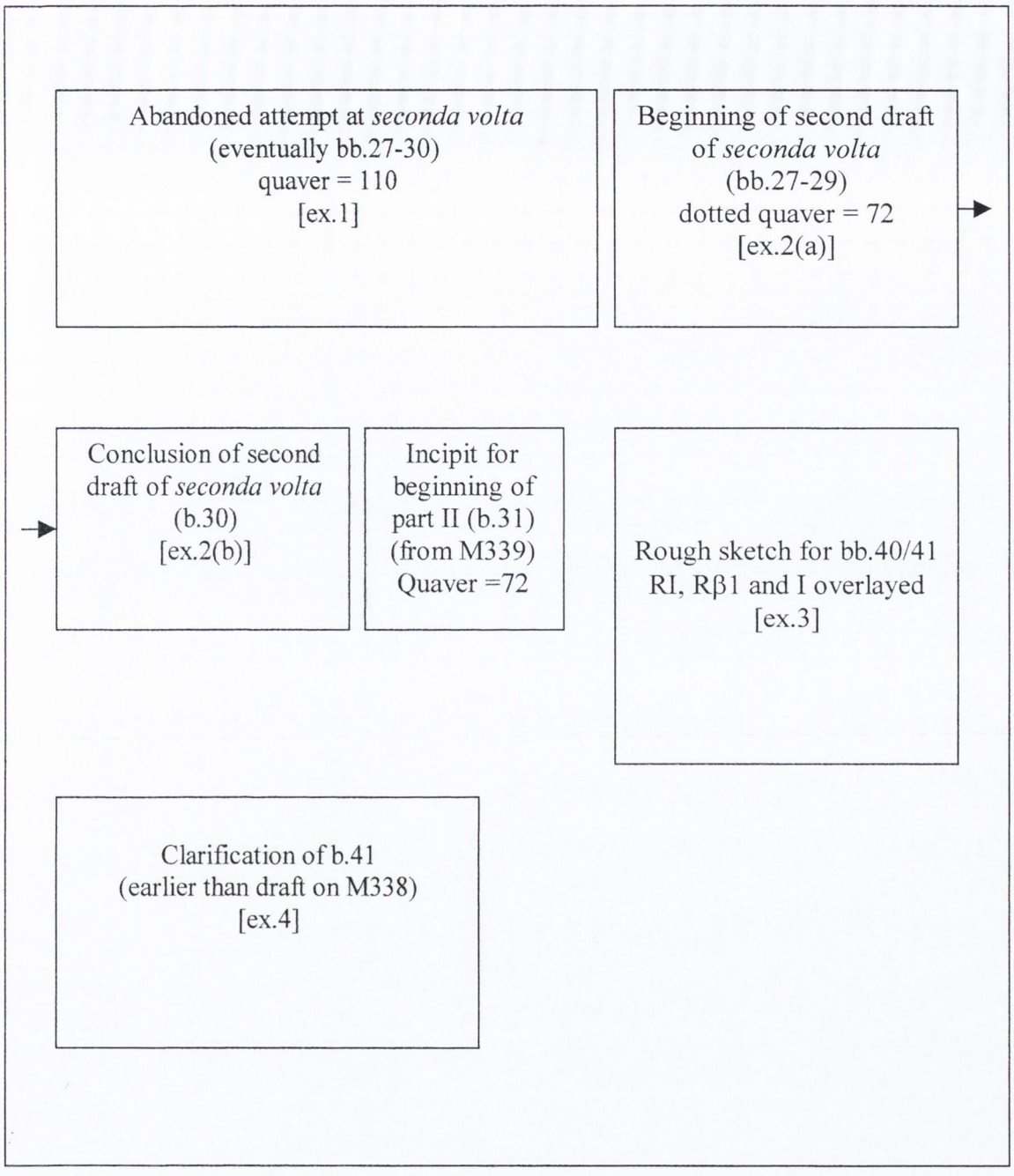


Figure 2:4: schematic outline of sketchleaf M386.

plainness and number of attacks already suggest the ultimate configuration of b.30. The composer thus worked backwards from the established pitch region of b.31 foll., employing the same template hexachords as a model. Indeed the proximity of the M339 template to pitch configurations in the draft for bb.31-36 immediately above (Figure 2:1, ex.1) has already been noted[34].

Exploitation of Hexachordal Invariants in the First Draft of the *Seconda Volta*

Stravinsky's first attempt to expand the M339 template took place on the top left hand side of M386 (Figure 2:4, ex.1). This notation consists of four bars of hasty and incomplete pencil sketches, the changing clefs on the lower stave indicating a continuous span of music rather than a number of dissociated fragments. The composer outlined the extremities of the block with some degree of confidence: these are supplied with serial rubrics and, in the case of the final four pitches, pencilled over in green and designated 'cl[arinet] alto'[35]. However, the hiatus in the centre of the sketch suggests that some difficulties were encountered in connecting these outer segments. In addition, the metronomic indication is still equivalent to that of part I.

[34] The contour and registral distribution of the M339 template δII hexachord also recalls b.2, as well as M332(ii).

[35] This abandoned instrumental idea is interesting both in view of the rarity of instrumental indications in the sketches and particell draft for movement I, and also because clarinet timbre was to play a major role in b.39-40, sketched in close proximity to the *seconda volta* block.

Key elements of the M339 template sketch were retained in this first attempt at drafting the *seconda volta* (see Example 2:3(a)). The end of the block employs RβV – a permutation (viz. 5[43]21/6) of the δII(T1) template[36] – which is also clearly related to the template contour – with the opening gesture imposing a similar contour on the hexachord IβV(T4), the intervallic structure of which is identical to the template δII.

In order to establish Stravinsky's compositional purpose here, it is firstly necessary to speculate as to why he replaced the template δ hexachord with the related hexachordal construction RβV, and secondly to substantiate a reason for the seemingly remote choice of the IβV transposition. As has been seen, the appearance of a row or, segment thereof, in transposition invariably presupposes the initial selection and compositional application of its untransposed form. The remaining, (incomplete or partially erased) pitches in Figure 2:4, ex.1, though not distinguished as such in the sketch, may be confidently identified as belonging to this untransposed form – Inv βV(T0) – see Example 2:3(a). This furnishes the following serial scheme for the passage (all hexachords presented with prescribed internal ordering):

InvβV(T4) . . . . InvβV(T0) . . . . RβV(T0)

The untransposed IβV hexachord is identical, both as to content and ordering, with the M339 δII(T1) template hexachord, and its intervallic disposition on M386 (as far as can be distinguished) suggests the direct influence of the template, particularly in the falling F#/G

[36] Note that this permutation retains the same final pitch (B) as the template δ hexachord.

seventh and F/C fifth couplings (a partially erased B, the final pitch of the hexachord, completes the template deployment). Stravinsky's deliberate designation of the hexachordal provenance (the hexachord is equivalent in all respects to P-beta II) suggests that his intention was to deploy related inversion forms in close proximity. This speculation is confirmed by the layering-in of the concomitant IαV partner in the second draft of this passage on M386 (Figure 2:4, ex.2). Thus throughout the entire sequence of sketches for part II, the β hexachord can be seen to have an important axial function as an invariant pitch formation mediating between a number of serial forms drawn from different areas of the chart.

The presentation of the concluding RβV clearly partitions the hexachord into two i.c.5 blocks, C/F/G and F#/C#/B, suggesting that the composer may already have had in mind a harmonic structure analogous to bb.5-6[37]. The first of these blocks reproduces the end of the preceding hexachord IβV(T0), creating multiple pitch redundancies in the centre of the sketch, and it is possible that difficulties in handling this feature caused its abandonment. The second draft of this passage in Figure 2:4, ex.2, discussed below, retains and reworks many of the features of ex.1. This draft approaches the details of the final score but, at a late stage of composition, the composer suddenly reverted to the form of the M339 template. While the particell short-score draft of b.30 conforms to the sketch, the subsequent two-piano and full score fair-copies cancel accidentals, thereby contravening

[37] The configuration of b.2 is also invoked in the register (an octave lower than the published score) assigned to the final G in the second draft – cf. Example 2:3(b).

the prescribed serial ordering[38]. This creates proximate repetitions of the FCG collection (a prominent feature of the abandoned first sketch) and indicates the residual influence of the original template configuration. The incipient IβV(T4) hexachord lies somewhat outside this scheme. It identifies with the RI hexachordal level and clearly has a retrospective function in duplicating pitch events occurring towards the end of the preceding block (bb.21-22)[39].

The Second Draft of the *Seconda Volta*

The second draft for bb.27-30, which ensues directly on M386, represents the final form of the passage in all but minor details such as phrasing and articulation. Stravinsky's serial superscriptions (Example 2:3(b)) are, however, a useful guide in speculating about some of the intermediate experimentation that must have taken place at the piano between the earlier and later drafts. In order to facilitate the discussion of serial usage here, Example 2:3(c) identifies the hexachordal forms employed in both drafts, together with an indication of their location in either draft 1 or 2. The serial scheme represented in draft 2 is as follows:

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[38] Both of these holographs are located in the Paul Sacher Stiftung's *Sammlung Margrit Weber*. The RβV F# and C# (the fourth and fifth pitches in the right hand, b.30) forming part of a harmonic configuration alluding directly to bb.5-6, are cancelled in both the two-piano reduction and full score holographs.

[39] The RIα level reproduces almost the entire content of the M363 'concept' hexachord, while the preceding section of music identifies with elements of this 'concept' in the form of concluding factors from series II(T0).

IβV(T11) . . . . I[αIII]r . . . . RβV

IαV(T11) RβII

The tripartite structure is a direct expansion from the first draft on M386. Stravinsky retained RβV without altering its pitch content, intervallic configuration or contour. IβV reappears in a new transposition retaining intervallic configurations from the first draft[40] but, more significantly, duplicating exactly the intervals and contour of the M339 template hexachord, with the single exception of its first order position, which is transferred downwards by two octaves. IαV(T11)[41] and RβII are added as partners to the hexachords at either end (RβII is a permutation of RβV which simply exchanges its trichordal groups). The single [αIII]r form is an entirely new choice functioning as a buffer between the outer components of the tripartite structure, both of which are evolved directly from the M339 template. As already noted, the derivation of the first two segments of the structure exclusively from inversion forms (for the first time in the sketches) suggests a direct association with the preliminary workings for bb. 40-41 found lower on the same page.

Many of the registral distributions throughout the passage are linked to the contour of the M339 template, specifically order positions 4-6 of the δII(T1) hexachord. This contour appears directly (twice) in the upper voice of bb.27-28 and 30 (twice, with identical pitches

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[40] Cf. the partially erased IβV(T0) in draft I.

[41] The third order position should correctly read Db, but as the duplicate Eb appears in this sketch and all subsequent material relating to the passage, it is probably a deliberate alteration. One result of this 'mistake' is that the entire pitch content of the M363 concept is unfolded across b.28 (with a distribution equivalent to χI:1-4 (left hand)/δII:4-6 (right hand), but the most likely purpose is to adumbrate the intervallic spacing of the same pitch classes in trombones I and II in b.31-32. This anomaly is noted by Straus in 'Stravinsky's Serial "Mistakes"', 236-7 and 262, where he (very questionably) recommends that a correction be made. The spacing of the E/D dyad in b.29 also projects forward to b.31.

on second appearance), and in the lower voice in b.29. It is inverted in the upper voice of the I[αIII]r statement in the same bar[42].

The ultimate transpositional level (T11) employed for the transferred IβV hexachord restores the hexachordal level and ordering of PδII, i.e. the same pitch succession that concludes the 'flute solo' template and thus part I of the movement. Bars 27-28 therefore echo the immediately preceding b.22, strengthening the retrospective function of the first draft whilst anticipating the new (χδII) dodecaphonic series which opens part II (at T1). The purpose of the transposition was thus essentially concerned with the achievement of localised continuity and pitch cohesion.

The retrograde presentation of the I[αIII] 'buffer' (b.29) – a new addition in the second draft – suggests that the composer searched down the columns of the inversion-form chart to find a suitable pitch structure with which to link the already established outer segments. As the I-rotations in the row-chart are not subjected to transposition, the resultant hexachordal patterns are straightforward permutations of each other, with the selected hexachord capable of connecting (i.e. creating pitch redundancies) with the preceding I rotations at either extremity. Its retrograde presentation creates a direct pitch repetition (G#-Ab) between the upper voice in b.29 and the lower voice at the end of the previous bar. The lower voice of the same bar echoes important elements of b. 28, such as the Eb/E between the outer voices and the concluding Bb/A (struck in b.28).

[42] The slurring of the published score clarifies the pitch and contour relationships within the tripartite structure of the *seconda volta.*

M386 demonstrates that the proportional (3:2) tempo relationship between the two parts of the movement crystallised only in conjunction with the second draft of the *seconda volta* bars, the first draft still applying the quaver = 110 standard of part I. The new metronome mark was calculated directly above the second draft[43]. The upper voice, in steady pulsation in the new tempo (reminiscent of the flute solo, b.13 foll.) is accompanied by a more fragmented and rhythmically irregular lower voice whose semiquaver triplets allude to the earlier tempo and whose gestures are characteristic of part I. The regular pulsation subsequently dominates the opening of part II. The passage thus additionally fulfils a transitory function between the two tempi and gestural areas of the movement.

Sequence IV: Origins and Applications of the I-Template

The lower portion of M386 is devoted to rough sketches for bb.40-41. This passage was subsequently transcribed onto M338 (the verso of M339, together forming the 'provisional' continuity draft of part II), several features of which confirm the compositional chronology of the *seconda volta*. The timing (30") following b.39 on M339, the absence of a tie in the bass clarinet Eb (b.39-40) and the failure to indicate the change of time signature from 3/4 to 6/8, despite the clear 6/8 beaming of bb.40-41, are all consistent with a hiatus in the compositional process between bb.39 and 40. Furthermore, as their serial provenance

[43] 110 x 2 (providing the semiquaver pulse for part I) = 220. Dividing this by 3 (73.333...(recurring), approximated by the composer as 'c.72' on M339) makes the dotted quaver (i.e. three semiquavers) in part I equivalent to the new quaver standard. In other words, triplet semiquavers in part II = ordinary semiquavers in part I.

demonstrates, bb.40-41 are more closely related to the compositional concerns of the chronologically proximate *seconda volta* block than to the immediately preceding musical sequence. As noted above, the two non-consecutive passages sketched on M386 (viz. the *seconda volta* and b.40-41) are related through serial practice, namely the use of R- and I-based forms, which play no part in earlier sketches for the movement, and which were first introduced in the *seconda volta* sketches through the agency of hexachordal invariants based around the M339 template. Both passages are additionally concerned with the interaction of the two fundamental tempi of the movement, providing a distinct three-against-two co-ordination.

Stravinsky's first notations for bb.40-41 were made on the right-hand side of M386, immediately following the second draft of the *seconda volta*, by aligning complete statements of the RI and I forms (cf. the *seconda volta*) together with the single Rβ1 hexachord in the middle register. Though rudimentary as regards rhythmic design (particularly in its second half), the registral assignments and intervallic configuration of the sketch are virtually identical to the ultimate version. The distinct separation in the middle of the sketch once again shows the composer thinking in hexachordal units. A subsequent sketch at the bottom left of the page, written in a more confident hand, clarifies details of the rhythmic co-ordination for the second half of the passage (i.e. b.41), though it is still a short stage from the virtually finalised version that appears towards the top of M338.

The initial rough outline for bb.40-41 suggests that Stravinsky began by notating what eventually became the flute part – a straightforward linear statement of RI unfolded in steady quaver pulsations. The only departure from this rhythmic evenness, a possible legacy of the earlier flute solo, is the syncopated Bb concluding the first hexachord, which underlying erasures show, in any case, to be a subsequent alteration of the original text. Against this pulsation, the middle voices, unfolding the Rβ1 hexachord in two trichordal groups, create a hemiola effect recalling the scratchpad notations M332 (i) and (iii), as well as derivations with comparable rhythmic strategies such as bb.31-35.

The lowest voice, unfolding the complete I form (eventually shared between bass clarinet and bassoon), was probably last to be layered in, to judge by its lower positioning relative to the staves allotted to the *seconda volta* draft. The same form, shorn of its initial Eb, though identified simply as "Inv αβ", and revised as to contour, appears at the top left-hand side of M338, immediately above the final sketch-draft for bb.40-41. This bears the unmistakable hallmarks of a new template notation, and apart from anticipated associations with the end of the movement (bb.42-42c) – sketched directly onto the remainder of the page[44] – it has a further explicit role to play in providing a template for the evolution of the middle block of movement II (bb.56-61)[45]. Clear traces of the intervallic structure and timbral distribution of the earlier I presentation remain evident even in the published version of the second-movement passage[46]. The new template, though ostensibly an

[44] This passage was subsequently copied on a piece of manuscript paper (M342), timed at sixteen seconds and taped to the second of the two large format particell pages for movement I.
[45] The composition of this passage is discussed in the following chapter.
[46] Compare, for example, the similar distribution of the row between solo cello and doublebass at the beginning of the I statement in b.56.

abstraction from the bass clarinet/bassoon row, has evident close affiliations to the M332(i) template in its primary row form status, rhythmic configuration, vaulting contour and intervallic structure[47].

Stravinsky's first notation for the piano music in b.42 was made on M338, immediately to the right of the draft for bb.40-41, from which it is segregated by an undulating vertical line. Essentially final in its intervallic structure and registral assignments, this employs the complete P form, but the even rhythm and total number of attacks (11) betray the direct influence of the new template[48]. In addition, the contour of the opening tetrachord is identical in both sketch and template, together with the registral assignment of the Bb/Ab dyad.

Beneath this sketch, the composer entered similarly distributed noteheads derived from the R form, and once again the distribution is final. Like the template, this commences with the second order-position of the series, thereby unfolding only 11 pitches. Possibly Stravinsky initially intended the 'missing' F to elide with the end of the P form in the first sketch, but the passages do not run consecutively in the final version, being separated by a statement of RI that elides at either extremity with both P and R. The sketch shares structural features with both the template (cf. the intervallic assignments of the dyads Ab/Bb and C#/B) and the sketch for b.42 (F#/G and E/Eb).

[47] Cf. the assignments of the row adjacencies CBC# and GF.
[48] The notation of this sketch in demisemiquaver units may signify that the composer's early conception of the passage and/or its relationship to the preceding music was different from the published version.

Two drafts of the entire passage, bb.42-42c, follow beneath. The first adds the RI 'buffer' between the two already drafted segments, and concludes with a statement of I which once again retains features of the template. The contour of the iambic figuration in the piano (commencing on the last semiquaver of b.42b) is equivalent to that of the first six order positions of the I template, and the intervallic spacing of the Ab/Bb, A/E and B/C# dyads also corresponds in both. The RI-based harp and celesta parts are subsequent additions layered in – principally beneath the piano music – and pencilled over in red. The second draft clarifies the detail of bb.42-42b and corresponds to the published score in all but minor details (e.g. the octave, (rather than unison) doubling of the G by harp at the end of b.42b).

Summary

Although perceptible parallels may be drawn between each of the self-contained halves of this movement (viz. bb.1-26 and 27-42c), they in fact originate from, and are regulated by, distinctly different template archetypes, which have a prevailing influence over extended spans of material within each half. Despite this, the principal second-half template (based on an aggregate obtained from the χ/δ matrix) appears to have originated in conjunction with early sketches for the first half, as it appears in conjunction with, though distinguished from, the other templates on the 'scratchpad' sketchleaf M332.

Towards the conclusion of sketching for the movement, a new, though obliquely-related template (now based on the I form of the series) was introduced. Although this exhibits tangential relationships to notations for the conclusion of the movement on the same page, its principal application is found within the succeeding sketches for movement II, where it provides the basic outline for material appearing in the centre of the completed movement. This, and the appearance within later sketch repertoires of configurations closely related to first-movement template sources, demonstrates that template influence does not remain exclusive to the main compositional sequence in which the template model itself originates.

CHAPTER 3

Movement II

Sketches for II: Preliminary Observations

Despite the absence of any dated sketches within the material for the second movement, it is possible to ascribe a general compositional order to the material. Two sketches, M382 (AM25) and M313, may be regarded as peripheral to the main sequence. The former presents a two-stave reduction of the orchestral part only, with the designation "piano II". This neat draft unquestionably relates to the clarification of the two-piano score from the particell materials, subsequent to the completion of the movement. The solo piano part (piano I in the reduction) would, of course, have already been extrapolated in some detail in the sketches. M313 also appears to postdate the other materials for the movement and to relate directly to the composition of the first interlude. Stravinsky's numbering of the opening bars of the movement on M382, three bars short of the ultimate figure in the published scores, confirms that the interludes were later insertions and that the movements were initially intended to form an *attacca* sequence.

In spite of its content, showing the opening bars of II, but no interlude-related material, several features of M313 confirm its association with the composition of the first interlude,

for which the opening of the second movement acted as a template model[1], and that it cannot be regarded as an early sketch for II. Firstly, it forms part of a small separate booklet, comprising loose-leaf pages (mostly of a distinctive pink colour), in which the composer drafted all of the interludes. This booklet, the cover of which is inscribed in red ballpoint with the legend "Four Interludes", will henceforth be designated as the 'interludes folder'. Stravinsky presumably first acquired, and began to make use of, this paper type only towards the end of composition on the piece. Although identical pages later appear within the sketch-materials for *A Sermon, a Narrative, and a Prayer*, they are not employed for any earlier sketches for the principal movements, once again confirming that the interludes were contemporaneous later insertions. Though of a different paper type, the close relationship of the M313 sketch to other materials within the interludes folder is confirmed by more than its mere presence in the folder. It shares the use of red ballpoint with both the folder cover and sketchleaf M312 (the unique sketch for interlude I). Physical markings in the form of four punched holes (probably staple-holes) at the top left-hand corner disclose additional associations. The identical imprint is to be found on three other sketchleaves within the folder, viz. M312 (interlude I) as well as M315 and M316 (interlude II).

There are also additional musical relationships between M313 and M312, which will be discussed in connection with the compositional strategy of the four interludes in Chapter 7 below.

[1] See Chapter 7.

Finally, despite its tentative appearance, a comparison of M313 with other sketches for the opening of II reveals a number of incremental adjustments to registral and rhythmic features. Thus M313's initial bass F# (that of the final score) is presented as an alto F# in three other sketches[2]. Similarly, the iambic rhythm of its concluding pitches, B and C (also as per the final version), is not present in any of the other sketches for the passage, including the late full-score draft AM27.

The large number of fragmentary working short-score and full-score drafts to be found within the material for movement II explains the absence of the composer's customary continuous (and often dated) particell score. The relative complexity of the texture and linear serial topography in this movement, compared to the mainly block serial topography of movement I, seems to have necessitated the elaboration of these particells as an integral part of the sketching process, in contrast to the composer's usual procedure of constructing the continuity draft as a parallel process.

The three distinct blocks that constitute the movement as a whole were predominantly sketched independently of each other on separate leaves, often with two or more successive drafts aligned beneath each other. Sketchleaf M387, one of the earliest sketches, is exceptional in this respect, containing single drafts of two non-consecutive passages (bb.46-51 and bb.56-61). These blocks or 'moments' are identified primarily by changes of texture, gesture and timbral combination[3]. The opening block is characterised by *concertante* viola and cello lines (initiated by doublebass) set in relief against a nebulous

[2] M387, M344 and M385.
[3] See Kramer, 'Moment form in Twentieth Century Music'.

background of *tremolandi* and flutter-tonguing effects from the other instrumental soloists. The compound piano-and-harp timbre derives from the end of I, but otherwise one is struck by the soloistic scaling-down of the ensemble from the composite timbral groups that dominated the first movement. In the second block, beginning in b.56, an arch-like melodic *Hauptstimme*, with notated *rubato* effect, is distributed between string soloists and piano, while the previously diffuse background is replaced by resonances from string harmonics and piano. The final block, immediately following the caesura in b.62, unites the preceding ensemble in a more rhythmically concerted manner, whilst maintaining references to gestures from earlier in the movement.

The I -Template as Focal point for Movement II

Stravinsky made incomplete initial sketches for the first two blocks of the movement on M387, as mentioned, with independent sketches on M384 offering both a first attempt at, and a later revision of, the final block. He completed and extended the two passages outlined on the former sketch on M385 and M383 respectively, first assembling them into a continuous text on the particell draft M344. He then proceeded to make a revised version of part of this text (bb.46-61) directly beneath the draft. The parallel sketching process employed for these sections (blocks I and II), and their later assembly suggests that the composition of the bb.62-67 (block III) post-dated the remainder of the movement. The three sketchleaves concerned with this passage are entirely autonomous, and the second

draft (lower sketch of M384) already employs outline instrumental combinations congruous with those on the M344 particell.

The upper sketch for the opening on M387 is clearly a preliminary working which shows considerable evidence of haste and experimentation. It remains incomplete, trailing off towards the beginning of b.51, after the constituent serial forms, denoted as RIαβ and Rβα, have been expended, thus demonstrating the extent of the interaction between serial choice and continuity. The lower sketch, a first attempt at the entire middle block, was evidently drafted in several discrete stages, beginning with the solo string and piano *cantus*. This *cantus* employs a succession of two complete serial forms, I and [RI]r (Table 3:1). The use of I, much of its intervallic profile, and the rhythmic plainness (equal quavers) of the sketch all point to the M338 template (used earlier in generating the conclusion of movement I) as the source of this material.

Block I (bb.46-55)	**Block II** (bb.56-61)	**Block III** (bb.62-67)
[RI]r:(2/1,3-12)* R (1-12)	I……[RI]r (*cantus*)	I+R+RI+P interlocked
R: (1-12)……RI (1-12)	RI: (7-12)	
	(1-6)	

Table 3:1: the serial scheme of movement II. (*[RI]r:(2/1, 3-12) = RI: 11/12, 10-1).

A comparison with the M338 I-template shows that order positions 4-7 are presented here using identical registral assignments. The G occupying order position 8 was also originally notated at the pitch of the M338 template, as revealed by the visible trace of an earlier partially erased, layer. Later short-score drafts (cf. M344), as well as the final score, restore the original intervallic quantities here, albeit in a lower register. Order positions 11 and 12 similarly match the M338 template in this respect. Thus it would appear that the composer consciously used the M338 template as a basis for engendering the melodic kernel of the middle block of movement II by the registral transfer of certain pitch-classes.

Stravinsky completed the *cantus* using a linear statement of [RI]r, another row form prominently associated with the M338 template notation. This form was earlier used to construct the first movement's second flute solo, in counterpoint to the I presentation in bb.40-41, initial sketches for which were made on the right-hand side of M386 (the verso of the second-movement sketchleaf currently under discussion). As discussed in Chapter 2, the successive, near final, stage of bb.40-41 appears directly beneath the extracted M338 template. Not surprisingly, a comparison of the M386 and M387 RI presentations (despite the row's retrograde appearance on the latter sketch) reveals similarities comparable to those noted above between the respective I presentations. Firstly, the M386 RI statement manifests a remarkably similar rhythmic exposition in even quavers (visible erasures show the iambic figure of order positions 5 and 6 to be a later alteration), and may even have invoked this aspect of the M338 template. The location of the I-template at the head of the M338 sketchleaf intimates that Stravinsky extracted it from the rhythmically incomplete I form on the bottom right of M386 before completing and elaborating the sketch for bb.40-

41 directly beneath. Secondly, like the I-presentation that forms the first half of the M387 *cantus,* both sketches share comparable contours and relative registral positioning. Thus, the first five order positions of the *cantus* [RI]r are clearly derived by an upward octave transposition, *en bloc*, of the concluding five pitches of the M386 RI. Similarly, while in no respect as self-evidently paraphrased, the final five pitches of the *cantus* share a number of significant intervallic properties with the beginning of the source-sketch RI form (Example 3:1).

Stravinsky beamed the resulting twenty-four-note succession on M387 in alternating groups of two, four and five, in the order 345435. This sketch, and the idea's subsequent appearance across the top of M383, treats the notation as employing equal quaver values, providing no intimation of the irrational subdivisions in the final version. The metric groupings, together with some of the contours and pitch/intervallic successions, involuntarily recall the configuration of the M332(i) scratchpad sketch and its immediate derivatives, such as M332(iii) and concomitant sketches on M336 for the bassoon music in b.39.

Having thus constructed his basic linear motif for the second main block of the movement, Stravinsky then entered skeletal rhythmic notations for two accompanying contrapuntal lines. These take the form of abstract rhythmic patterns that alternate crotchets with dotted crotchets in three four-note groups (producing a total of twelve attacks). The two groups forming the lower voice outline the same pattern of crotchet –two dotted crotchets – crotchet, but the upper-voice group reverses the pattern to dotted crotchet – two crotchets –

dotted crotchet. That Stravinsky worked out these rhythmic schemes prior to the consideration of pitch material seems likely in view of the isolation of the schemes and the visibility of at least one rejected alignment for the upper voice. The final alignment produces only one simultaneous attack from both voices

Having evolved this rhythmic framework, the composer proceeded to overlay pitch material in the sketch immediately beneath. The upper stave of this sketch once again imposes RI (though with its hexachordal presentation reversed) onto the pre-formulated scheme, within a range restricted to slightly over one octave. Evidently the notations here, consigned entirely to the bass register, were initially conceived as a registrally-segregated stratum of activity from the *cantus*. The lower stave finds the composer assigning new registers to these pitch-class components, some of which were to undergo further alterations in the later drafts. The second hexachord of RI (Stravinsky's 'α' in the unorthodox nomenclature of the row-charts)[4] is unfolded simultaneously with the *cantus* I form, with the first hexachord acting as a counterpart to its [RI]r. This method of presenting the RI form results in the lower groups unfolding adjacent order positions, while the single upper-voice group unfolds order-positions 11, 12, 1 and 2.

Subsequent stages of elaboration for this passage on M383 show the composer still carefully distinguishing the various layers outlined in his first sketch. The upper M383 draft transfers the *cantus* material, without alteration, directly from M387 (this time

[4] Throughout the work, α and β are used to identify the specific intervallic assignments of the constituent hexachords rather than their relative positions within the row form. Thus the order of the hexachords under retrograde operations (i.e. in R and RI rotations) becomes β/α.

scrupulously indicating the derivation of its pitch material), but refines the RI-derived counterpoint. On M383, the first tetrachord is transposed, *en bloc*, one octave higher (as adumbrated by the single Ab notehead at the bottom right of M387), with the final tetrachord remaining essentially the same. The central (upper-voice) group underwent the longest gestation, Stravinsky having introduced treble-register material on M387 before reverting to a version closer to his original registral concept. He nevertheless continued to vacillate about registral placements, as witnessed by the surprising reappearance of the bass F# of M387 on the lower sketch of M383, itself still a stage from the final score[5]. This suggests that Stravinsky did not necessarily disregard earlier sketches as successive versions, superseding one another in detail, but viewed them as potential sources of material, reserving them for reference within the passage being sketched, or as possible templates for later elaboration.

M383 also witnesses Stravinsky's application of irrational subdivisions to the *cantus*. Although the composer's quaver beaming, already present on M387, prognosticates an intention to instigate some form of cross-rhythmic irregularity or alignment, the extent to which he pursued the original format of the sketch perhaps points to an element of late inspiration in this instance. This type of modification proves possible because the aggregate number of quaver beats remains constant at twenty-four in both cases. The pitches are thus unfolded within identically measured time-frames (the second twelve-note

[5] The sketch begins to indicate instrumental configurations, though many of these are surprisingly distant from the published score. The second tetrachord, for instance, is assigned to muted trombone, contrasting with the more circumscribed range of timbres employed in the ultimate version of the passage. This tetrachord was eventually assigned to the left hand of the piano in the ensuing particell draft M344. It should also be noted that Stravinsky's eventual notation for the piano in bb.56-57, despite initial appearances to the contrary, produces, in practice, sympathetic resonances equivalent to the pitches indicated in the sketch (in their respective octave positions), as confirmed by his notation on the lower sketch of M383.

row of the *cantus* commences at the same point in the cycle), but the alignment of pitches within this frame is modified by the irrational time-distortion. In the later sketch for this passage, continued through to the final score, Stravinsky compensated for only one of these effects. The middle-C cello harmonic should now coincide with the first of the new quintuplet figuration and consequently with the entry of the opposite group (trombone). The composer evidently regarded this convergence of attacks undesirable, as he chose to retain the original coincidence of the C with the *cantus* F, despite the resulting violence to his distribution method. In the final score, this C is sounded one quintuplet quaver later than implied by the original scheme.

Sketches for the Opening Block

The upper sketch on M387, an early attempt at the opening bars of II, employs the simultaneously unfolding rows, R and [RI]r (the latter identical to that used in the manufacture of the second half of the *cantus*). Stravinsky possibly composed the upper [RI]r-derived stave first, which proceeds with equal crotchet pulse and several adjacencies verticalised into struck fifths. The only irregularity in presentation is found in the reversal of the first two order positions. The R form, by contrast, is unfolded across two staves in an exclusively linear fashion, introducing frequent acciaccaturas and quaver offbeats with the upper stave, recalling general rhythmic features of the M338 sketch for bb.40-41. Towards the end of the sketch, the composer indicates the proposed continuation "Riv β" (i.e. the *first* hexachord of R – see note 4) followed by three tentatively pencilled-in

noteheads. These pitches, apparently order positions 2 and 3 of the eponymous hexachord (the F, occupying order-position 1, presumably elides with the end of the [RI]r β hexachord), together with an isolated F aligned with the lower stave, clearly recall the opening pitch configuration of the sketch and are perhaps subsequent additions (Example 3:2).

The composer appears to have interrupted the completion of this passage in order to draft the outline of the middle block directly beneath. Returning to finish the passage on M385, a much less hastily drafted sketchleaf than M387, he continued and completed the outline of the opening block as far as b.55, as well as refining rhythmic details of the very beginning of the movement and setting its definitive metronomic rate. This sketch, together with its attendant serial classifications, confirms the purpose of the M387 noteheads in indicating the proposed serial succession. Stravinsky incorporated the noteheads G and F# (upper stave of M387) directly into a complete unfolding of R, whilst the lower notehead F-natural became part of a complete RI statement. The composer initially outlined the RI form, mainly in faint noteheads, in the middle of the page. This acted as a guide for the more definitive sketch directly above, and may have been layered in following completion of the upper stave, with which it aligns. Here, the second order position, Eb, is elided with the end of the preceding Rα hexachord. There may be grounds here for perceiving some influence from the earlier [RI]r statement: the opening pitch classes of both are reordered, and the adjacency-patterns are similar.

The sketch at the very bottom of M385 is an extrapolation of the solo piano part, in which form, differing considerably from the published score, it was subsequently transcribed onto the upper portion of the particell draft, M344. The incipit for the piano harmonics in bb.55-56, appearing at the very end of the M385 sketch, corresponds exactly with the notation found on M383, and suggests that Stravinsky had, by this time, developed the central block.

An abstract serial overview of bb.46-55 (Table 3:1) indicates that Stravinsky devised this entire opening block from only two row forms, and that the extension elaborated on M385 was derived from the same forms as the original M387 sketch. Thus [RI]r and R are overlaid on R and RI. The first order-position of both rows is identical, and dyads consisting of Eb/E and F#/G adjacencies are shared by both rows (the latter also appearing as an adjacency in I, and emphasised as an important invariant formation in bb.40-41). The central block, as has been seen, uses I together with two twelve-note RI-based forms.

The Composition of bb. 62-67

The final block, commencing in b.62, combines all four primary row-forms from the charts – P, R, I and RI. All order positions are presented in correct sequence, although the high degree of interaction between the different serial forms, and their subsequent instrumental fragmentation, obfuscates the sources. Stravinsky sketched the full texture of this passage

on four staves across the top of M384, in light pencil, and began the process of extracting instrumental lines in the sketch on the lower portion of the page. Two further drafts dedicated principally to refining the instrumentation followed on M381 and M380.

The composer, however, did not assign each row-form to a separate stave, resulting in a draft of labyrinthine complexity that necessitated the introduction of superimposed coloured pencil and guiding lines in assisting serial identification (see annotated transcription in Example 3:3). He apparently instituted work on the passage by first outlining the I layer of the texture (a possible legacy from the *cantus*), as this is the only row form drafted entirely on one stave, appearing across the top of the page. The two staves directly beneath combine R and RI forms that converge, towards the end of the sketch, onto the upper stave. It may be safely conjectured that the final layer to have been added was the statement of the Pβ hexachord occupying the lowest placement at the middle and end of the sketch. All order positions of the hexachord are numbered, and a red-pencil line identifies its migration to the new stave. The supplementary nature of the P statement is shown by observing that the first five order positions of the Pα hexachord are extracted, without duplication, from the combined I, R and RI forms, as Stravinsky's red-pencil noteheads and connecting lines at the beginning of the sketch reveal. The absent sixth order position, D, is supplied on the bottom stave at the end of the first bar.

The extremely self-referential nature of the movement in employing only the four principal serial forms, all of them, apart from the single P statement, used several times, may be viewed as occupying a distinctive position within the context of ongoing template

mechanics. In particular, the choice of these forms seems to have been directly influenced by the emergence, for the first time in the sketches, of the untransposed, correctly ordered, I, R and RI forms towards the end of movement I, as sketched on M386 and M338. This hypothesis as to provenance is merely confirmed by the direct use of material from these sketchleaves in evolving the principal outlines of the central block.

Occasional similarities of gesture conspicuous within the layers of M384 provide suggestions that Stravinsky may have obtained his pitch material here directly from other second-movement sketchleaves, rather than from the row charts. General textural, together with specific harmonic and rhythmic resemblances (e.g. acciaccaturas, syncopated quavers) to the passages (for block I) sketched on M385 and M387 are obvious. The registral deployment of order positions 4-6 of I on M384 is familiar from the *cantus* sketches, while its second hexachord bears a resemblance to the contour of the bassoon phrase in b.41 (sketched on M386/338). This resemblance seems confirmed by the correspondence of rhythmic structure (e.g. the syncopated C#/Db) at the end of both sketches. Close similarities of registral spacing and serial deployment are also to be found in the disposition of the RIα hexachord, and of order positions 2-5 of R, on both the M384 and M387 drafts.

Summary

The second movement, in conspicuous contrast to the first, is confined to a small, carefully circumscribed, repertoire of row forms, and consists of three principal blocks of material, identifiable through changes of texture, timbre and gestural character. Preliminary sketches for the first two blocks, exploiting a horizontal layering of row forms, are found together on M387, the central block (bb.56-61) being clearly elaborated from the I-template appearing towards the end of the first-movement sketches, on M338. This *cantus* line is expanded by the addition of an RI-based configuration (demonstrably associated with the I-template found within the sketch materials for the first movement), both row forms being subjected to segmental transposition whilst retaining key intervallic features.

The third block (bb.62-67) – probably the last of the three to have been composed – is derived from a complex composite of the four primary row forms, unfolded simultaneously, though with a high degree of elision. Once again, the I form (suggesting certain secondary features of earlier sketches, including the *cantus* model) appears to have formed the starting-point and referential backbone of the construction, around which the other series were subsequently deployed.

CHAPTER 4

Movement III

The Earliest Sketches: Preliminary Observations

The dated sketchleaf M375, a square piece of trimmed music manuscript, almost certainly preserves the composer's first notations for the third movement. The page contains two distinct sets of sketches relating directly to bb.74-78, the opening of the movement, and its continuation in bb.79-81 respectively. Therefore, roughly the first half of the movement is outlined in approximate form on this sketchleaf, although both sets of sketches are surprisingly distant in detail from the final score versions. Stravinsky dated the former notation '7th September 1958'[1], at the bottom of the page, the only sketch within the material for the movement, other than the completed particell draft (dated 14 February 1959), for which he provided such information. The latter sketch is reversed in a manner identical to the first movement 'scratchpad' notation, M332(iv), and suggests that a similarly pivotal and referential role was intended for the present page. As with the earlier 'scratchpad', Stravinsky may have returned to add the reversed sketch at a later date, or simply wished to dissociate contemporary sketches with differently encoded template characteristics, intended for separate development.

[1] In the absence of a dated particell for the second movement, Robert Craft rather disingenuously offers this date for the completion of that movement. See *SPD*, 453.

The contrasting serial sources from which the M375 sketches derive create such a direct parallel with the M332 example that it is tempting to view the latter as a generalised template for these preliminary third movement sketches. As with the M332 example, the dated sketches on M375 are extracted exclusively from 'simple' rotations, mostly derived from R. On the other hand, the reversed sketch, although it may be explicated largely in terms of primary P α and β hexachords (together with a single, unequivocal, χ rotation), is designated by the composer exclusively in terms of χ and δ forms. Thus, as observed in earlier sketches, the notation not only offers explicit pitch constructions intended for specific passages, but immediately establishes parameters for its future expansion, in this instance suggesting the elaboration of some form of χ/δ-derived hexachordal spiral. This is a good example of how the sketches, by revealing the composer's strategies concerning the putative deployment of material, may place notations in a context that a serial analysis performed without recourse to such material cannot achieve. Evidently it was his intention, once again, to exploit serial processes by projecting primary row forms as invariant, recognisable landmarks within the larger context of more recondite pitch-constructions deriving from the χ/δ rotations.

The intention to deploy χ/δ-derived material towards the centre of the third movement is only the most abstract of a number of explicit back-references to constructions familiar from the first movement sketches. The circumvention of such gestures and serial methodology in the second movement makes such restitution all the more conspicuous here. While not denying the movement its self-sufficiency, in that it naturally pursues its own criteria of gesture and instrumental practice (as implied by the plural title *Movements*),

it appears that the return of serial practices evolved in movement I, and wholly absent from movement II, acts as the main catalyst for the re-introduction of parallel surface allusions. Indeed, the sketches show that many of these referential features were adapted at a late stage in order to consolidate a localised connection with earlier models[2]. These inserted allusions include the opening semiquaver pattern in the piano (b.74, resuming from b.42 with an identical metronomic speed), originally scored for a mixture of harp, piano, clarinet and violin[3], and the muted trumpet fanfare in b.76 (resuming from b.12), scored for an oboe and cor anglais combination as late as the particell draft, M346. This 'fanfare' motif is supplemented in b.76 by pitches in the piano suggestive of the distribution accompanying its first appearance in b.12. Once again, Stravinsky transferred the original register of the piano G (located in the bass register in all five sketch appearances (M375, M365 and three drafts on M379) within the sketch material) only while refining the particell draft.

Much of the strategy of the movement is concerned with the development and interplay of distinctly characterised motifs, further distinguished by instrumental practice. The previously mentioned 'fanfare' figuration, readily identifiable by its open fifths and repeated pitches (most immediately recalling the opening trumpet gesture of the work), appears in the trumpets in bb.76 and 79, and in a more compressed form (with the addition of bass clarinet) in b.81, with further clear allusions in bb.78, 82 and 86 (oboe). This is contrasted with sinuous, arabesque-like figurations first appearing in the piano, oboe and

[2] See Cone, 'Stravinsky: The Progress of a Method' for a discussion of comparable stratification techniques in *Symphonies of Wind Instruments*.
[3] See its second draft on the upper portion of sketchleaf M365.

cor anglais in bb.75, 77 and 79 foll. The end of the movement achieves something of a *rapprochement* between these opposing materials: the pulsating 'fanfare' figure is attenuated to provide the background clarinet-and-harp *ostinato*, whilst the arabesque motif reaches its apotheosis with the return of the flute timbre (together with piano), again continuing from the first movement, in bb.88-89. The subsequent third interlude may be viewed as representing the consummation of the characteristic pulsations associated with the fanfare motif, emphasised by its scoring for the entire brass ensemble (though with incongruous bassoon interjections). As with the preceding interludes, timbre is restricted to a homogeneous group that emerges from the preceding movement[4].

The M375 Template

At the top of M375 Stravinsky entered a brief 'concept' notation (two bars of 4/8 metre) occupying two staves and employing R rotations 2 and 4[5] in linear topographical alignment. Each row is unfolded complete, with correct internal ordering, on one stave. This notation may have had its origins in keyboard-based experiments, as suggested by the composer's designations for 'r.h.' (bottom stave) and 'l.h.' (upper stave). The inverted appearance of the hands here perhaps suggests that the upper, bass-orientated, stave was

[4] The wind scoring of interlude I echoes b.13 foll. and b.39-40, and the second interlude similarly recalls the extensive use of solo string *obbligati* in movement II. In the final interlude all timbres participate, other than the piano together with its affiliated celesta and harp colleagues.

[5] Stravinsky employed Roman numerals to specify the rotations used throughout the sketches for this movement. The Arabic equivalent is employed in the present discussion to avoid confusing juxtapositions such as 'RIV' which could be interpreted as RI5, R4 or even 'Riv', the composer's peculiar nomenclature for R)

added first, with the higher treble material on the lower stave being subsequently layered in. The upright notations filling the remainder of the page, directly beneath this sketch, represent a complete, early version of the opening block of the third movement, bb.74-78, and were expanded directly from this 'concept'. It must thus be viewed as a template formulation for the movement, although its associations with previous material remain obscure. Certain features of the template, including the row sources, suggest a possible connection with material from the second movement. The alternating triplet and quintuplet groups of R4, in addition to its general contour, recall the final version of the *cantus* line in bb.56-61 (the septuplet subdivision, however, is an entirely new feature in the sketches, and reappears within subsequent third movement materials). In addition, certain contours and registral deployments of the R2 rotation are closely related to those of the R statement unfolded on the top sketch of M387 (Example 4:1(a)).

The weakness of the retrospective link created by the template in this instance, together with its introduction of much new material, suggests that Stravinsky did not exclusively rely on manufacturing templates from surrounding sources. Thus his intentions in generating material from such sources were not solely grounded in factors of integration or continuity, but principally in the opportune manufacture of new models for the passage or movement currently underway. The 'concept' sketch on M375 shows considerable evidence of erasure (nothing of which remains discernible) suggesting that the notation underwent a considerable degree of experimentation and revision before reaching this configuration.

The two rows employed in the manufacture of the M375 template, being proximal 'simple' rotations deriving from the same row form, naturally have a large number of pitch and intervallic features in common, creating an extremely high degree of directly adjacent pitch redundancy. The composer's solutions, in successive sketches for this passage, in dealing with the problems created by this initial choice within the template formation account for some obscurities of serial provenance in the published score at this point. Although the two row forms pursue distinctive rhythmic agendas (the septuplet subdivision being exclusive to the R2 rotation) which eschew any coordination of attack, there are additional cross-references in the gestural domain, as a comparison of the respective pitch-contours of the shared quintuplet figure demonstrates (Example 4:1(b)).

Expansion of the M375 Template Through 'Cloning' Processes

On the ensuing sketch, directly beneath the M375 'concept', Stravinsky expanded this template into an intermediate version of the opening block of the third movement (bb.74-78). This was achieved by incorporating a modified version of the template directly into the passage whilst simultaneously evolving the remaining material by 'cloning' template characteristics. He copied the entire block onto a separate sheet and added it directly to the

top of the single large particell page for the movement (M346)[6], suggesting consolidation of the basic details at an early stage of the compositional process for this section of the work.

Identification of serial orders on the M375 sketch is assisted by Stravinsky's red and green pencil markings. The original 'concept' template is incorporated, with some alterations, towards the end of the sketch, beginning at 'Riv IVβ' (see annotated, partial sketch transcription in Example 4:2). These alterations are most prominent at the junction with the added material (i.e. the first bar of the original template) and undoubtedly reflect problems of dovetailing the two halves and creating continuities across them. The second bar of the template (on the next system, directly above the date) remains essentially unchanged. Thus the transfer, three octaves down, of the R4 β hexachord's second order position, originally middle C, was evidently designed to open up a lower tessitura intimated in the preceding sketches. The alteration of the same pitch as the fourth order position of R2α (via the brief sketch in the top right-hand corner, directly above its appearance in the main sketch)[7] creates a link with the same pitch towards the beginning of the draft. Similarly, the only other octave position in the template that was altered in the later sketch,

[6] The third movement particell is dated at the end '14/II/'59' and timed to one minute and six seconds. As on sketchleaf M375 itself, serial orders are distinguished throughout in red and green pencil. Probably the paste, like those occurring towards the beginning of the first movement particell, was primarily a means to circumvent the attachment of a large (and space-consuming) particell sheet at a stage when the music rack would have been occupied with various preparatory sketches for the current movement. As discussed in Chapter 6, smaller trimmed sketchleaves tend to become more apparent in the later stages of composition for a movement, when the particell draft has been introduced as a parallel compositional mechanism. Large, particell-sized sketchleaves (e.g. M363 and M362, for movements I and V respectively, which measure approximately 12 by 18 inches) always concern initial (i.e. pre-particell) stages of composition.

[7] The alteration of the template septuplet configuration to a triplet is not as radical a change as it initially appears, and merely represents a simplification of the original notation. Although the initial C is moved onto a downbeat, the order and general placement of attacks is preserved exactly as in the template model.

the final Bb of R4, connects back to the very opening of the movement, though *pentimenti* show that this opening was originally notated two octaves higher. The system concludes with partially erased noteheads from the beginning of the R2β hexachord, which Stravinsky then completed directly beneath. Although he adapted the original rhythmic configurations towards the beginning of the template's appearance within the main sketch, an examination of the precursory material in this draft reveals that his compositional strategy involved cloning the 'discarded' configuration elsewhere through the selection of closely-related row forms.

This new material, comprising the first half of the sketch, is derived from two complete twelve-note statements whose selection evidently depended on their compatibility with the template model. The movement therefore opens with a complete linear exposition of RI5, followed by [I5]r, the hexachords of the latter partitioned between the two voices of the texture. This row statement additionally contains an unwarranted duplicate pitch apparently conditioned exclusively by the template model.

[I5]r was obviously selected because its β hexachord is identical, in both content and ordering, with the template model's R4β hexachord. This developmental 'cloning' process is confirmed beyond doubt by the re-allocation of the concept's opening rhythmic and pitch configuration to the new I-based material as a means of propagation. [I5]rβ is accompanied by its respective α form, using the familiar septuplet figuration of the template. Once again, the original septuplet, which was altered to a quintuplet in the incorporated version of the template (although its general rhythmic outline was preserved), is cloned to produce

supplementary material. Although the septuplet in the main sketch has an additional attack compared with the template model, both begin with a rest of three semiquavers duration, (notated in both instances as quaver plus semiquaver).

This process of cloning material from the template also applies to the composer's disposition of the hexachordal pitches at this point. A striking feature of the main sketch (preserved to some extent in the published score) is the multiple appearance, with consistent registral allocation, of the template's repeated F#/C# dyad. This occurs three times, first as part of the original incorporated template, then at the conclusion of the [I5β]r hexachordal clone (in the register of the template's identical R2 dyad) and finally as part of the present septuplet figure. Here, however it is manufactured, in a less-than-straightforward manner, to suggest the pitch configuration of the original model. The F# represents the final order position of the preceding RI5α hexachord, while for the C#, Stravinsky had to 'borrow' order position 1 of the I5β clone (= order position 7 of the complete I5 rotation, as the composer has rather confusingly renamed it here)[8], thus creating a serially unwarranted duplication. The remaining pitches of [I5α]r can also be related to the template. The Bb/Ab acciaccatura evidently derives from the template R2 quintuplet, while the struck Eb/D dyad adumbrates the R4α triplet and the R2β grace notes.

The opening RI5 rotation has a more oblique connection with the template row forms. Its first hexachord, RI5β, is a transposition (at T4) of the template R2β, which thus preserves

[8] Thus the complete ordering of I5 is as follows: 12,11,10, 9,8,7 (lower voice quintuplet, plus two beamed demisemiquavers on additional upper stave)/ 7,6,5,4,3,2,1 (septuplet configuration, plus lower-stave dyad D/Eb, plus lower pitch (E) of following upper-stave dyad). This reading is confirmed by Stravinsky's arrows, as well as by further serial indications on later sketchleaves for the passage (including the particell).

interval-class quantities[9]. The RI5α also preserves the four initial interval-classes of R4β (this time at T8) now with exact quantities (and thus contour) implemented as well – though *pentimenti* show that Stravinsky experimented with additional octave placements. Its final order position, F#, supplies the initial pitch of the septuplet configuration and also doubles as the eighth order position of the ensuing [Iα5]r sequence.

The later draft of this passage across the top of M365 adds occasional suggestions for instrumentation[10], and some significant refinements (rhythmic extensions) towards the end of the passage, but otherwise follows M375 closely in most details of pitch and rhythm. On the other hand, M379, which deals exclusively with this block in several successive drafts, reveals the composer making substantial decisions regarding pitch repetition and alignment.

M379 contains five individual sketches. The two longest drafts, which appear towards the bottom of the page, with systems occupying four and three staves respectively, present most of the block with the exception of the very opening. The drafts are exactly aligned, showing that the composer used the upper draft as a guide in formulating the lower one, which is, in substance, very close to the final particell version of the passage. Indeed, *pentimenti* confirm that the composer originally beamed b.76 in the lower draft in a manner

[9] Order position 6 of RI5β, B, is present on this first draft only as a visible erasure (treble register) between the two hexachords. There are allusions to the first movement template, M332(i), in the equal semiquaver motion and registral assignment of the D/C dyad.

[10] Remarkably few of these were followed through to the published score. The draft calls for harp, clarinet and violin in b.74 and violas in b.77.

analogous to the upper model[11]. The earlier of the two drafts commences with a registrally and rhythmically adjusted variant of the M365 RI5α hexachord, but the later draft entirely omits the opening RI material. It may therefore be assumed that Stravinsky added the near-final revision of this opening, appearing at the top right hand corner of the sketchleaf, between the two drafts. The next, particell stage involved dovetailing the revised opening with the lower draft by eliding the concluding RIα5 C with the identical I-derived pitches immediately following.

Stravinsky also introduced a similar reduction of close pitch repetitions in the middle of the passage, where the high incidence of F#/C# repetitions, resulting directly from the cloning processes observed on M375, had evidently becoming undesirable. The second of the F#/C# dyads, (the end of the [Iβ5]r presentation) were simply excised between the two longer drafts on M379. Although this could be explicated as an elision, the composer fails to identify how this might have been achieved, here or on any subsequent sketch. The remaining pair of brief sketches on the top left of the sketchleaf are concerned with this passage (eventually b.76 and the beginning of b.77). The top left-hand draft, encircled in green pencil[12], consolidates details of its neighbour, which offers detailed serial indications and shows evidence of erasure and registral re-distribution. Once again this latter draft is precisely aligned with the later version of the passage (underneath), and most likely represents a parenthetical stage of its construction. *Pentimenti* on the later draft reveal that

[11] The upper-stave C# and lower-stave F in the second triplet were originally beamed together as were the F#/F (o.p. 1 and 5 of Rβ2) in the first draft. Additional evidence of direct reproduction is provided by Stravinsky's failure to transfer serial indications onto the lower draft.
[12] The rhythmic and pitch configurations here are still some distance from the final version.

the higher octave positions of the C#s on the top sketch were originally transferred down to the draft beneath.

Following elimination of the second F#/C# dyad, all repetitions of these pitches in b.76 are determined by row content, i.e. there are no serially redundant pitches[13]. The two earlier drafts of this passage on M379 clearly account for all pitches as members of either R2 or R4, identified respectively in green and red pencil. Although all repetitions are still present in the lowest draft, the composer tacitly eliminated the final C# attack in the particell, where, not surprisingly, he also failed to supply any serial elucidation for this bar.

Ramifications of the Reversed Notation, M375r

The reversed notation added to M375 (henceforth referred to as the M375r template) occupies four staves and employs two each of χ and δ rotations. Bars 79 through 81 evolve directly from this notation, via M378, but it also contains features which may be linked directly to the development of the immediately ensuing passage beginning in b.82, which was elaborated on the lower half of M365. The careful alignments between the four staves of M375r, together with the approximate notation at the end of the sketch where pitches appear only as noteheads, indicate that Stravinsky intended only one system. For ease of

[13] For remarkable examples of serially approved redundancy in Webern's music see the explication of b.50 and the ensuing canonic passage beginning in b.55 in the second (variations) movement of the *Symphony*, Op.21, in Bailey, *The Twelve Note Music of Anton Webern*, 44, 46, 102-103.

reference, Example 4:3 provides a clarification of the serial practice together with a single-stave reduction of the sketch.

The two upper staves unfold Pχ5 followed by the unrotated [Pδ]r (equivalent to [Pβ]r) whilst the lower staves present [Pχ]r (= [Pα]r) and Pδ (= Pβ)[14]. Thus although all forms are specified by the composer as deriving from the χ/δ chart, only one is unequivocally identifiable as a χ/δ rotation, while, in effect, R, with reversed hexachordal order, is stated in its entirety. The isolated A occupying the second stave could be thus derived from either Pχ5 or [Pχ]r, but its sole identification as order position '5' would seem to suggest a prolongation of the latter A. The second half of the sketch, which layers Pδ with [Pδ]r, is naturally highly pitch-redundant, but the more fully notated first half also displays striking symmetrical properties. The selection of the Pχ5 rotation seems to have depended on its opening order positions Eb/E adumbrating the conclusion of its [Pχ]r partner. Both rows, which share four pitch classes, are unfolded using related rhythmic schemes emphasising iambic and trochaic patterns (a suggestion of the first movement's trumpet 'fanfares'), the lower being a displacement of the upper non-retrogradable pattern (see Example 4:4).

There is ample evidence in the selection and distribution of row forms in the M375r template to suggest that it was Stravinsky's initial intention to develop harmonic and intervallic gestures from the end of the first block (bb.74-78) as sketched on the bottom of M379. Thus, the sustained A-natural of the M375r notation clearly picks up the same,

[14] The registral distribution of the latter, together with contour and pitch features of the Pχ5 rotation, suggests an influence from the M332(i) template.

similarly prolonged pitch from this late version of the opening block (cf. b.78), and is accompanied by other associated pitches, most notably the lower-register Ab with which it is struck in both sketches (Example 4:5). The quintuplet piano arabesque in b.77 is recalled by the disposition of [Pχ]r, whilst the opening simultaneity of the M375r template octave transfers the Eb/D piano dyad sustained throughout most of b.78[15]. Stravinsky's near-final adjustment to the oboe/cor anglais music in b.77 (originally assigned, with different rhythmic emphasis, to (solo?) violin in the M379 sketch), appears unexpectedly beneath late sketches for the end of the movement (bottom of M373). Here the intervallic profile of the M379 version is retained, but the rhythmic configuration is adapted to create further imitation of the falling E/Eb of both the piano arabesque (b.77) and the M375r [Pχ]r hexachord. As the gestures in b.77-78, which provide a basis for the M375r notation, have their origins in the upright M375 'concept', this must also be regarded as a possible basis for the concluding A/Bb configuration of the Pχ5 hexachord.

Elaborations of the M375r Template

Sketchleaf M378 is dedicated to the elaboration of the reversed notation of the M375r template into bb.79 through 81 of the published score, via three complete drafts. These drafts are directly aligned in a manner similar to those concerning the opening block on M379, and may thus be safely regarded as chronologically successive improvements, each

[15] It was perhaps this gesture that suggested the repeated Ds in the reversed M375 sketch.

modelled on the preceding draft. The first of these drafts makes several refinements to the M375r template, whilst in the second and third the entire block is transposed a semitone higher with additional indications for metrical grouping and the separation of instrumental and piano textures[16].

The principal alterations introduced in the upper draft of M378 concern registral adjustments to the first half of the M375r template and the substitution of one hexachord in the second half of the template. While the rhythmic alignment of the first half is barely altered from the template, Stravinsky experimented with intervallic expansions and contractions in the Pχ5 hexachord (lowering order positions 2, 3 (E,F) and 6 (Bb) an octave for example). He continued to make such alterations in the succeeding drafts, once again changing the distribution of the first order position of Pχ5 on the second draft. As this takes place in conjunction with the transposition of the block, one may surmise that the alteration is directly related to localised concerns about linkage between block boundaries (see below). In the second half of the sketch, the composer retained the M375r template's [Pδ]r but replaced the Pδ with the Pδ5, the partner of the Pχ5 hexachord employed in the first half of the sketch. Thus the revised version employs two simultaneously unfolding aggregates, [Pχ]r/[Pδ]r and P[χ/δ]5 (crossing between the staves). As noted in the earlier discussion of the second half of movement I, Pχ/δ rotations 2 and 5 both have mutually exclusive χ and δ pitch content and thus furnish aggregates. Because Pχ/δ5 generates

[16] Details of the instrumental texture are not specified, and Stravinsky did not preserve the piano dyads (doublings mostly emphasising compound i.c.2s in iambic and trochaic rhythm, derived from the M375r template) in the final score.

hexachordal levels equivalent to RI, the replacement hexachord holds four pitches in common with the original Pδ model.

The later drafts of the second half condense the middle portion of the sketch by introducing elisions at the hexachordal juncture. In the second draft, order position 6 of Pχ5 is struck with order position 1 of Pδ5, and the former is later elided with order position 3 of [Pχ]r, but otherwise the first draft is complete in all essential pitch details.

Stravinsky's decision to transpose the block, made before he had refined details, was undoubtedly connected with concerns about block linkage and pitch redundancy similar to those observed in the first movement. Left at its initial pitch level, the beginning of the block would have directly echoed many of the pitch events of bb.77-78[17]. Yet Stravinsky had apparently initially intended the sketch to do just this, suggesting that other factors, most probably its connection with ensuing music, may have been involved. Speculation along these lines would entail hypothesising that the composer outlined material for b.82 foll. between the two upper drafts on M378. Although there is no concrete evidence in the sketch material to confirm such a theory, it is not implausible given the physical layout of sketches for these bars on M365 and their evident derivation from the 375r template.

Stravinsky sketched bb.82-85, employing three staves, on the left-hand side of M365, directly beneath the second draft of the opening block. He initially outlined bb.82 and 83 only, as this sketch (here assigned to 'piano' despite the notated crescendo through the high

[17] The final version, though it echoes some pitch groups from the previous block (e.g. Eb/E, A/Bb dyads), creates considerably weaker associations than the earlier version.

Db!) is followed by a large hiatus in the rastration. Registral distributions of pitches in this fragment are final, but in terms of rhythmic outlines and direct pitch repetitions the notations are still several stages from the final version. Stravinsky then appears to have embarked immediately on a second draft, aligned directly beneath and followed by a similar rastration break. This draft incorporates improvements which approach the published score, although the ultimate rhythmic configuration of rising semiquaver and answering (descending) quaver septuplets (a tangible influence from the upright M375 'concept') is not yet established, and the consequent phrase is rhythmically a little more condensed than the final score.

The curious topography of the first draft offers important clues as to the compositional strategy involved here. Bars 82 and 83 unfold, in correct order, P hexachords δI and δ5, distinguished in the final score by their respective instrumental and rhythmic assignments. In the sketch, the first four order positions of the δ5 hexachord appear, parenthetically, above the main body of the draft, while the remaining staves run continuously beneath, incorporating the two concluding order positions of the δ5 hexachord. As the upper stave is unlikely to be an insertion, given the completion of its hexachord on the lower half of the sketch, the most likely explanation for this positioning of δ5(1-4) is as a fragment that acted as a starting point for the block. This view is supported both by the apparent provenance of the music and by Stravinsky's failure to identify its serial origin on this draft.

The M365 fragment unmistakably derives directly from the M375r template's [Pχ]r hexachord. Both sketches share immediate pitch repetitions, a generally descending contour, and, most significantly, direct intervallic and registral relationships, based on the identical content and remarkably similar serial orderings of [Pχ]r and Pδ5. The compositional strategy is the by-now-familiar one of using serial invariants to create fresh material from template configurations. Here T10 of [Pα]r = Pδ5, except for the negligible exchange of the final two order positions, which significantly do not appear on the upper fragment of the M365 sketch (Example 4:6(a)). The intervallic distribution of these pitch elements is remarkably close in both the template and the M365 fragment.

The δ1 hexachord of the M365 sketch, probably a subsequent stage of composition, also appears to relate, though in a less ostensible manner, to the M375r template. Here, the noteheads outlining the second half of the M375r template (forming a single system – see Example 4:6(b)) provide a skeleton for pitch and rhythmic details in the later sketch. Once again, immediate pitch repetitions are prominent in the template, with the sustained middle-voice B (with a duration of four attacks) mirroring the sustained A of the first half (cf. Example 4:3). The overall configuration of the template noteheads suggests the outline of b.82, the final version of which appears directly below its initial draft on M365. Pitch connections are especially evident in the registers assigned to the incipient C and to the F#/C# dyads in both notations, as well as the template continuation F#/G, suggesting the relative placement of the δ5 hexachord within the M365 sketch[18].

[18] There may also be an association between the septuplet figuration in b.82 and the seven notehead attacks of the M375r template.

To the right of this draft, Stravinsky outlined bb.84-85 in four separate framework sketches, together with a finalised version added to the bottom of the page directly beneath them. Extending from the serial bias of the preceding sketches, this short passage employs the δ2 and δ3 hexachords, which are melodically outlined in the box to the extreme right. Here δ2 is outlined in red pencil, with δ3 (immediately beneath) appearing in green, an expedient method of discrimination employed throughout the remaining sketches and the particell segment for these bars. The δ2 hexachord is an exact inversion of the δ5 hexachord used in b.83, a pure abstraction were it not for the fact that the registers assigned to first four δ2 pitches in the boxed sketch also invert those of the preceding δ5 'fragment'. Thus this incipient 'fragment' for bb.81-82 would also appear to exert considerable influence on the compositional *modus operandi* of bb.84-85. That Stravinsky intended to exploit common pitches (of which there are four) between the boxed hexachords is apparent in the registers that he assigned to the constituent pitches. Although in the boxed sketch each hexachord covers a wide range of approximately two octaves, shared pitches (viz. C, F, Gb,Cb) appear in the same octave positions in both. The three remaining drafts combine and elide the two hexachords in a variety of ways that serve to obfuscate the serial provenance but correspond closely to the intervallic spacing and registral distribution of the paradigmatic enclosed sketch. Like the M375r template and its derivations, these sketches make considerable use of sustained or repeated internal-voice pitches.

The two sketches immediately to the left of, and directly underneath, the boxed hexachords are very similar to each other, and both preserve the registers of this model. The latter is more orderly and confident in appearance, however, and displays some registral

experimentation towards the end (the low G, resulting in apparent duplications), thus designating it as the later sketch and the closest, despite registral dissimilarities, to the final version at the lower end of the page. The sketch on the bottom left of the four drafts is more remote in detail from these models, and also from the final version, and displays evidence of copious erasure and registral experimentation in red and green pencil. Although its exact role in the compositional process of these bars is difficult to establish, it too preserves significant elements of the original hexachordal registers. The instrumental assignments of the particell (identical to the published version) attempt to clarify hexachordal content, in that the harp plays exclusively δ3 pitches (minus the F) whilst the oboe, cor anglais and clarinets are used to project δ2.

The End of the Movement: New Serial Permutations.

Planning for the conclusion of the movement, bb.86-91, took place largely on M376, where various dissociated fragments of the music for these bars are to be found. Sketchleaf M373 assembles these fragments into a continuous draft and introduces further alterations and refinements. Two further sketchleaves relating to this passage, M374 and M377, are evidently drafts for the distributions of the two-piano and full scores respectively. The former, on the obverse of M373, contains a fair copy of bb.84-88, mostly on two staves. The solo piano is omitted from the texture except where necessary to delineate the unusual notation of b.87, where piano and oboe are beamed together. It is thus primarily a sketch

for the 'orchestral' part assigned to piano II. M377 also deals essentially with the unorthodox notation of b.87, this time represented in full score layout identical in all important respects to the published version.

M376, a square piece of printed manuscript paper, begins with sketches for b.89 on the top left-hand side. To the right of this, divided off by a vertical line (Stravinsky's customary precaution for non-consecutive ideas) are sketches for the preceding bb.87-88. The bottom half of the sheet consists of an outline (noteheads only) showing the derivation of the 'flute II' quintuplets in the first sketch, a rough draft of bb.86-87 (incorporating part of the top right-hand sketch) directly above this, and a later, near-final, version of b.89 (bottom right). This latter draft, which differs from the published score only in the matter of the demisemiquaver quintuplet later introduced into the second group of flute I, originally incorporated notational elements of the earlier sketch at top left. The original triplet bracket in flute I and the two groups of quintuplets instead of a single 'ten' in flute II, are visible here as *pentimenti*[19].

As with the immediately preceding sketches for the movement, all materials derive from the χ and δ rotations, but the notations for b.89 manufacture new intervallic successions by combining fragmentary excerpts from different rotations, in a manner similar to the first movement 'flute solo' template. In this respect it hardly seems coincidental that the sketch once again re-introduces the flute timbre (the first time it has been heard since movement I) as the vehicle for these new permutations. This tends to support the idea of some kind of

[19] The three-against-five idea may derive from the second half of the M375 upright template.

reciprocity, at least in a general sense, between serial structure and instrumental character and role-playing.

Though, like the first movement 'flute solo' template, such permutational techniques inevitably involve elements of apparent serial randomness[20], the preservation of recognisable elements from previous drafts demonstrates that they have their basis in template-like formations. The probable first sketch on M376, that for b.89 on the top left, begins with 'triangles and quadrilaterals'[21] drawn from three separate δ rotations, reminiscent of those employed in the manufacture of the 'flute solo' template (the δ1 rotation, using order positions 3,4,5 and 6, occurs in exactly this form towards the beginning of the first-movement 'flute solo' as does the χ1 used on the right-hand sketch for b.88). As these same δ rotations (i.e. δ 1, 3 and 5) are used in formulating bb.82-85 on M365, it seems reasonable to suppose a direct compositional link with this sketch.

Stravinsky formulated the final intervallic assignments for this serial collage as noteheads directly underneath, and proceeded to layer in the second flute quintuplets, the sequence of which he had already worked out in a parenthetical sketch at the bottom left-hand side of the sketchleaf. Both collages have in common the compositional prerequisite of shared pitch-classes at the junction of the constituent serial subgroups, whilst preserving nominal continuity of order position. In the first flute this is evident in the anaphorical pitch repetitions between groups, but in the second flute these redundancies are elided (to this

[20] Cf. *Poetics of Music* 53-56.
[21] See Stravinsky's programme note for *Movements* reproduced in *Memories and Commentaries,* 106-107.

end the composer has encircled them) as a means of pivoting between otherwise isolated serial subgroups. The composer has essentially fabricated an ancillary sequence of twelve pitches (though immediate internal repetitions mean that it is not an aggregate) from three rotations, respecting hexachordal division and nominal order-position within the rotational scheme. Thus, beginning with δ4 [6,5,4,3], the row proceeds via a shared F to δ2 [2,1] continuing along the second rotation, χ2 [6,5], this time via a shared Ab, to the unrotated χ [4,3,2,1], i.e. following the serially prescribed numerical order, but switching between rotations. This naturally creates a new intervallic succession incorporating certain elements familiar from preceding sketches. δ4, used here for the first time, has the same pitch content as δ2 (though naturally a different ordering) and thus reviews elements from M365. This becomes evident through a comparison of the first quintuplet (collated from δ4/δ2) with the boxed appearance of δ2 on M365 (cf. the intervallic assignments of the Cb/Gb/Fb group). δ4 was later re-used on the right-hand side of M376 to precede the first sketch by creating aurally intelligible pitch connections across bb.88 and 89[22]. In a similar way, the re-use of χ1 (in rotation) in the earliest sketch for the linking passage at b.86 (middle-left, subsequently elaborated on M373) evidently derives from its earlier appearance on the top right-hand sketch (b.88 of the published score), as evinced by the similar registral and intervallic layout of both sketches[23].

[22] E.g. the first flute's hexachord in b.88 is followed immediately by an accelerated partial retrograde, in a similar register, in flute II, b.89.

[23] The first revisions of this link, on the upper section of M373, still retain the treble register *tessitura* of this first sketch.

The 'portmanteau' group of ten demisemiquavers assigned to the second flute in b.89 was to assume further significance as a template within Stravinsky's ongoing compositional *modus operandi*. Its synthetic nature meant that it was simultaneously oblique to the work's principal serial configurations, and also malleable enough allow multiple references to them, thus acting as a potential prototype for formulating several kinds of material. Within the context of the fifth movement sketches (chronologically the next section to have been composed) this configuration forms the most conspicuous and purposeful use of template propagation technique within the entire *Movements* sketch collection.

Summary

The sources of the main third-movement template are less immediately apparent, suggesting the possibility of a new 'concept', although the visibly large amount of reworking may obscure an underlying ancestry with earlier material. The mechanics of its subsequent manipulation within the movement are, however, of particular interest. The principal template, dated '7 September 1958', together with an independent template found as a reversed notation on the same sketchleaf (M375), provides intervallic, pitch and rhythmic relationships from which almost the entire material of the movement is elaborated, through a variety of 'cloning' processes employing resourceful invariant-substitution methods. The material of the movement is mainly χ/δ derived, a feature which apparently reanimated surface allusions to analogous constructions within the first movement.

Sketches for the conclusion of the movement exploit new serial distributions, manufactured by juxtaposing, in a quasi-systematic manner, independent segments drawn from the χ/δ matrix. The similarities with the 'portmanteau' serial construction of the first-movement 'flute solo' template are emphasised here by the reintroduction of analogous timbres.

CHAPTER 5

Movement V and the Genesis of Movement IV

In his programme note for *Movements,* republished in *Memories and Commentaries*[1], Stravinsky alluded to the compositional problems involved in constructing this section of the composition, recalling that '[it] cost me a gigantic effort – I rewrote it twice'. This account alludes to substantial modifications to the composer's original conception not only of the movement's internal dimensions, but to those of the work as a whole, as the sketch material discloses. This chapter investigates the complex evolution of the fifth movement through the examination of relevant sketch materials, an unusually high number of surviving particell and orchestral drafts, and timing-sheets that reveal significant clues regarding compositional chronology and methodology in this section of the composition. The movement is additionally highly significant within Stravinsky's *oeuvre* for its inauguration of prototypical serial procedures, in the form of 'verticals' and rotational 'chains', which he was to develop and refine in successive compositions as a very personal and flexible method of pitch selection and organisation. For ease of reference throughout the following discussion, Example 5:1 presents a facsimile of the published full score of the movement with superimposed serial annotations predicated on the information provided by the sketch material.

[1] *Memories and Commentaries*, 106.

The Particells and Instrumental Drafts: Compositional Second Thoughts

The compositional problems encountered in this movement are clearly reflected in the unexpectedly large amount of duplicate particell and draft material available for study. The table of sketch materials in the appendix summarises principal points of information concerning these materials[2]. Particell and instrumental materials are easily distinguishable from the preparatory sketchleaves through their presentation of extended, continuous passages of the work in forms very close to the published version in matters of pitch and rhythm, though often disagreeing in numerous secondary details concerning instrumentation and articulation. Such drafts are also generally neater, with fewer visible erasures and alterations than the other sketches, and the material additionally includes some photocopied pages and transparencies presumably intended for subsequent duplication. Examples of the latter are three calligraphic pages preserved in the Paul Sacher Stiftung's *Sammlung Robert Craft,* henceforth 'Craft 1-3' (see the descriptions given in the taxomony of sketch material provided in Volume II).

The more fragmentary sketchleaf M366, in pencil with rastrated staves, is closer to the published score than earlier appearances of this passage on M371 and the particell draft 123-0011 (where, though the substance is identical to the published version, the barring is different)[3]. This, however, is primarily a draft for the two-piano reduction of the score, (as

[2] See Volume II, 7-9.
[3] This latter sketchleaf, though now integrated with the main *Movements* material in the Paul Sacher Stiftung, originally formed part of the *Robert Craft Nachträge* and is therefore cited using its full microfilm number.

with earlier movements, an interim stage on the way to the full score)[4]. Apart from its exact correspondence with the distribution of hands in the published two-piano score at this point, the sketch offers a clue in the form of an indication for use of sustaining pedal in bb.177 through 179 (not retained in the final two-piano score) although the published passage is scored for flutes with cello harmonics.

Stravinsky appears to have begun sketching the fifth movement on March 4 [1959], completing the first version on June 22, and the final version on June 28[5]. These are the only dates to be found within the sketch material for the movement. The first is located on the top right-hand side of M362, a very large rastrated sketchleaf (of similar proportions to those employed for particell drafts) consisting of multiple, dissociated sketches for all sections of the first half of the movement (i.e. to b.165) except for bb.145-150, which represent a later insertion. This sketchleaf is similar in appearance to M363 (first movement), though wider-ranging in content. The date is associated with a secondary template notation, cited in the preceding chapter, that is evidently derived from sketches for the end of the chronologically preceding (third) movement, and forms a focal point for surrounding sketches for V on M362. The morphology and subsequent ramifications of this template will be treated in greater detail below.

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[4] Cf. the two-piano score of the first movement (*Sammlung Margrit Weber*), which is closer in detail to the working-particell copy (with the same divergences of pitch) than to that of the calligraphic full score (q.v. Chapters 1 and 2).

[5] Stravinsky's eventful concert tours in Honolulu, Hong Kong and Japan, which spanned most of late March into early May 1959 (q.v. *Chronicle* 75-91), presumably severely curtailed time available for compositional work and account for the apparently lengthy gestation of the movement. In addition, the brief *Epitaphium* for clarinet, flute and harp, in memory of prince Max Egon zu Fürstenberg, patron of the Donaueschingen festival, was composed in the middle of work on the fifth movement. Dates provided on the top and bottom of the single sketch/particell leaf for the work in the Paul Sacher Stiftung (109:403) indicate that the piece was composed between 14th and 16th May 1959. Stravinsky informed Boosey and Hawkes of the composition of *Epitaphium* on 5th June 1959, adding that *Movements* was 'two-thirds composed' (letter in Sacher Stiftung).

The second date was added to the end of the large particell draft 123:0011 (henceforth 'particell III'), which forms a working continuity draft (with occasional rough sketches) for the entire second half of the movement, beginning in b.166, but incorporates an earlier, subsequently discarded, version of the work's coda (bb.188-193). The date is found immediately following this first version of the ending, which Stravinsky cancelled by crossing out, and re-wrote, in substantially its final form as published, on an unused part of the draft directly to the left of the discarded version.

The latest date, added almost one week later, is to be found on the last of three calligraphic transparencies in the *Sammlung Robert Craft.* The first two of these pages form a sequence reading continuously from b.150 though to b.163 of the published score. The last presents the music from b.181 to the end (incorporating the published version of the coda) and is additionally timed to 'about 2'40"'. Stravinsky calculated this timing on a piece of notepaper, M308/AM73(c)[6], adding together the total for individual blocks, beginning with the new coda (which had evidently just been completed). This is timed to 36", slightly longer than the first version of the coda, the timing of which is given as 32" on M368. The combined total for the movement, a rather optimistic 2'41", was then evidently rounded up and transferred to the Craft transparency, and was later used in the calculation of the overall timing (M308/AM73(a)) following the completion and calculation of similar

[6] The AM number represents the slide number of the *Movements* microfilm (box 3-11, item 18-21 at the Paul Sacher Stiftung) made under the supervision of Stravinsky's son-in-law André Marion in 1967-68 (see Craft, *Glimpses* 320). Though the sketch material included for the work is identical to that on the Paul Sacher Stiftung's microfilm 110, frame number 0308 (M308), the different distribution makes for easier reference in this instance, with four timing sheets included together on slide 73.

segmental timings for movement IV (M308/AM73(b)).

These transparencies may have formed part of a complete fair-copy continuity draft of the movement in practically its final form, as the distribution of music on the pages does not correspond with the major structural divisions of blocks within the movement, suggesting parts of a more extensive sequence. Though showing details of the instrumentation in most important respects, the drafts are still essentially part of a very detailed short score rather than rejected pages from the final full score, in that the exact distribution of some instrumental groups is not fully delineated (e.g. 'strings'). Despite its apparently incomplete form, the draft unequivocally fixes the revision of the coda, the first of Stravinsky's amendments, as having taken place following completion of the principal compositional work on the movement, specifically during the week of 22nd to 28th June 1959.

The second 'rewritten' section referred to in Stravinsky's programme note was the late insertion of bb.145-150 into the main body of the piece. The two particell drafts for the first section of the movement, sketchleaves M360/361 and M352-355 do not include these bars, although their musical text reads continuously. Example 5:2 shows the original sequence of b.144 and its continuation, eventually revised to form b.151 of the published score. He sketched the insertion on M370, together with three shorter satellite sketchleaves (M372(a) and (c), and M356/AM55(a)) that clarify and refine aspects of this draft, employing significantly different compositional procedures from those used in creating the surrounding material (see below). The latter part of the insertion, together with the

rewritten link bar, appears within the context of the continuity drafts only in the first Craft transparency (accommodating bb.150-157 of the published score), suggesting a very late date of composition contemporary with the replacement of the coda.

M360 and M361 (henceforth 'particell I') were evidently intended to combine in forming a single continuity draft of the first major section of the movement (bb.141-165 minus the insertion), and are assembled directly from the notations made on M362 and M359. The second particell ('particell II') which incorporates these bars, M352-355, is an ozalid photostat (a different draft from particell I)[7] taped into booklet format. This draft originally presented the same music, up as far as b.165, with minor corrections and additions entered on the photocopy in red pencil[8]. He subsequently extended this draft by adding bb.166-177 directly onto the distinctively sepia-coloured ozalid pages as a fair-copy holograph in blue ink. As Stravinsky habitually sketched in pencil at this period, the appearance of a non-rectifiable ink draft presupposes the prior completion of a detailed sketch for this passage. In fact, these bars correspond exactly to the more hastily drafted music on the top half of particell III (with less advanced preparatory sketches for these bars appearing on M369 and M371), which the composer evidently transferred with the intention of eventually assembling a complete fair-copy draft of the movement on particell II. His failure to do so surely relates to the late decision to insert bb.145-150, thereby rendering the draft obsolete and necessitating the redrafting evinced by the Craft fragments.

[7] The original transparency from which the copy was made does not appear to be extant in the Paul Sacher Stiftung's Stravinsky archives.
[8] E.g. 'celesta' indicated in b.144, quintuplet sign added in b.158.

The material thus provides convincing evidence that the constituent blocks of the particell were largely assembled in the order of the score, with the insertion and revised coda written last. The timing 0'35", which appears at the caesura between the pencil and ink layers of particell II (b.165), is a valid estimation of the duration up to this point in the score (i.e. the first half of the movement minus the later insertion) and is also found on the timing sheet M308/AM73(d). Stravinsky then added the ink draft of bb.166-177 to particell II, via preparatory sketches and the more extended draft on the top of particell III, and continued to assemble the conclusion of the work on the latter, clarifying the continuation from the preceding draft on the upper section of the particell by an arrow following b.179. Bar 166 was sketched, in several stages, at the beginning of particell III, as a buffer linking the first half of the movement to the later block of bb.167-177.

As discussed above, M362, begun on March 4th, contains dissociated early sketches for all the music later assembled in both particells I and II (i.e. bb.141-165), except for the instrumental lines in bb.158-165 of the published score (only the eventual piano part was sketched on M362) and the inserted bars, bb.145-150. The 'missing' instrumental parts of bb.158-165 were layered in on M359, which consists of two separate pages joined together to furnish the complete texture of bb.158 through 165[9]. Stravinsky evidently began by refining the piano part of these bars, which appears across the upper fragment, developing them from the rougher notations found on M362, and subsequently layered in the instrumental parts by attaching a fresh page underneath. A large number of *pentimenti*

[9] Marks in the paper show that the pages were originally stapled together. The Paul Sacher Stiftung has reconstructed the montage – a straightforward procedure, as the time signatures traverse both fragments.

visible on both fragments, in addition to serial elisions (*ausfälle*)[10], suggest that the composer continued to polish the sketch after the full texture had been established.

Stravinsky seemingly proceeded to make a continuity draft of this section as particell I (which shows little evidence of alteration or correction), later making a further, slightly adjusted[11], copy on transparencies (the origin of particell II), which could be used to produce multiple copies, if so required, for subsequent correction or alteration. An important feature of particell I, to be discussed in greater detail in the following chapter, is the appearance on its second page of a pasted fragment of sketch material, evidently a principal template, for the subsequently composed fourth movement. The detailed discussion below of the fifth movement sketch material will deal with the provenance of this notation, analogous in appearance to the pasted 'flute solo' template (M323) added to the first movement particell, and will thus offer further evidence that it was composed directly following completion of the first half of the movement. It thus contrasts with the hitherto prevalent method of extracting templates for new sections or movements from immediately preceding sketch material (i.e. usually the end of movements). Timing sheet M308/AM73(c) demonstrates that Stravinsky completed the fifth movement before beginning to elaborate and expand the principal fourth movement template, and also that he composed the opening block of IV (bb.96-109) first (although a version of the template later became bb.110-111). This sheet reveals the composer calculating the overall timing

[10] See Bailey, *The Twelve-Note Music of Anton Webern*, 49. Bailey attributes the first use of this term to Hans Jelinek (Bailey, 420, note 11).

[11] The alterations mostly concern instrumentation, e.g. the muted trumpet in b.153 was assigned to clarinet, in particell I. This was changed in the ozalid photocopy, and the doublebass pizzicato-glissando was introduced into bb.164-5, though with trombone still doubling bass clarinet pitches. The tied G# grace note in the piano, b.142, appears an octave lower in particell I.

of the music thus far composed. Beneath the aggregate timing of 2'41" for V (calculated from various segmental timings) the composer writes '+6 [= 8'41"]'. This additional six minutes is clearly compounded from the combined total (5'19") of the first three movements plus 41" of movement IV (both thus identified on timing sheet AM73(b)) this being the duration of the first block as indicated on the first page of the particell draft for IV (M349).

The 'premature' appearance of the fourth movement template, together with the late insertion of an additional large block of material and the re-composition of the coda, suggests a high degree of anxiety concerning the proportions of the piece. M362, on which Stravinsky sketched all the subsections later assembled in particell I, is headed with a large, incompletely erased 'IV', showing that the material was originally intended as the fourth movement. The timing sheet M308/AM73(d) confirms that Stravinsky had initially intended V to follow III, as the timings of I to III are provided, followed by the legend 'part of IV [*sic*] – 35"'[12]. This clearly refers instead to the first block of V, derived from particell II (i.e. bb.141-165 minus the insertion, timed thus on particell II as discussed above). None of the subsections of IV, identically timed on the both the particell for that movement and on timing sheet M308/AM73(b), equates with this figure. This and a number of other features concerning movement IV (see Chapter 6 below), suggest that the whole of IV itself may be an insertion which was not part of the composer's original plan.

[12] This is also confirmation that bb.141-165 (minus the insertion) was the first section of V to have been composed.

Stravinsky's concern with extending the piece was probably instigated by correspondence with the Swiss pianist Margrit Weber, for whom the work was commissioned, which took place during the composition of movement V. Stravinsky wrote to her, in French, on 23rd March 1959, concerned that she had found the idiom of the piece 'alien' (he had mailed movements I-III to her in February)[13]. Her response does not appear to be extant in the Paul Sacher Stiftung's Stravinsky archives, but its general substance may be inferred from Craft's diary entry in *Chronicle of a Friendship* for 17th April 1959.[14]

The M362 Template and the Origins of Movement V: Methods of Template Morphology using Serial Invariants

As discussed above, Stravinsky made initial notations for all sections of the first half of the movement, as far as b.165 (minus the inserted bars 145-150), on the very large sketchleaf M362 (12 by 18 inches), later assembling the various dissociated notations into a continuity draft on particell I. He apparently began with the dated template notation, which appears in a parenthetical position at the extreme top right-hand corner of the page (treble clef implied). The notation of this eleven-pitch template as an irrational group of ten demisemiquavers followed by a single notehead, unequivocally reveals its source in the late third movement sketch M376. These two sketches, along with the later drafts of b.89,

[13] Letter (in French) in Paul Sacher Stiftung, partially quoted in translation in *SPD*, 453. See footnote 17 regarding the photocopied material sent to Margrit Weber.

[14] 'As a result of a letter this morning from the Webers in Zürich, who have commissioned his *Movements* for piano [*sic*], I.S. says, "I think I will have to add another minute or two of music"'. *Chronicle*, 85-86.

are the only appearances of this rhythmic configuration to be found within the sketch materials for the work[15]. Once again, the selection of this material as a template model for future development seems to depend largely on considerations of serial valency and simple convenience (as M376 would presumably have been immediately to hand on the composer's music rack). Issues of serial invariance once more surface as a primary means of generating new technical and compositional possibilities from antecedent material.

As explained in the previous chapter, the ten-pitch sequence on M376 is a serial collage, synthesised in a quasi-systematic fashion from several discrete χ and δ rotations. The eleven-pitch template on M362, though its provenance is not supplied by the composer, is, conversely, readily identifiable as deriving from a single rotational unit, namely $P\chi/\delta5$[16]. The first five template pitches unfold $\chi5$ order-positions 2 through 6 (i.e. omitting the initial Eb of the hexachord), while the second six present a retrograde statement of the complete $\delta5$ hexachord. Despite the ostensible divergences of serial procedure between the two notations, the direct manner in which the rhythmic configuration of the M376 sketch was transferred to M362 compels one to seek additional features that explicate the conspicuous use of the M376 configuration as a model for the M362 secondary template.

A detailed inquiry into the intervallic properties of both notations reveals that Stravinsky was once again deliberately employing 'cloning' processes using serial invariants to generate a template which, while accommodating new technical and serial potential, retains

[15] The notation in demisemiquavers confirms that Stravinsky drew his model from the preliminary sketches for b.89, not from the particell draft (which like the published score is beamed in semiquavers).
[16] This is one of the two aggregates resulting from the χ/δ rotations. Later derivations from the M362 template confirm this interpretation of the serial provenance.

significant intervallic features of its model. In other words, he sought rotations which were close enough to accommodate prominent features of the M376 model, whilst containing enough new material to allow subsequent divergence from it.

The absence of any suitable clones available directly from the charts meant that Stravinsky had to resort to transpositional methods in his search for an appropriate serial invariant here. Transposition of the M376 model a semitone higher immediately reveals its connection with the pitches of the $\chi 5/[\delta]5r$ rotation that constitutes the M362 template (see Example 5:3). Here the final quintuplet of the M376 model (equivalent to $R\alpha$, order-positions 2-6) is reproduced, with exact replication of intervallic structure and contour, though in retrograde, in the $\chi 5$ hexachord of the M362 template. The composer's desire to preserve this feature of the model in transposition explains the otherwise curious omission of the initial pitch of $\chi 5$. Stravinsky concluded the M362 template configuration by completing rotation 5, using its δ hexachord. This does not conform directly to the M376 model, but its first two pitches (C, G) are likewise a transposition of those that begin the model, explicating the retrograde presentation of the $\delta 5$ hexachord (i.e. the preservation of boundary configurations). The hexachord additionally contains other constituent pitches of the model (i.e. F#,C# = Db,Gb).

It is not clear whether Stravinsky ever intended employing the M362 template in its original configuration, as it does not reappear within the sketch materials (however, see the discussion of bb.161-2 below). The affiliated date demonstrates that it was entered some three weeks after the completion of the third movement particell (dated 14th February), by

that time evidently drafted in its final form, as Stravinsky posted calligraphic copies of the full and two-piano scores to Margrit Weber before the end of February[17]. Although the notation of the template demonstrates its ancestry specifically in M376, rather than later drafts of this motif (which employ the semiquavers of the published score), the M362 template was clearly not a residual element of the third movement sketches, but a conscious method of launching composition on, and creating possibilities for expansion in, a new section of the work some time after completion of the preceding music.

The most obvious initial application of the M362 template was as a starting point for what eventually became the piano music in bb.158-165. Stravinsky drafted the elements of this passage, in a form very different from the final score, across the entire top of the sketchleaf. This sketch, the legibility of which is rendered difficult in places by copious erasures and alterations, is nevertheless clearly marked with serial superscriptions identifying its origins in a chain of χ and δ hexachords, the first systematic use of this device of spiral consecution in Stravinsky's *oeuvre* (see the annotated transcription in Example 5:4). This chain originates out of the template notation, which furnishes the last eleven pitches of the sequence. This is drafted directly to the left of the template and clearly evolves directly from it, as can be seen by the assignment of registral positions, which are identical to the template except for the exchanged octave positions of the B and A. In a later draft found directly beneath the template, with metric configurations approximating those of the

[17] Stravinsky notified Margrit Weber of the photocopied material for the first three movements in a letter of 23rd February 1959, requesting her not to show it to anybody. He indicated that she would receive twelve pages of full score (the total number in the complete holograph is thirty-one) and fourteen pages of the two-piano reduction (total of the final holograph, twenty-seven). This material was evidently dispatched the following day, as the envelope, postmarked 24th February, is preserved alongside the score material in the Paul Sacher Stiftung's *Sammlung Margrit Weber*. The pianist acknowledged receipt of this material in a letter of 4th March. (Letters in Paul Sacher Stiftung).

published score, the composer reverted to the exact registral and contour formulation of the template.

The notation of the original draft is curiously reminiscent of the 'flute solo' template pasted onto the first movement particell (M323). Like this, the M362 draft is limited to treble register material, and employs largely regular rhythmic patterning (as far as can be ascertained from the untidy sketch) with frequent acciaccaturas[18]. Once again, a similar musical archetype appears in conjunction with a monodic line derived from χ/δ combinations, ostensibly a legacy of the template's ancestry in the flute music of M376. The ultimate version of the χ/δ chain (the piano music between bb.158 and 165), partially sketched beneath the original draft, and, in more complete form, directly aligned across the bottom of the page, is surprisingly distant from its model in many respects, though its vaulting capriciousness maintains a generic similarity with the earlier 'flute solo' archetypes. Significantly, Stravinsky employed an adapted version of the original M362 template for the re-entry of the flute in the middle of this section at bb.161-162. This flute phrase, unfolding the complete R form, has, like its model, eleven (in this case semiquaver) attacks (i.e. disregarding the grace-note at the end of b.161), with a suggestion of the irrational values of the template in its opening septuplet configuration. The general contour is directly modelled on that of the template, and intervallic features from the second half (δ hexachord) of the template are retained as a result of the transpositional relationship between the two row forms (Example 5:5). The first hexachord of R is equivalent to the δ5

[18] Whether consciously or not, several patterns occur in identical registral distributions both here and in the M323 template, e.g. δ1: 4,5,6; [δ3]r: 6,5,4; and δ3: 3,4,5.

hexachord at transpositional level T5, but rotated by one degree. Thus a transposition of the template at T5 would produce the exact pitch-intervallic arrangement projected at the beginning of the flute phrase in b.161. Although layered in (in its ultimate form) at a later stage on M359, together with the rest of the instrumental music of this section, this phrase constitutes the movement's most direct affiliation to the configuration of the original template.

Influences on the Fourth Movement Template, M360

Significantly, Stravinsky also appears to have extracted his fourth movement template directly from this material. As mentioned in the preceding discussion, he added this new template sketch as a pasted fragment to particell I, the two-page draft collating the materials initially drafted on M362 and M359. The template appears on the second page, which begins in b.161 with the flute allusion to the M362 template. It may be surmised that Stravinsky took the decision to insert the fourth movement, or at least to revise the sequence of his original scheme, at this point, both because of the unusually early appearance of a new template, and because the given timing for this section of V on M308/AM73(d) (35") clearly indicates that the composer still regarded it as the fourth movement of the work. Although the new template became the basis of expansion for IV (and was incorporated in a revised form as b.110-111 of the published score)[19], the

[19] See Chapter 6

composer also appears to have referenced it in composing the inserted bars 145-150 (cf. bb.145-6).

Although the M360 template is not dated, its unusual texture, dominated by a sustained group of very high pitches, suggests a conscious imitation of the sounds of *Gagaku* music, with which the composer was so impressed on his Japanese tour at this time[20]. The later instrumental assignment of the template idea to a combination of flutes/piccolo and string harmonics evokes the characteristic sound of inverted pedal clusters traditionally sustained by the Japanese mouth organ, the *sho,* beneath which the remainder of the music unfolds. Other influences from indigenous Japanese music may be traced in the fifth movement. The pizzicato-glissandi heard in bb.165, 167 and 170 (the first a later addition to particell II – see footnote 11), may similarly recall Kabuki drum glissandi[21]. (Stravinsky had, however, used similar effects, in isolation, previous to *Movements* e.g. in the *Brevis Motus Cantilenae* movement of *Canticum Sacrum*, b.265). Unmistakable, though, is the overt reference to the idiosyncratic Kabuki drum accelerando, heard on the flutes at bb.177-9[22]. Stravinsky had provided an early intimation of his intentions of incorporating such allusions into his music at a press conference given in Tokyo on 14th April 1959:

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[20] See entry for 24th April 1959 in *Chronicle*, 89-91.

[21] Stravinsky was present at his first *Kabuki* performance on 8th April, later attending *Noh* and *Bunraku* theatrical/musical presentations. See entries for 8th, 19th and 20th April 1959, in *Chronicle* 80, 86-89. The composer apparently entered the phrase 'Kabuki !!! Formidable !!!' into his diary on the first of these dates (quoted in *SPD*, 450).

[22] Stravinsky later identified a similar *Kabuki* reference in Stockhausen's *Carré,* in his brief review of that work republished in *Themes and Conclusions*, 25. But the gesture is also characteristic of *Gagaku.*

> Stravinsky, speaking before a news conference here, said that he has been inspired by Kabuki music. He indicated strongly that several musical ideas are already forming in his head, but warned the newsmen that "The audience will not recognise it [*sic*] when they hear it". He said he had been impressed by the "rhythmical orderliness of Kabuki"[23].

As the composer's first direct encounter with *Gagaku* seems to have taken place only on 24th April[24], it may be surmised that the fourth-movement template must have been devised on or after this date, i.e. following receipt of the Weber's letter on 17th April. As only the first section of V appears to have been drafted by this date, the above chronology heightens suspicion that the fourth movement was added in direct response to the Weber's letter, as a means of extending the duration of the piece. Various features preserved in the template sketch point at its direct extraction, presumably via some preliminary experimentation at the keyboard, from the flute configuration in bb.161-2 (Example 5:6). Both the flute configuration and the template notation employ the unrotated R form (these being among the very few appearances of the complete R within the fifth movement material) and the template notation is pasted to M360, the second page of particell I, which commences at the top of the page with b.161. Partly erased notations (noteheads) on the left-hand side of the pasted fragment are evidently preliminary investigations for the template. Two tentative drafts are present, both employing registral distributions familiar from the flute

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[23] Quoted in *SPD*, 450. Cf. also Willi Reich's interview with Margrit Weber in 'Strawinkys "Klavierkonzert" für Margrit Weber': 'Strawinkys 'Movements' gemahnen mich an einen chinesischen Teppisch mit abstrakten, mathematischen Mustern, und er selbst sagte einmal, diese Schöpfung sei 'chinesische' [*sic*] inspiriert'. I am grateful to Frau Weber herself for providing me with a copy of this article.

[24] See footnote 20, above.

configuration. The intervals and registers of the flute's opening F/G and later C/B dyads, together with its ensuing D, are preserved here, and are retained into the main sketch directly above[25]. This sketch, incorporating the complete R form of the series, continues onto the lower staves with the preservation of the flute's final E/Eb together with a re-appearance of the struck C/B and F/G dyads. Further details of this template and its subsequent expansion will be addressed in Chapter 6.

The Elaboration of Sketchleaf M362

As discussed above, Stravinsky elaborated the fifth movement template on M362, incorporating it as the end of a χ/δ hexachordal chain. The chain begins with δ1/[χ1]r, and continues with [δ2]r/χ2, [χ3]r/δ3, δ4/[χ4]r, χ5/[δ5]r (this latter hexachordal pair incorporating the template configuration). Thus the selection proceeds down through the rotations in numerical order from 1 to 5, using both the χ and δ of each rotation, and always combining opposing polarities, forward and retrograde ('back' in Stravinsky's nomenclature), within each pair. The sequence in which the χ and δ are alternated within each rotation is not however entirely rationalised, resulting in direct consecution of several χ and δ forms in the centre of the sketch. This systematic method of generating the chain is ostensibly implicit in, and extended from, the template formation itself, which encapsulates

[25] The octave signs added to the main sketch elevate the overall *tessitura* of the passage into the stratospheric regions of the Gagaku *sho*. The erased sketches demonstrate that the composer initially conceived the music in the lower octave, i.e. as an outgrowth of bb.161-162. Cf. also the intervallic structure of the opening piano gesture of IV (b.100) with the flute model (b.161).

the elements of succession and polarity present in the subsequent expansion. Stravinsky probably initiated the chain with the δ1 hexachord because of its affinity with the template [δ5]r. These hexachords, uniquely, share the same pitch content, and both contain the same adjacent triad group of Ab, Gb, and Db as well, of course, as the same initial boundary pitch, C. Thus the chain is circumscribed at either end with similar pitch sequences, emphasised by comparable registral distributions.

Directly beneath the χ/δ chain, on the left-hand side of the sketchleaf, Stravinsky entered early notations for the directly preceding passage, bb.153-7 in the published score. This sketch experiments exclusively with various distributions of the I form of the series. Directly underneath this again, extending across to the right-hand side of the sketchleaf, is found the near-final form of this passage, with additional material added or layered in (the early version of bb.151-2, together with the second trumpet and clarinet figuration in b.153-154), and adjustments made to the incorporated earlier sketch. A draft for the opening of the movement (bb.141 though 144) is found towards the top right-hand side of the page, with a clarification of bb.143-44 aligned beneath the end of the sketch and segregated from surrounding material by the composer's habitual wavy vertical line. The desired sequence of the individually drafted blocks is shown by horizontal red-pencil arrows which indicate the direct connection of this latter sketch to the near-final draft of bb.151 through 157 on the left-hand side of the page. The cramped appearance of the lowest draft, the developed version of the piano music in bb.158 through 165, testifies to its elaboration following the completion of the other sketches on the page. Stravinsky elaborated as far as the middle of b.163 in the published score, using the rough sketches

across the top of the page as a guide, but was unable to complete the draft on the same line, as a result of the position of the clarifying sketch for bb.143-44 in the lower right-hand corner. His initial solution was to employ a duplicate pair of diagonal red-pencil arrows to indicate that the ending remained the same as the metered sketch directly beneath the template (developed from it at an early stage). He later decided to clarify the situation, copying out the 'template' ending in the small space available directly beneath the lower sketch, and unsuccessfully attempting to erase the arrows.

The row forms employed in the sketches for bb.151-157, on the left-hand side of the page, are closely interrelated. The first sketch employs the complete retrograde of I followed by its adjacent rotational level Iβ1/[Iα1]r. The subsequent sketch, directly beneath, adds I (this time with forward polarity) and Rα2, and is virtually identical to the final version. The rhythmic plainness of the earlier version's [I]r presentation (considerably adapted in the succeeding draft), its similar (and often identical) intervallic patterning and contour, and the extended *tessitura*, together with the total number of attacks (11, due to the verticalisation of the adjacent order-positions 3 and 4)[26] suggest a close affinity with the first movement I-template on the top of M338 (Example 5:7). The succeeding draft, though it imposes a new rhythmic scheme, retains all registral dispositions proposed here.

The second half of the sketch, continuing logically with the hexachords of the I1 rotation, is more developed and, apart from the lower octave position assigned to the Eb (D# in the published score, bb.155-6), approaches the final score in all but minor details. Stravinsky

[26] This is, of course, the same number of attacks as in the M362 template.

may have been prompted to use the I1 rotation in this particular disposition (in the β hexachord, presented first, order positions 3 and 4 (verticalised) occur ahead of the remaining pitches) by its intervallic affinities with the χ/δ chain. The [δ2]r link in this chain, aligned directly above the sketch, has analogous intervallic and ordering properties (at T1) with the modified I1 form (see Example 5:8). The only non-I form present in the final version of this passage, the R2α hexachord introduced into the succeeding sketch, has an oblique relationship with these forms, in that the β hexachords of both R2 and I1 are identical with regard to both content and internal ordering (in retrograde). This allows b.155 to perform overlapping roles as part of both an R2 presentation spanning bb.154-55 and an I1 presentation spanning bb.155-157, an ambiguity emphasised by the use of the clarinet timbre across these bars (see Example 5:9)[27]. Stravinsky was possibly prompted to this duplication and convergence of β forms as a partial, serially-based, vindication of the conspicuous pitch-repetitions already apparent in the earlier sketch for bb.155-56.

[27] In particell I, Stravinsky also assigned the C#/G# in b.153 to clarinet, altering it to muted trumpet in particell II. The C# is part of the preceding I statement while the G# is the first pitch of the R2 hexachord. Thus the unexpected appearance of the muted trumpet sonority in the later version (additionally distinguished by its contrasting piano dynamic and slurred articulation) may be regarded as identifying the transition from I (brass) to R2 (clarinet). The draft on M362 additionally assigns the Ab/Bb dyad in b.157 to clarinets, identified by the use of red pencil.

The Verticals

Although the opening of the movement (bb.141-44) appears in virtually its final form on the M362 draft (right-hand side), there is evidence of a significant amount of erasure and alteration to both the piano part and the R presentation aligned directly above it, later assigned to the first trumpet and clarinet. Although not specifically identified as such on the sketch, the piano pitches unfold, for the first time in Stravinsky's *oeuvre*, twelve 'verticals' furnished by a superimposition of the four primary serial orders represented in the row charts, namely P, R, I and RI. Thus, unlike Stravinsky's customary later practice, hexachordal rotation/transposition schemes, represented here by the χ and δ forms, play no role in the manufacture of verticals in this work. Stravinsky drew up a separate chart for this purpose, which is preserved along with the sketch material for *A Sermon, a Narrative and a Prayer* in the Paul Sacher Stiftung archives, and has also been published in colour facsimile[28]. This sketchpage, which will be subsequently identified as SNP/0[29], consists of two centrally-placed, boxed charts, inscribed 'verticals', each of which contains superimposed single hexachords from all four series forms. Twelve pitches within each box are pencilled over in red. The verticals resulting from the superimposition of the four serial forms are numbered from one through twelve, and are transcribed in close position on the left of the sketch, with preservation of the original registral assignments of the boxed charts. Guiding arrows confirm the source of the chords.

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[28] *SPD*, top half of plate 20, between pp. 400 and 401. Inexplicably, given its distinctive content, the plate is identified in the accompanying caption as '1964. *Variations*. A sketchbook page.' This sketchleaf is discussed, and partially transcribed, in Spies, 'Impressions after an Exhibition', 6.

[29] The chart is also found on frame 64 of the André Marion microfilm.

Above the six chords extracted from the first box, Stravinsky wrote 'verticals β's and α's of the 4 forms', above those of the second box 'verticals α's and β's of the 4 forms'. In each case the character 'β' is pencilled over in red to correspond with the similarly coloured pitches in both the boxed chart and its concatenation[30]. Here 'αs' and 'βs' evidently relate to the unorthodox nomenclature of Stravinsky's original serial charts (M309 and M310), where the designation 'β', attached to the first hexachord of both the R and RI forms, respects its distinctive intervallic content. Thus each box of the chart contains two α and two β hexachords. In the lower box, the two upper staves (the β hexachords of P and I) are entirely in red as one would expect, but in the upper box there is inexplicable deviation from this scheme. Stravinsky's original intentions in identifying the provenance of the chord pitches is unclear, given that later sketches elaborated from such verticals largely fail to project these hexachordal distinctions, though occasional traces of this stratification may be detected in some of the later instrumental assignments (see below). There are also discrepancies to be found between the original chart and its adjacent concatenation, in that the colours are reversed (generating the 'correct' assignment) in vertical III. Also, closer examination of the boxed verticals (visible to some extent in the facsimile) shows a number of different colour assignments as tentative, or erased, layers, which may simply reflect some confusion in the initial stages of constructing the chart. Verticals I, II and III all show evidence of adjustment, whereas the second half of the upper box, together with the whole of the lower, are free from such alteration.

[30] As will be seen, verticals sketched on M368 also bear corresponding colour assignments.

Directly beneath the concatenation chart is a draft for the cello music in b.170, with connecting lines to demonstrate its derivation from the sequence of verticals. This draft is close to the published score in all essential details, post-dating the more primitive sketches for the passage included on M369. The context of this earlier sketch (see below) also assists in explaining the apparently random combination of verticals used here.

On the extreme right of the SNP/0 sketchleaf, the composer duplicated the content of the boxed charts at the transpositional level T4. The pitch material generated by this transposed redaction of the 'verticals' chart was not employed in the fifth movement itself, but instead formed a template model for the fourth interlude, that would later be inserted directly before the movement[31]. In this respect it ostensibly represents a later addition to the sketchleaf, a subsequent reapplication of fifth movement materials in a new context (see Chapter 7).

Claudio Spies's article dealing with the present sketchleaf[32] includes an early explanation of the transpositional relationships, relating to the combinatorial properties of the series, which pertain among the resultant verticals[33]. Thus, as Spies points out, the verticals fall into the transpositionally related pitch groups I and V, II and IV, and III, VI, VIII and XII. However, his somewhat supercilious assertion that 'the relationships thereby implied

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[31] Interlude IV was the last section of the piece to have been composed. Sketchleaf M319, one of two drafts relating to it, is dated '16/viii/'59', the only dated interlude sketch and the latest dating available for the piece. Stravinsky informed Margrit Weber of the completion of the work on 15th August [*sic*] and posted the interludes to her on 20th (letters and postmarked envelope in Paul Sacher Stiftung, Igor Stravinsky Collection (Stravinsky *Nachlass*) and *Sammlung Margrit Weber*).

[32] Claudio Spies, 'Impressions after an Exhibition'.

[33] Although Stravinsky did not elaborate a chart of verticals according to his later rotation-transposition methods, such a procedure would have resulted in extreme redundancy among the constituent verticals (reproducing identical chords in several places within the chart).

appear to have eluded Stravinsky's attention or concern – as did unfortunately a good many more fundamental concepts of twelve-tone theory' is not only condescending to the composer, but appears to miss the point by judging Stravinsky's idiosyncratic serial methods against a putative paradigmatic ideal. While the superimposition process creates twelve different verticals, invariant dyads result within each α and β group, clarified by the final colour assignments of the concatenation. This is especially evident in the α and β hexachords of both the P and I forms (Example 5:10). The significance of these dyads to the composer is clear from their preservation, this time in the R and RI forms, within the transposed chart later used as a basis for interlude IV[34]. The wish to retain this material evidently influenced the choice of transpositional level and clearly points to an inherent understanding of serial possibilities on the part of the composer.

The resultant verticals are deployed in several sections of the movement, although as Spies notes, never in the numerical ordering designated in the SNP/0 chart. Also, for the most part these verticals are not struck as chords, as is usual in Stravinsky's later works, but are variously distributed to create more diverse textures, a technique that further obfuscates their provenance. All twelve verticals are presented in reordered sequence at the opening and again between bb.167 and 171. These complete chains appear at the beginning of each half of the movement (as determined by the constitution of the particell material), and show some evidence of similar treatment. The insertion between bb.145 and 150 is also derived from a similarly complete chain of verticals, but in this respect is a special case that will be dealt with separately below. Finally six further verticals selected from the chart appear between bb.184 and 186 (see Example 5:1).

[34] See the detailed discussion of this interlude in Chapter 7.

Before discussing the role of these verticals within the movement, it will be useful to provide a brief outline of the chronology of this second half of the movement as far as it may be ascertained from the sketches. The music was sketched principally on M369, M371 and M368, before being assembled on particell III. Two satellite sketchleaves, M366[35] and M367, postdate this continuity draft, as does the altered version of the coda added onto the particell itself. Bars 167 though 179 were apparently composed first, as they were transferred (from the lower sketch on M369 and the upper on M371) to the upper half of particell III, which also includes rough sketches for the link at b.166. The composer then added this entire block as a holograph ink continuation to the ozalid copy of the movement's first half (bb.141-165, minus the subsequent insertion, bb.145-50) to form particell II. Returning to M371 he continued with rough sketches for bb.180 to 183. M368 demonstrates that the original coda was composed before the link (using six verticals in the form of block chords) in bb.184-186, as the very rudimentary outline sketch for the latter concludes with an incipit referencing the coda sketch directly above[36]. Stravinsky transferred all of this material, including the block-chordal version of bb.184-186, to the lower half of particell III (123:0011 (b) and (c)). The separate levels on which the blocks are positioned here seem to confirm that they were added immediately (with only minor alterations) in the order of their composition. This half of the page displays a considerable number of *pentimenti* traceable to the earlier sketches, showing that the composer established the continuity of the blocks before resolving much of their internal detail. M367 is a later reworking of the texture, distribution and duration of the six verticals in

[35] See discussion above.
[36] In fact the incipit simplifies the rhythmic notation of the original sketch.

bb.184-186. Though close in detail to the final score, the partitioning into piano and orchestral textures (later abandoned – see the designations on the left-hand side of the sketch) conceals an earlier conception of the instrumental distributions, related to the serial structure of the constituent verticals (see below).

In the unique sketch for the opening passage of V on M362, the pitches constituting each of the twelve verticals are encircled, those occupying the upper box (box 1) of the chart (i.e. verticals I-VI) in red pencil, the remainder in normal grey pencil. This reveals that the compositional strategy here involved the simultaneous unfolding (i.e. superimposition) of the two boxes as separate strata, but with the order of verticals preserved within each of the boxes. This explains the superimposed appearance of the boxes in the chart[37]. Because the rate at which each box is unfolded fluctuates, new linear juxtapositions of the verticals, caused by the staggered appearance of the two strata, are created within the scheme. In general, box 1 verticals unfold in a slightly higher *tessitura* from those of box 2, but the distinction is inconsistent and does not assist with aural identification:

[Box 1] I II III IV V VI
[Box 2] VII VIII IX X XI XII

Stravinsky was able to sketch the music directly onto M362 without preliminary drafting, excepting the modest amount of alteration indicated by erased earlier layers, and without

[37] Spies's transcription, in 'Impressions after an Exhibition', though it indicates the boxes and the hexachordal division of the concatenation, places both in a linear sequence, thus contributing towards his subsequent misconception of the vertical orderings as 'odd but not entirely capricious'.

supplementary serial identification, because the visual distribution of the SNP/0 chart acted as a template guide for the general pitch configuration of the passage. Further details of the music evidently arose from experimentation at the keyboard within the overall framework established in the chart template. Although most of the verticals underwent significant degrees of internal manipulation, including occasional elision with adjacent chords, derivation from the chart is sometimes manifest. Thus, vertical I occurs in b.141 in the exact register of the chart, while its partner from the opposite box, vertical VII, is preserved two octaves lower than the chart, but with identical intervallic spacing.

The real importance of the SNP/0 sketch thus lies in its topography. Coming so late into the composition of the work, it acts as more than merely a supplementary serial chart. While Claudio Spies's transcription (q.v. footnote 37) does not alter the actual substance of SNP/0, by visually redistributing its elements he treats it as an abstract chart of serial possibilities, rather than as a direct template model. This sketch offers an important clue as to the symbiotic relationship between template model and keyboard experimentation within Stravinsky's compositional technique. Template models, which may themselves emanate from either abstract speculation or keyboard improvisation, provide material for subsequent manipulation and expansion at the piano. The presence of templates is thus a residual manifestation of the composer's predilection for composing at the piano.

The final layer of the music in bb.141-144 consists of an unfolding of the complete R form spanning the trumpet and clarinet lines (partly doubled by pizzicato violins)[38].

[38] The doubled final C in b.144 forms part of vertical VI and was added to the clarinet line at a late stage. It is not assigned to clarinet in the particell drafts.

Surprisingly, this notation reverts back to M387, the draft containing the earliest sketches for the second movement, as a template model for its present configuration. A comparison of the M362 draft with the earlier R presentation at the top of M387 (Example 5:11) reveals a large number of remarkably close intervallic, registral and rhythmic similarities. *Pentimenti* on M362 suggest that the first version may have been even more faithful to its model – the fifth order position B having been originally notated on the crotchet beat, for example.

The order in which the two remaining sequences of verticals are presented is also directly inferable from the visual appearance of the SNP/0 sketch. The second sequence of twelve verticals, occurring between b.167 and 171, is similar in approach to the opening of the movement. Significantly, Stravinsky returned to the original model to generate material for the opening of the movement's second half. He sketched a preliminary version of the verticals on the top of M369, this time presenting all twelve as struck chords, without elision, in the sequence VII, I, II, VIII, IX, III, IV, X, XI, V, VI, XII[39]. As was the case on M362, the order of verticals is not identified on the sketch, suggesting both that it was predetermined, and that the composer considered the pattern to be easily inferable from the chart alone. In fact, the sequence, though it results in new linear juxtapositions, is a variant on that of bb.141-144 and is once again best considered as a symmetrically patterned, simultaneous unfolding of both boxes:

[39] As Spies (op. cit.) discusses, vertical VII, the second chord in b.168, should correctly contain A instead of the published score's F. The serially authorised pitch is present in both the M369 sketch and subsequent particell III copy but (as Spies remarks) is already adjusted in the later particell II.

I II III IV V VI
VII VIII IX X XI XII [bb.167-171]

This sequence is ostensibly a displaced variant of the earlier one, retaining the general interaction between the boxes (pairings are preserved, though reversed towards the end of the sequence, e.g. X, IV becomes IV, X):

I II III IV V VI
VII VIII IX X XI XII [bb.141-144]

The M369 sketch also shares general rhythmic features with the M362 verticals, in its use of dotted and triplet figurations, though these features are associated with different verticals in the later sketch. Once again some of the chord spacings (VII, IX) are derived directly from the chart. Verticals III and IV show evidence of alteration and were originally in the treble register in a dotted (iambic) rhythm later transferred to the end of the sequence. As at the opening of the movement, the sequence of verticals is followed by an I form of the row, in this case the rotation Iα1. The spacing of the sketches on M369 shows that this was drafted independently from (and probably after) the chain of verticals.

The later version of the passage, sketched directly beneath on M369, is very close to the final score, but does not yet suggest instrumental separation. Its alignment, the transfer of dynamic markings, and the surprising appearance of keyboard fingerings (partly retained in

the published score in b.167), show that it was derived from the first version through experimentation at the piano. Many features of the first version are retained, with the principal alterations occurring at either extreme of the vertical chain, where *pentimenti* are visible. Elisions are introduced at these points[40], together with registral adjustments and horizontal expansion of the chords, those relating to verticals VI and XII probably being concerned with effecting the transition to the general configuration of the ensuing I rotation.

Although, as Spies observes, the sequences do not project the transpositional relationships of the verticals, there is some evidence in Stravinsky's ultimate instrumental assignments that he was conscious of, and concerned with, certain pitch relationships. However their use suggests that the composer did not feel constrained to a systematic projection of these features, instead employing them in a more confined manner as localised form-building elements. Verticals IX and XII are both assigned, in bb.169 and 171 respectively, to a combination of flutes and tremolando clarinets using identical, punctuating rhythmic configurations (probably deriving directly from the upper-stave sketch of b.173 on M369, but ultimately from the opening gesture of the work). Although forming different pitch class sets (and thus not transpositionally related) the verticals share the pitches Db/F (C#/E#), which are assigned to uniform timbres, flutes in b.169 and clarinets in b.171. The flutes, at the top of the texture in both cases, further exploit the remaining interval-class 4 in vertical XII to create close association between the two gestures.

[40] For example verticals V and XI are conflated, as Stravinsky's instrumental sketch on SNP/0 demonstrates.

The final sequence, this time comprising only six verticals, occurs between bb.184 and 186 and also necessitates taking into account the visual appearance of the chart for a full understanding of the compositional procedure involved. It appears to have been devised as a linking passage between the section ending at b.183 (sketched on the lower half of M371) and the coda, and as such appears beneath the draft of the first coda on M368. An attached incipit for the beginning of the coda, metered and notationally improved from the upper sketch, confirms its later compositional status. The six chords in the sketch present chart-derived verticals in the order XI, IX, VII, II, IV, VI.

The sequence of verticals was decided using abstract permutational techniques. Stravinsky's numbering of verticals on M368 (appearing directly above the chords) differs from that of the SNP/0 chart and from his later designations (in blue pencil) on particell III. In this instance the verticals are regarded as being numbered from one through six in each box (rather than from 1 through 12), so that the selection of three verticals from each box (odd numbers in retrograde in box 2, followed by even numbers in forward sequence in box 1) constitutes a complete and interlocking numerical sequence from one to six, (i.e. 531246).

Stravinsky outlined these six chords mainly in notehead form in the treble register. This registral distribution offers a clue to its derivation from the SNP/0 chart, where moreover the first chord of the sequence, vertical XI (V)[41], appears pencilled in beneath its source in the concatenation. All of the chords are revoiced from their models in the chart, but, as

[41] The bracketed numeral refers to the alternative numbering of the vertical on sketchleaf M368, where this differs from that of the principal chart, SNP/0.

was the case with the earlier sequences of verticals, certain features of the source remain intact. In the present instance this invariance appears to be connected with the α/β colour schemes of the chart, which are transferred across to the M368 sketch along with the rubrics α-β (over the first three chords) and β-α (over the remainder), both βs penciled over in red (Example 5:12).

The red-pencil notes, which thus correspond to the β hexachords of the chart, retain the precise spacing of the chart in the case of verticals XI (V), IX (III) and II, and are uniformly octave displaced (preserving the interval) in verticals VII (I) and IV (though *pentimenti* show that VII (I) may have been initially notated at its original pitch). With the exception of vertical IV, where the α pitches are both displaced an octave higher, each vertical also retains one α pitch in the register of the original chart. Though hardly a systematic transformation of the chart chords, this sketch perhaps offers clues as to how the composer may have experimented with chord-voicings at the piano. As Stravinsky revised some of these distributions (particularly towards the end of the sequence) in the later appearance of the passage in the particell III draft, 123:0011(b), his approach would seem to have consisted of aural-based trial and error at the keyboard, stimulated by more abstractly based initial decisions.

This combination of instinct and calculation would also appear to influence the selection and ordering of verticals. Requiring an inserted link to connect the preceding block ending at b.183 with the coda, the composer consulted the chart concatenation, choosing vertical XI (V) as his starting point ostensibly because of its direct pitch relationship (the G/B

dyad) with b.183 (a feature emphasised by the colour-coding of the chart) and entered the newly-voiced chord directly beneath the chart model. The later horizontal expansion of these verticals on M367 (which also adjusts the time frame of the chords proposed beneath the M368 sketch, and realised in its subsequent transfer to particell III) originally intended a differentiation of the boxes through a partitioning of piano and orchestral timbres.

The Coda Revision and the Inserted Block

The Coda

The first version of the coda, sketched on the upper section of M368, is constructed, as confirmed by Stravinsky's accompanying serial designation, from a statement (complete except for the final order position, G) of the 'simple' P rotation V. A very slightly revised version of this coda, dated 'June 22/'59' and now accommodated within an unrotated P statement[42], was subsequently added to particell III. Most features of this version's first hexachord were reused in the final revision added to particell III, made sometime between 22nd and 28th June 1959, immediately before commencement of work on the fourth movement[43]. The chronology of this revision strongly suggests an association with the placing of an additional movement (eventually IV) following directly after V, an

[42] The only divergence between the pitch content of the two sketches is the appearance of F (instead of D) in the second bar of the earlier version, as a consequence of the different row forms. The composer was able to retain the initial sustained D into the revision because it constitutes a member of the preceding vertical VI. The retained ending of the earlier version required the omission of the final two order positions of P (G, F).
[43] Though sketch materials for the fourth movement are undated, the particell was completed a month later, on July 30th 1959.

impression substantiated by the content and character of the coda sketches. The most striking characteristic of the first version, deleted in the revision, is its concluding (and hitherto unprecedented) sustained/repeated chord, with its low registral bias. This can surely only have been intended to adumbrate and balance the opening of the fourth movement with its proposed high *tessitura* 'Gagaku' chord, which is accumulated in an identical manner by sustaining individual pitches from an unfolding primary form (in this case RI). The opening melodic and rhythmic gestures of the coda also presage the beginning of the fourth movement, more evidently so by comparison with the early sketch (using RI) for bb.96-99 on M349 (see Chapter 6). Many of these common features remain evident in the published version of the fourth movement opening, e.g. the intervallic and rhythmic patterning of flute II, b.96, flute I, bb.97-98 and the solo cello bb.98-99 (see Example 5:13). In addition, the accelerating motion through the sustained chord of the first version is unlikely to have been envisaged as a satisfactory conclusive gesture to the work.

Stravinsky deleted the sustained chord in the revision, evidently regarding it as superfluous following his decision to insert the additional fourth movement before V[44]. Much of the contour, voice-leading and intervallic patterning which opens the coda's first version, and (more directly because of the identical row form) the whole of the final version, have clear affinities with, and appear to be modelled on, the upper-left notation of the first movement's early 'scratchpad' M332(i). This is especially evident in the opening contour, the register of the low C and the final voice-leading motion in both these sketches (Example 5:13).

[44] Interestingly, the sustained repeated chords of the rejected coda bear an unmistakable generic resemblance to that of Stravinsky's next major opus, *A Sermon, a Narrative and a Prayer* (cf. b.272 foll.).

The brief, vertical-based, link that the composer inserted immediately before the coda (bb.184-187) was also initially drafted in the form of sustained chords and was transferred without significant modification to the particell III draft. Stravinsky's entry of the link in the particell, realising shorthand annotation of rhythmic schemes below the M368 sketch, suggests that he considered the chordal version to be definitive. The M368 rhythmic schemes furnish the duration of each chord, together with proposed metres (four bars - cf. particell III), and are clearly influenced by the durational framework of the first coda sketch directly above. The contrast with the textures and rhythmic configuration of the final version (sketchleaf M367) is therefore surprising, and suggests that the revision, horizontally expanding the chords, was similarly prompted by the final decision on the placement of IV and the consequent alteration of the ensuing coda.

The Inserted Block

Stravinsky composed the late insertion between bb.145 and 150 on M370, refining some details of its voice-leading and instrumentation on the small satellite leaves M372 (a) and (c), and on M356/AM55(a). The main M370 sketch, in grey pencil and green crayon, is very heavily worked, with much evidence of erasure and revision, some of which remains visible as *pentimenti*. The final layer of the sketch approaches the published score in all but minor details and is timed to sixteen seconds (an accurate estimation for the complete block). The inserted passage proceeds directly to a revised version of b.151 (with

instrumental assignments including clarinets, bassoon and trombone, differing significantly from the published score).

The serial provenance of the published version of the passage is somewhat recondite, and it is significant and unusual that both M370 and its satellites fail to clarify this circumstance by identifying constituent serial forms. This omission suggests both that the composer did not consult the row charts directly during construction of the passage and that he considered the provenance to be unambiguous, thus hinting at its predetermination in a template source. Numerous elements of the M370 draft further indicate a method of template composition employing as a model the immediately preceding block of bb.141-144, with its elements unfolded in retrograde. Of primary importance in this regard is the observation that, unlike the other related passages of vertical-derived material in the movement, the insertion reworks *both* layers of the earlier texture (verticals *and* overlaid linear R presentation)[45]. Piano fingerings added to the sketch (see the triplet quavers on the lower right-hand system, first bar, eventually assigned to flutes), together with the high number of *pentimenti*, once again intimate that this reworking of the earlier material was formulated in an instinctive manner via experimentation at the keyboard.

Pitches distinguished in green pencil on M370 unfold the P form of the series, identifying with a retrograde presentation of the trumpet and clarinet lines (employing R) in bb.141-144, together with a simultaneity (end of the upper system, including the acciaccatura C#) readily identifiable as vertical IX (see annotated transcription of the sketch in Example

[45] The inserted block, at 23 quavers duration, is considerably longer than its model, which occupies only 16 quavers.

5:14). This material was eventually assigned to the string parts of bb.145-147 and the harp part immediately following. The remainder of the texture here is also based on a modified retrograde presentation of the vertical chain heard in the opening block.

Beginning in the second bar of the sketch, the following sequence of the twelve verticals is unfolded: VI, XII, XI, V, IV, X, III, IX, II, VIII, VII, I (cf. the sequence in bb.141-144 above). The ordering of these verticals (in retrograde) and of the horizontal expansion of their constituent pitches, their pacing and general alignment with the parallel P presentation, together with many of the registral and intervallic features are carried over from, or directly influenced by, the template model.

The music on the sketch opens with the latter half of the template model's R sequence (order positions 9-12, introduced in b.143 by the punctuating pizzicato in first and second violins), unfolding, in retrograde, the five R pitches originally assigned to clarinet in the model[46]. Much of the spacing of this gesture (for which several rejected drafts are discernible as underlying layers) is evident in the model, e.g. the intervallic quantities of the Eb/E and A/Ab(G#) (the latter additionally retained in the same register). The first element of the vertical chain, vertical VI (upper stave), follows in incomplete form. Missing are the pitches C and E, the latter possibly eliding with the second order position of the opening P presentation[47]. *Pentimenti* indicate that Stravinsky originally sketched the C in the first bar two octaves higher than in the model, but later erased it, treating the

[46] See footnote 38.

[47] These are the only vertical constituents not assigned to piano in the M362 model. They already appear in the closely affiliated harp timbre on the M362 sketch.

original appearance in b.144 as a pivot common to both passages.

A brief review of the remaining verticals shows that, while the composer respected the general demarcation of the constituent chords (i.e. the passage can be subjected to plausible serial parsing), pitch combinations are more directly patterned after the interactions found in the template model. The composer probably used the sketch for the opening block on M362 (which encircles the constituent pitches of each vertical) as his template, thus allowing for the relatively intact reappearance of the vertical combinations on M370.

In b.146 (rhythmically and texturally related to the fourth movement template on M360), verticals VI and XII unfold the same dyads as in the model (b.144). In the following bar, the piano grace-notes are clearly influenced directly by the analogous configuration of b.144, as the autonomy of the verticals is violated at this point (the only instance of this occurrence) by introducing the E of vertical XI before the completion of vertical XII by the subsequent G. Vertical V, and the ensuing vertical IV, also preserve similar dyadic constructions to the model (the B#, eventually appearing in piano (only) in b.148 is not a constituent of any vertical at this point, but simply represents an interpolated doubling of the P-form's seventh order-position, C). The F# from vertical X is struck simultaneously with vertical IV pitches (b.148), an association evidently suggested by the grace-note occurring in the template model at this point.

The most conspicuous links with the template model, however, are preserved in verticals I and II, which, significantly, demarcate the extremities of the new 'palindromic' opening

section, bb.141-150. Both these verticals preserve clearly perceptible rhythmic and registral features of the original. In both occurrences of vertical I, the octave-doubled F's with grace-note figuration are assigned to identical registers, and are accompanied in both instances by a third F in the P/R linear presentation. (Stravinsky later revised the coordination of the M370 sketch to ensure that the P-derived F in b.150 would coincide with vertical I, as in the model). The Eb in vertical I is elided in the M370 sketch and final score with the beginning of the following I presentation in b.151). Vertical II, assigned to flutes in b.149, preserves the registers, intervals and triplet rhythm of its model.

The coordination between the two serial layers of the texture is not identical in both the template and its clone. Nevertheless, the template evidently provided a general framework for the coordination of both layers within the insertion, in that pitches of the P form are associated with, or occur in very close proximity to, the corresponding verticals of the template.

Template Patterning in the Central Blocks.

Sketches for middle blocks within each half of the movement, together with the link bar 166 that joins the two halves, also reveal significant transfer of material. Stravinsky layered in the instrumental lines of bb.158 through 165 on the lower fragment of M359, and drafted bb.180-183 in two independent blocks on the bottom half of M371. The link

bar, as discussed above, was composed in several stages directly onto the beginning of particell III (123:0011). All three passages have significant associations with the retrograde I presentation sketched on the top left-hand side of M362, which provided specific material (in the piano) for bb.153-154 (Example 5:7).

The instrumental lines drafted on M359, beneath the near-final version of the χ/δ rotation chain in the piano, are identified as deriving from P1β (trombone) and P1α (shared by bass clarinet and trombone), the complete R form (flute, as discussed above), P3 α and β (clarinet) and the isolated I5β hexachord (bass clarinet and trombone). The instrumental assignments of the sketch differ in two places from those of the final score and are largely retained in the later particell copies. In the published version, the bass clarinet enters earlier (in b.159) and the last hexachord is allocated largely to bass clarinet.

The P1β form, which begins the instrumental line, opens with the same dyad as the M362 [I]r template (picking up the piano B in b.157), with the same pitches and interval echoed later in the line by the end of the clarinet P3β hexachord (b.163), which is identical in content and ordering to the template model β form (though presented in retrograde)[48]. In both instances the B/C# dyad is isolated from the remainder of the hexachord, and the two forms share similar rhythmic gestures in the F/C dyad, where the acciaccatura may have been prompted by the [I]r template's unique simultaneity at this point.

[48] Similar pitch/interval configurations are also preserved in retrograde in b.161. Cf. trombone 1, bb.158-159 (B/C#, F#/G) with flute, b.161 (F, G/F#, C#/B).

Pentimenti reveal that much of the contour and registral disposition of the P1α hexachord near the centre of the draft, assigned to bass clarinet with trombone entering on the final pitch (as in the published version), initially appeared in a variant on the right hand side of the page beneath the draft for b.163. Whether or not Stravinsky originally intended the hexachord to be used at this exact point is unclear (the spacing and alignment with the top sheet would suggest not), but enough of the erased draft remains visible to show that he initially outlined the gesture with the E notated as a grace note and the D an octave higher. The registers of the remaining pitches are identical to the final form of b.160. An erased low Eb visible in the semiquaver rest of this bar in the draft demonstrates that Stravinsky originally employed the unrotated Pα form, almost identical, of course, to the final hexachord. The 'duplicate' Eb in b.161 would then have been supplied solely by the piano part at this point (end of [χ3]r, which is still present in the sketch). Evidently worried by the problem of such duplicates, Stravinsky reconstructed the piano part of b.161, where *pentimenti*, including alternative registers for the Eb, are visible, before finally eliding the note with the replacement P1α rotation (as demonstrated by the vertical red pencil line in the sketch). Other pitches eliminated in the piano part of the final score are the bass A in b.161 (probably as a result of its immediately preceding duplications in both the piano and instrumental lines) and the second acciaccatura C in b.162.

Stravinsky used the registral configuration of the rejected Pα hexachord as a template for the passage beginning in bb.180-183 drafted on the lower part of M371. It appears on this sketch as the first hexachord of the 'O' (i.e. P) form (bottom left), with the second hexachord unmistakably following intervallic assignments of the early scratchpad's upper-

left-hand sketch, M332(i). This combination (later assigned, with a single registral revision for the C#, to trombones and pizzicato lower strings) undoubtedly resulted from the similar intervallic properties present in the dispositions of both α hexachords (cf. the intervallic structure/contour of order positions 2, 3, 4, 6 and 7 on M371 and M332(i)). These intervallic similarities are reinforced by a prevailing rhythmic regularity (adapted in the final version of bb.180-181)[49] common to both M371 and M332(i).

Pitch material for the other layers of textures in these bars derives from [δ5]r followed by [χ5]r (eventually the piano part of b.180 and beginning of b.181) – the opening C here representing a completion of the preceding RI4 statement in the flutes, and as such clearly bracketed off from the remainder of that line – and I5 (trumpet plus the remainder of the piano part in b.181)[50]. Though crude in comparison to the published score, almost all of the pitch material, general alignment, prevailing rhythmic design, and registral disposition of the final version are already present in this sketch. The demisemiquaver notation common to all layers of the sketch suggests, in conjunction with the composer's stipulation of equal semiquaver pulsation across the sections, a different conception of the tempo in b.180 foll. More specifically, the notation of the χ/δ-derived layer, considered together

[49] In this respect the ultimate version has more in common with M332(iii), the later adaptation of M332(i).
[50] The serial provenance revealed by this sketch is interesting in view of the vehement exchange of correspondence concerning this passage between Claudio Spies, Eric Walter White and Robin Maconie, published in *Tempo* 103, 104 and 105. The exchanges, arising directly from Spies's article ('Impressions after an Exhibition') in *Tempo* 102, offer several individual interpretations of the passage, none of which matches the actual provenance as disclosed by the sketch. The difficulty arises partly from the correspondents' lack of awareness of the χδ rotations and partly from their insistence on viewing the piano's first C in b.180 as a component of the adjacent row forms, thus implying that all three have analysed the passage in isolation from its directly preceding context. As regards their disagreement over serially inadmissible pitches, the sketch reveals conclusively that the only deviation from the prescribed row order occurs with the grace-note B natural in the piano in b.180 of the published score, which should 'correctly' read Bb. The change was probably instituted deliberately in order to create the anaphora with the ensuing left-hand pitches at the beginning of b.181.

with its serial provenance, suggests an association with the M362 'March 4' template, although the disposition of the sketch, for instance the verticalisation of the opening pitches of [δ5]r, is ostensibly constituted to pick up the conclusion of the preceding RI4.

Stravinsky continued the passage in a separate sketch (for bb.182-183) on the lower right of M371. This draft, identified as piano music, unfolds, in prescribed order, both hexachords of P2, with a revised version of the same music, verticalising the triplet adjacencies, entered directly beneath. This distinctive triplet configuration of the earlier draft hints at a template source, in that it unmistakably alludes to the piano gesture in b.154, first sketched on M362, which once again derives from the [I]r form on that sketchleaf. The first version's triplet figuration (unfolding the P2β hexachord), the registral/intervallic assignments of which were retained into the final score, replicates not only the rhythmic patterning of the M362 sketch, but also most of its intervallic quantities (Example 5:7). This correlation is supported by the beginning of the α hexachord, where further direct, though less extensive correspondences with the [I]r β hexachord are invoked. This is possible because the P2 rotation is very similar to [I]r at the transpositional level T3. Under this operation, the ordering of the source is preserved, apart from the exchange of the final two order positions within each hexachord.

The brief link at b.166 comprises of a statement of R3, the first (β) hexachord of which is also identical to that of the [I]r form. Stravinsky's first notation for the link, sketched directly on to particell III, separated from the remaining music by a large break in rastration, is notated entirely in the treble register in semiquavers, in a manner somewhat

suggestive of the flute figure (unfolding R) in bb.161-162. The second version of the music (which more closely resembles the vaulting profile of the original [I]r on M362) is aligned directly beneath and matches the final version in terms of registral assignments, though it is still some distance away in rhythmic placement. The beginning of the ensuing continuity draft incorporates a still later revision which is very close to the published score (the beginning of b.166 still awaits rhythmic consolidation), and shows the link in context for the first time, with the initial C# displaced to the end of the preceding block.

The row forms at this juncture are all closely related. The P3 form unfolded in the clarinet in bb.162-163 is, naturally, an exact retrograde of the link's R3, while the isolated I5β hexachord in bb.164-165 also corresponds (with partial rotation) to the ordering of these β hexachords[51]. This allows the link, the first extended appearance of unaccompanied piano in the movement, to echo, in retrograde, much of the preceding instrumental pitch sequence (especially the bass clarinet (originally trombone) in bb.164-5).

Summary

The fifth movement is propagated from a dated secondary template (4 March [1959]) explicitly derived (through the substitution of invariant row components) from a late sketch for movement III. Though not incorporated directly into the composition, this template

[51] This is Stravinsky's denomination for the hexachord, as found on M359. However, as the initial C# (junction of bb.163-164) is elided with the end of the clarinet's P3 form, the ultimate version could with equal validity be regarded as an unrotated Iβ with its final order position supplied by the piano C# in b.165.

ostensibly supplied pitch, intervallic and rhythmic material for a number of subsequently composed passages in the movement.

Of particular interest in the sketches for the movement is the treatment of verticals, prototypes of the composer's later vertical technique, derived in the present case from horizontally aligned primary series, rather than from the columns of the rotation-transposition matrix. The unorthodox layout of the ancillary row chart employed for these constructions furnished a single template guide for the ordering and manipulation of several constituent vertical chains (presumably in conjunction with ongoing keyboard experimentation), which appears to have been more influential than any internal relationships exhibited by the verticals.

Four chains of verticals appear in the completed movement, one of which is a late insertion derived from the immediately preceding opening block, which is employed intact (though in retrograde) as a template model for the serial treatment and gestural composition of the insertion. This insertion constitutes one of a number of adjustments instituted following Stravinsky's sudden decision to extend the length of the composition. These include alterations to the original coda, apparently resulting from the composer's vacillation about the positioning of a proposed additional section, eventually forming the present fourth movement. That this movement is also an insertion, and not part of the original plan for the piece, is suggested by (among other information) the parenthetical appearance of its main template amid sketches for the first half of movement V. This secondary template, later the basis of the earliest fourth movement sketches, shows predictably clear affinities

with adjacent fifth movement material, but the date of its 'premature' extraction may be more accurately determined by noting its explicit allusions to *Gagaku* music, which Stravinsky had first encountered in Japan towards the end of April 1959.

CHAPTER 6

Movement IV

Preliminary Observations

Working materials for IV consist of thirteen small fragments (in addition to the template sketch pasted onto the fifth movement particell page, M360) as well as three typically large-format particell pages, M349, M350 and M351. Details relating to all these materials are summarised in the appendix table[1].

Each page of the particell draft for IV is concerned with only one of the three similarly structured blocks of the movement, (henceforth (i) [bb.96-109], (ii) [bb.110-122] and (iii) [bb.123-135]). The sheets are paginated, with the identifying rubric "IV" appearing on the obverse of the final page. Timings are given at the end of pages 1 and 2, with an overall timing for the movement at the end of 3, together with the date 'July 30th '59', establishing that composition was completed approximately one month after that of the fifth movement[2]. This date was added to the end of the published full and two-piano scores as the date of completion for the entire work, although the four interlude insertions were not written until August of the same year (see Chapter 7).

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[1] See Volume II, 10.

[2] Stravinsky calculated the overall timing of the movement on M308/AM73(b) as 1'55", using the timings from the first two particell pages (41" + 36" (= 1'17")) together with an estimated duration of 38 seconds for page 3.

In terms of serial technique, this movement is the most elementary and closely circumscribed in the work, drawing its pitch material exclusively from the four basic forms of the series, with little deviation from prescribed orderings. Surprisingly, in view of the advances in serial procedure encountered in the chronologically adjacent fifth movement, it eschews any use of verticals or rotational chains (indeed, no rotation techniques of any kind are present). As a natural result of this technical transparency, it has also acquired a place as the most frequently and fully analysed movement in the literature on the piece[3]. Another gift to analysts lies in its ostensible promotion of gestural repetition through its employment of quasi-isorhythmic and isotextural schemata acting across the three major subsections – a device which may in itself be regarded as a specific category of template construction. Although there is no evidence to confirm whether or not Stravinsky commenced work on the movement with this scheme in mind as a pre-compositional groundplan, the first intimation of its application occurs only towards the end of work on block (i) – see below.

These facts, together with the rapidity of its composition relative to the earlier movements, would initially seem to suggest that the composer deliberately simplified his compositional methods here, and imposed a prevailing isorhythmic framework, in order to expedite compositional progress as a result of the unplanned additional music seemingly prompted by the Weber's letter of April 17th.

[3] See for example Cooke, *A Guide to Musical Analysis*, 312-322 and Müller, 'Igor Stravinsky: *Movements* for Piano and Orchestra', 136-138.

Evidence of Divergent Drafting Methods

Although during this period, following his return to Hollywood from Japan, the composer was less occupied with concert work, with consequently more time available for composition[4], the physical appearance of the sketch material for IV supports such intimations of an abrupt divergence in compositional approach. Unlike working materials relating to the earlier movements, where larger sketchleaves containing variously redrafted stages or multiple sketches for diverse passages are commonly found, the non-particell material for IV consists exclusively of very small fragments. Stravinsky's earlier sketches for the work, together with known information relating to his studio environment, offer important clues as to his *modus operandi* here.

Photographs of the composer's studio piano during this period of his career show clearly the manner in which he attached sketchleaves to the enlarged music rack or drawing-board using a variety of clips and adhesive tape. The well-known photograph dating from the 1960s, published as a plate in *Selected Correspondence*[5], shows characteristically sized particell pages mounted on the left-hand side of the rack, with smaller sketches and other documents clipped or taped onto the remaining space to the right. When in place, the particell would have occupied a large proportion of the available space on the rack, leaving only a relatively cramped area for other ongoing sketches. The inconvenience of this situation meant that it would have been to the composer's advantage to delay mounting the particell either until he felt its absolute necessity, or unless sufficient room was available.

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[4] See Craft, *Chronicle,* 75.

[5] See the (unnumbered) plate in *Selected Correspondence* II (between 338 and 339). The exact date is not specified, nor is the visible sketch material identifiable.

This would have been particularly true in the earlier stages of composition for a movement or section, when diverse preliminary sketch materials were in use. Mounting of the particell was evidently necessary when the composer was refining details, making alterations, or even composing passages or layers of the texture directly onto it. He could, however, obviate the need for attaching a particell in the earlier stages, establishing continuity by copying passages onto smaller strips at the music rack and pasting them to the particell pages, as appears to be the case with the particell drafts for movements I and III. Significantly, the pasted fragments in these instances relate exclusively to the initial sections, including the opening bars, of both movements, the locations of which could hardly have been in question. As material accumulated on the particell, it came to assume the focus of the compositional activity[6], and with consequently fewer loose sketches in continuous use, would have become a permanent feature of the rack, allowing later sections to be copied directly. Pastes found on the particells of I and III[7] are thus unlikely to be related to problems of continuity or revision, but appear to be simply pragmatic solutions to limitations of space.

The visual appearance of the sketch material as a whole supports this theory. The only other comparable large-format, particell-sized pages (12 by 18 inches) to found within the sketch material, apart from the particell drafts themselves, relate to the initial stages of composition for movements I and V. These are M363, for the beginning of the first

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[6] See, for instance, Vera Stravinsky's letter 'to a Cousin in Moscow' published as an appendix to *Themes and Conclusions*, 304: '. . . quarto-sized strips of thick white paper are clipped to [the plywood drawing-board]. These are used for the pencil sketch manuscript. Smaller sheets of paper are pinned to the board around this central manuscript, like sputniks.'

[7] The division of music across the pastes on the first particell page of movement I does not, in any case, correspond to that of the preliminary sketch materials.

movement, and M362, the dated sketch outlining the entire first half of V, both sketchleaves containing a network of multiple, dissociated notations. As initial sketches, problems of rack space would not have arisen, although even M363 was originally folded in half. Later sketches, particularly advanced drafts consolidating details of layout or instrumentation, tend towards a much smaller format, as available working space decreased[8].

The fourth movement material, with its consistently small-format pages, would suggest that, in contrast to previous methods, the composer worked simultaneously with the particell from the beginning. This is borne out by the uncommon appearance of marginal sketches on all three particell leaves.

The M360 Template and the Distribution of Row Forms.

The M360 'secondary' template, which, as discussed in the previous chapter, had its origins in fifth-movement materials drafted on the same page, consists of sixteen pitches arranged into eight struck, rhythmically defined, dyads (Example 6:1). Though not specified as such, the music begins with a statement of R and concludes with four further

[8] Such sketches are made mostly on small notepaper pages (subsequently rastrated by the composer) or on trimmed sheets of printed manuscript.

pitches that echo earlier dyadic groupings and intervallic structures[9]. In subsequent sketches for the same passage (eventually bb.110-111, i.e. the opening of block (ii)), appearing on the second particell page M350, the row forms are confirmed as Rβ/α (i.e. the complete, correctly ordered, R form) with the concluding redundant pitches identified as order positions 5, 6, 1 and 2 of Rβ. This apparently arbitrary selection may be explained with reference to elisions made possible by the sustaining of certain order positions. The M360 template may be more readily explained as evolving from R followed by its retrograde, P, using the Eb/E dyad as a fulcrum, and omitting the Bb/Ab dyad to avoid immediate repetition. The A/D and C#/F# dyads sustained from the R presentation are not subsequently restruck, but are elided with the high-pitched chord formed from order positions 3, 4, 7 and 8[10]. In the subsequent sketches, most of the template dyads are rhythmically skewed, generating the contrapuntal texture and row ordering of the published score.

The structure of the template notation thus gives rise to a redundant hexachordal buffer that is additional to the four consecutive twelve-tone statements that constitute each section of the tertiary structure. The only other deviation from the strictly ordained serial ordering occurs with the reversal of hexachords in the final R statement of the movement:

(i) RI, R, I, RI (ii) R, [Rβ], RI, R, P (iii) RI, P, RI, Rα/β (i.e. reversed hexachords).

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[9] Order positions 9 and 10 of this R presentation are notationally unclear, but the serial context, together with later sketches for bb.110-111, which incorporate a version of the template configuration, confirms the dyad Ab/Bb.

[10] The following of a row statement by its retrograde form is a standard procedure for creating temporal expansion in many of Stravinsky's earliest templates. See the discussions below on the C115 pocket notebook sketches and *Introitus* materials (Chapters 9, 11).

RI is the predominating row form, employed five times, with R coming next in the hierarchy (four complete appearances in addition to the isolated hexachord in (ii)). The remaining primary forms, I and P, appear only once and twice respectively in the movement. Although all three subsections of the movement are based on an audibly similar patterning of events, (ii) is more loosely constructed than the closely analogous (i) and (iii). These latter two begin with similar RI-derived gestures and unfold corresponding features of rhythm, texture and contour, while (ii) is more independent, a characteristic endorsed by its row formation. All three sections are identical in their use of timbre except for the consequent gestures in bb.98-99, 111-112 and 125-126, which are differently orchestrated on each occasion.

The Compositional Chronology

Stravinsky seems to have begun, not with block (ii), which incorporates the M360 template, but with the composition of block (i), as suggested by the aggregate timing shown on M308/AM 73(c)[11]. Like M363 and M362, this was sketched directly onto the large-format particell sheet M349 (a working draft), with only one loose sketchleaf – M318(a) – being employed in the process.

[11] See the preceding chapter. The aggregate timing (8'41") consists of the timings for V (2'41") plus 6', evidently comprising I, II and III together with the first block only (0'41") of IV.

The top half of M349 consists of rough sketches for all sections of (i)[12], with the lower half of the page constituting a more refined continuity draft of the block with fully worked out instrumentation, identical in virtually all respects to the final score[13]. An approximate outline of the movement's opening appears in the upper left-hand corner, encircled and identified as the RI form. This notation was clearly derived from the M360 template's dyadic and intervallic structure (inverting the template), and sustained chord[14]. The characteristic rhythmic components of the template were redistributed in the later (final) version in the main draft below (bb.96-98). The final four pitches of the row are expanded into a melodic gesture (employing more pitch-repetition than in the final score) which is clearly simulated by the analogously RI-derived intervallic structure and contour at the end of the block, entered directly beneath. In the final score the relationship of these gestures (bb.98-99 and bb.108-109) is emphasised by adaptations to the tessitura and rhythm, the iambic configuration of which (b.99, F#/G) seems to echo that of the template. The orthography of the particell sketch for the later RI statement (bb.105-9) is closer to the published score than its appearance on M318(a), and was thus initially sketched on the latter before being transferred.

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[12] A syncopated rhythmic figure notated on timing sheet M308/AM73(c), drawn up during composition of the fourth and fifth movements, may refer to b.104 (and its later appearances) via b.183.

[13] The only deviations from the published score are minimal. The piano's final G is additionally assigned to harp, and the eighth order position of the R form (A), appearing in the particell as a grace note to the Ab in b.102, was eliminated in the final score. This may be explained as an elision, as the pitch is present in the held chord on string harmonics.

[14] The sustained chords on string harmonics, occurring in all three sections, were notated on M348(b), in semibreves and without an additional context. All three chords form pitch-class set [0158], with (i) and (iii) consisting of identical pitches, with only the E assigned different registers in both. The piano's open fifth in the sketch for b.104 on particell M349 is marked 'quasi harm' and implies that Stravinsky intended the piano and string timbres (which share these pitches) to 'converge' at this point, marking the end of the '*Gagaku*' chord.

To the left of these notations on M349, Stravinsky pasted in a small sketch, showing the pitches of the melodic gesture in the early RI notation as artificial viola harmonics (bb.98-99). Although the later draft reassigns the registers, most of the notes were retained as cello harmonics, though their exact manner of production is no longer specified.

Directly above this pasted insert, the composer drafted the opening R statement of the piano. This is identical to the final score, but a brief notation to its left appears to represent an abandoned attempt at the same passage. Surprisingly, in view of the serial currency of the completed movement, this is identified as PδIII. Its brevity and unique position within the sketches for IV, as the only rotational form, demonstrate that the composer rapidly established his parameters of serial practice, though only after work on the movement had commenced. The sketch once again shows the composer experimenting with template-related row forms, in that δIII is the only χ/δ hexachord which corresponds in any way closely to the template R form, preserving both the content and trichordal groupings of Rβ. Its disposition in the sketch shows affinities with the structure of the M360 template, particularly in the concluding F/G dyad, and the registral disposition of the C# and F#. The final version of the passage, employing the R form, betrays similar references to the template formation, for instance in the spacing of the F/G and the verticalisation of the F#/C#[15].

[15] Significantly, the intervallic configuration in the piano in b.100 is identical to that of the probable source of the M360 template, the R-based flute figure in b.161.

The only early loose-leaf sketch relating to this block[16], M318(a) – which as mentioned above contains the earliest draft of bb.105-9 (commencing with the solo cello music employing RI) – additionally outlines the R and P forms of the row which were to be employed in formulating the analogous sections of blocks (ii) and (iii) (i.e. bb.119-122 and bb.132-135). It thus appears to represent the first stage in elaborating the later blocks of the movement from the model furnished by block (i). The registral assignments and intervallic structure of these rows, represented merely as noteheads, show that they were selected directly from the main row charts without initial regard for their future compositional manipulation. The R hexachords already appear in reverse order, as in the final score, so that both supplementary series unfold retrograde-related hexachords in the order α-β.

Directly below the P form of the series, the composer notated a contour using a sequence of twelve pencil dots joined by straight lines. This shorthand guide evidently acted as a mnemonic to the composer in devising the registral assignments of the P form used in (ii), possibly in conjunction with keyboard experimentation. The M318(a) contour is one of five such notations found within the fourth movement materials, the remainder located as marginal sketches on the third particell page M351 and on sketchleaf M356/AM51(b). Unlike block (i), preliminary notations for all sections of both remaining blocks may be

[16] Sketchleaf M356/AM44(b) is a late draft for the cello music in bb.106-7, almost certainly intended for the two-piano reduction, the notation of which it matches precisely. This draft refines, and therefore postdates, the M349 particell. It should be noted that the bar numbering, which suggests a date contemporary with the completion of the final calligraphic scores, confirms that none of the interludes had yet been written.

found on small sketchleaves, with a minimal amount of marginal drafting on the corresponding particell pages M350 and M351. Notations for block (ii) occupy five pages in addition to the M360 template and a later draft of the same passage, close to the final score, on top of the particell page M350. Two of these pages, M348 and M356/AM51(c) are clearly much later drafts, establishing particulars in the two-piano reduction and full score respectively, to which they correspond precisely in notational detail. Drafts for the final block (iii) occupy four pages, with the whole section sketched principally on the heavily worked sketchleaves M372(b) and M357. M356/AM50(c) is a draft for the full score (bb.125-7), with M356/AM50(b) a clarification, introducing some minor refinements, of the conclusion of M357 which is rendered barely legible due to alterations, erasures and the addition of adhesive tape[17]. The registral dispositions of both the latter sketches differ considerably from the published scores at this point (cf. bb.132-5). The manifestly early nature of all marginal notations, together with the small size of the remaining sketches, confirms that Stravinsky worked with the particell attached to the music rack throughout the compositional process here.

Each dot in the M318(a) contour is entered directly below its respective pitch in the P form and corresponds closely to the contour of the row on its appearance in bb.119-122 (the first order position Eb is in the piano), with the grace note B (order position 8) indicated by a twist in the connecting line. From the contour, the composer subsequently elaborated an outline draft of this passage on M356/AM 50(a), which, though still rhythmically imprecise, confidently fixes all registers as per the final score. The single deviation from

[17] This sketchleaf consists of two smaller sheets taped together to form a single continuous span of music.

the contour model arises in conjunction with the vector between order positions 7 and 8, where a large break in rastration occurs (though an earlier erased draft may have corresponded directly to the contour model). Although indications for sustaining pedal in the first half of the sketch show that Stravinsky initially intended it for piano, the sketch already implies the contrasting timbres of the final score. The draft was composed in two stages (as indicated by the rastration break), with the last five pitches (eventually bb.121-2) redrafted in greater detail directly beneath, including indications for the division of hands. This uneven 7+5 partitioning of the row implies that the composer was pursuing the model provided by block (i) (bb.105-109) and that he had by this stage completed the lower draft on M349, where the partitioning is made clear by the assignments of timbre.

This chronology is confirmed by a comparison of the other sketches for the cello-and-piano cadences ending each of the three sections. Although the intervallic quantities unfolded by the P and RI forms are, of course, different, the contour on M318(a) is an exact inversion of that of the RI form on the lower half of the page (Example 6:2). The contour makes no attempt to suggest precise intervallic quantities, although it outlines in a general way the relative registral location of the pitches, and Stravinsky kept in mind the template's intervallic quantities as a general guide for the registral assignments of bb.119-122. The composer was thus consciously using the RI sketch for (i) as a model not only for the rhythmic structure but also for registral assignments of the later passage. The notation of the contour, with its representation of the template's acciaccatura (retained in its later expansion on M356/AM50(a)) confirms that Stravinsky also intended to devise the rhythmic structure via the template from an early stage.

The RI contour which the composer was employing as his template model on M318(a) does not, however, correspond exactly to the final form of the passage, which first appears in the full continuity draft on the lower half of particell sketchleaf M349. The early version, with orthography improved from M318(a) (i.e. closer to the published score), and greater rhythmic definition, had earlier been transferred to the upper-left segment of the particell. These early drafts differ from the final version in relation to the registral deployments of order positions 6 and 7 (cf. b.107), though in terms of the contour, this affects only order position 7, as the remaining pitches retain identical vectors with respect to their other neighbouring pitches.

The M356/AM50(a) sketch for bb.119-122 clearly bases its registral assignments on the contour allocated beneath the row form on M318(a), which inverts that of the template RI form's early version. In the final score, this inversional correspondence between the 'new' contours of the RI and P forms is retained, except for the single vector between order positions 6 and 7 (see Example 6:2, lower examples), suggesting that the contour alterations made towards the centre of both rows may be mutually associated. The corresponding music at the very end of the movement (bb.132-5, employing the reversed R hexachords from the top of M318(a)), sketched on both M357 and M356/AM50(b), was also originally drafted according to the contour of the early RI template. Stravinsky appears to have made the first, rather untidy, draft on a small page that was subsequently taped onto a draft of the preceding piano music (b.127 foll.)[18] to form the composite

[18] This part of the draft is virtually identical to the final score, although several alterations are distinguishable and a couple of registral positions await revision.

sketchleaf M357. This draft for bb.132-135 includes red pencil and ballpoint ink markings together with numerous *pentimenti* and cancellations. The differences in registral assignment with the final score are considerable and are largely replicated on the neat clarifying draft M356/AM50(b), creating an identical contour with the first version of (i) as sketched on M318(a), with a falling contour from order positions 6 to 7, instead of the final version's rising vector.

Stravinsky began altering the original contour on M356/AM50(b), where the grace-note treble G in the final bar was erased (though remaining visible) and lowered by two octaves. This creates a new contour, falling instead of rising between order positions 7 and 8, and thus corresponds to the 'new' version of the RI template in block (i). In the final score, therefore, all three cadential passages are rigorously contour-related, (i) and (iii) being mutually identical, with (ii) as an almost literal inversion, and all exhibit similar rhythmic configuration and partitioning.

The remaining contours within the sketch material, three on particell leaf M351 and one on M356/AM51(b), are evidently part of a comparable template-related cloning process, although their relative abstraction (those on the particell are marginal notations divorced from their musical context) makes identification with specific passages in the completed movement difficult. Sketchleaf M356/AM51(b), for the piano music at bb.113-15, once again seems closely related to M318(a), and uses the same row form (RI) as the earlier template. The hexachord directly beneath the principal sketch on this page is transferred directly from the RI row-chart on M310, is overlaid with a contour apparently derived from

the end of the M318(a) RI template, and is clearly intended as a sketch for the end of the passage at bb.115-16, otherwise not accounted for within the sketch material. In the sketch above, the composer has partly outlined the music corresponding to this contour (o.p.8-10), which also clearly preserves registral assignments from the M318(a) template (e.g. order positions 9 and 10). The register of o.p.9 is adjusted in the published version, although the contour is preserved (except for order position 12), together with conspicuous rhythmic features of the M318(a) template (e.g. the 'grace-note' associated with o.p.8 in b.115 and the offbeat on o.p.12 in b.116). In addition, order positions 2 through 8 invert the contour of the corresponding order positions in the M318(a) RI model.

The contours on M351 are more difficult to identify, particularly as the associated music probably underwent subsequent alteration. The profile found in the top right-hand corner, though seemingly for an incomplete dodecaphonic series, appears once again to have associations with the M318(a) template. Despite its difficulty of attribution, its concluding profile and a characteristic twist, denoting a grace note, five order positions from the end, link it to previous template-related models. Its location on the third particell page suggests that it may have formed part of the compositional process involved in bb.132-135 (sketchleaf M357). The two remaining contour notations, found in the bottom right-hand margin of the particell, represent hexachords with inversionally related profiles[19].

An examination of the complete contour scheme of the movement in its final version reveals other interesting, if less extensive, correspondences of this nature. In constructing

[19] The lower contour recalls M356/AM51(b), although this latter is associated with a pentachord rather than a complete hexachord.

this hypothetical chart (see Example 6:3), contours are determined according to numerical row order regardless of incidental topographical features such as adjacency verticalisations and overlapping serial forms. The direct correspondences between the final blocks within each section of the movement become explicit in this contour map, but the two preceding row forms in each block also betray evidence of comparable, if less structured, contour association. Because slight alterations to the registral association of pitches can dramatically alter their contour, fundamental underlying similarities are easily obfuscated.

In the penultimate row statements (bb.103-5, 116-18 and 130-32), the contours of I and RI (appearing within blocks (i) and (iii) respectively) are virtually identical in terms of both vectors and interval magnitude. The only inconsistency here concerns the reversal of the vector between order positions 6 and 7, suggesting that Stravinsky may have been treating the constituent hexachords independently. The contour associated with the R form constituting the middle block is once again largely I-related, a feature particularly evident in the second hexachord. If considered as deriving from the I-contour in (i), the overall pattern of the inverted form deviates only in the vectors located between o.p. 2-3 and from o.p. 6-8.

In the antepenultimate row statements (bb.100-2, 113-16 and 127-130) the contour of the R and P presentations in the outer blocks is once again very closely affiliated. P deviates from R only in the centre, where the vectors between order positions 6/7 and 7/8 are inverted (order position 8 of R is in any case elided in the final score)[20]. The central RI

[20] For the purposes of the contour map, the relative registral position of this eliminated pitch is taken from the particell M349.

statement largely inverts the contour of P, with deviations in the vectors between 3/4 and 11/12.

The use of contour templates to furnish basic compositional configurations with which to clothe abstractly selected row forms, is found once again within the sketches for two shorter works dating from the 1960's, *Introitus* and *The Owl and the Pussycat*. Although contour templates are employed here in a simpler context (where they relate mostly to the melodic shape of the vocal parts), a remarkably similar approach is observable in which only minor modifications occur between successive models, although such modifications may (as secondary templates) be subsequently refracted backwards onto the template itself[21]. These works will be examined in some detail in Chapter 11.

Summary

Particell, sketch and other documentary evidence points to the fourth movement as a late addendum to the original compositional scheme. Another consequential feature of template morphology is revealed by observing that the template from which the movement ostensibly originated was extracted from ongoing compositional concerns appearing towards the beginning of the fifth movement, and is, as a result, indirectly related to the main fifth movement template. The 'premature' appearance of the template (all previous

[21] Such 'refractive' modifications would appear to underlie the ongoing relationships between the final sections of the three movement IV blocks, first outlined on M318(a).

examples are extracted from sketch materials for the conclusion of the chronologically preceding movement) endorses the observation that such templates were not organic outgrowths of the compositional process, but instead acted as synthetic compositional tools manufactured in parallel with it.

Perhaps as an additional result of the movement's auxiliary status, the serial techniques here are more rudimentary (only primary row forms are deployed), leading to its relative popularity as an analytical subject. This difference in technique is mirrored in drafting methods that diverge considerably from those apparent in earlier movements (e.g. in the consistent appearance of marginal sketches on particell leaves and in the diminutive size of the preparatory sketches), suggesting that the particell played a more closely integrated role in the composition at this point.

Sketches for the fourth movement additionally disclose the composer's use of 'contour templates' – abstract models for melodic profiles and/or registral distributions which are independent of the row forms (and thus the intervals) used, and which are in themselves liable to elementary serial manipulation (principally inversion).

CHAPTER 7

The Four Interludes

Materials for the Interludes

The four interludes were inserted into the score in August 1959, and posted to Margrit Weber on 20th of that month[1]. Evidence in the sketch material for the main movements, for example the bar numbering on the fourth movement sketchleaf M356/AM44(b) and on a fifth movement errata sheet[2] in the *Sammlung Craft,* together with the various timing sheets for the work, confirms that the interludes were insertions composed following the completion of the main body of the score. The final interlude (M319) is dated 16th August.

More information regarding the gestation of the interludes may be gleaned from timing sheet M308/AM 73(b). This page lists the timings for movements I to III and provides an aggregate timing for the three subsections of movement IV. Although the placing of the fifth movement is indicated, no timing is provided. This had however already been fully calculated (as 2'41"), as demonstrated by AM 73(c) where this total was added to the aggregate timing for I, II, III and the first block only of IV (totalling 6') to generate the

[1] The envelope, postmarked 'Los Angeles, August 1959' is preserved in the *Sammlung Margrit Weber* at the Paul Sacher Stiftung.

[2] This unnumbered small card, located in a folder of unidentified sketches in the *Sammlung Robert Craft*, makes reference to the page numbers of the calligraphic full score and offers the following information: "page 25: f[orte] at piano. [Ditto] trombone. [Page] 24: Fl[ute] 2d bars 157-158", followed beneath by a draft of the second flute doubling in bb.175-176.

overall timing 8'41". On the top of AM 73(b), the composer entered a pencil notation, consisting of five vertical lines with four similar, but shorter, strokes placed in the interstices directly above. This is surely intended to represent the work's interlocking arrangement of interludes and main movements and suggests that the genesis of the interludes post-dated the completion of the main movements. The aggregate timing of the interludes (0'64"), derived from the sketches and/or cover of the interludes folder (M311 – see below), appears on AM 73(a), combined with the 9'45" aggregate timing calculated for the main movements, resulting in an overall (and rather exaggerated) total for the entire work of 10'49".

The composer preserved the sketches for the interludes together in a brown folder, into which he also inserted the four timing sheets (M308)[3], and on the cover of which (M311) he inscribed the individual timings of each interlude, transferred directly from those entered on the corresponding sketches:

4 INTERLUDES
to be placed between
parts

1st	I and II	0'15"
2nd	II and III	0'18"
3rd	III and IV	0'15"
4th	IV and V	0'16"

[3] Three of the four timing sheets bear staple-holes similar to those found on many of the interlude sketchleaves.

The appendix table[4] summarises the contents of the leaves of interlude-related materials that form the contents of this folder.

All four of the interludes were devised using an identical compositional method involving the reworking of the opening material from the respective following movements. This technique of extrapolation from a pre-existing template explains both how the final form of these insertions was achieved with only a minimal amount of sketching, and also elucidates the composer's statement in *Themes and Conclusions* that 'the interludes are introductions not codas: the conductor should pause before them, and I like these seams and sutures to show'[5]. An obvious consequence of this approach is audible in each interlude's preparation of the subsequent main movement tempo. The serial structure of each interlude relies on using that of the ensuing movement's opening material as a template, and like the fifth movement insertion (bb.145-50), which employed an analogous technique, the clone often borrows additional configurations, such as rhythmic or gestural features, from its parent model. In the second and third interludes the parent series are transferred directly from the template, but in the first and fourth interludes, transposition of this material occurs.

[4] Volume II, p.11.
[5] *Themes and Conclusions*, footnote to p.34.

The First Interlude

The two sketches for interlude I (M312, M313) demonstrate in an explicit way the relationship of interlude to subsequent movement. Both drafts are pencil sketches with overlaid red pencil and ballpoint ink layers, the latter a rarity within the sketch materials as a whole. The composer began on M313 by copying out the framework of the opening bars of movement II. This notation, hastily outlined from a very late source[6], shows the general configuration of the constituent hexachordal forms at the beginning of the movement (cf. M387), the RIα hexachord assigned to the top two staves and overlaid in red ballpoint ink, with the two lower staves unfolding Rβ. The composer wrote out both these hexachords as noteheads directly above, preserving the colour designation of the RI hexachord, identifying their serial source and carefully numbering their internal order positions. The ordering of pitches within each hexachord follows that of the source, with the verticalisation in RI unfolded in forward numerical order (1,2) to provide distinctive dyadic pairings. Erasures towards the beginning of the lower draft may suggest that the composer began tentative experiments for the interlude directly on this sketch.

Both hexachords reappear in transposition (T9 for both hexachords, thus preserving their mutual relationship) on the actual sketch (M312) designated '1st interlude (between I & II)', which is identical in all important respects to the final version and also includes full details of instrumentation as it appears in the published score. Although hasty in appearance, the sketch shows little evidence of erasure, leading to the conclusion that the

[6] Probably the full score, as the iambic rhythm of R's order positions 5 and 6 (cello solo b.48) is not present in any of the sketch drafts (M344 or AM27(a)) or the calligraphic copy of the two-piano reduction.

composer consolidated most of the details at the keyboard. Here the row forms, indicated in red (Rβ) and green pencil (RIα) respectively, appear above and below the draft, and are not directly aligned. This fact, together with the generally linear distribution of the hexachords in the texture, suggests that the composer dealt individually with the row forms, beginning with RIα. The first five pitches of this hexachord, ordered as on the M313 model, are unfolded before the Rβ hexachord begins, allowing only a minimal overlap between the structures. All pitches are serially authorised, including the repeated Bb's in the second flute in b.45, where both hexachords converge.

Although the distribution and mutual interaction of the hexachords does not relate to the M313 template, some elements of its spacing are preserved in RIα[7], together with other general compositional characteristics such as the gradually coalescing chord which is a feature of both passages.

The composer's failure to indicate the transpositional level of the hexachords on M312 demonstrates the extent of the sketch's indebtedness to the M313 model as a template. Although ostensibly extracted from the opening of II, the transposition and compositional distribution of the hexachordal elements (e.g. the opening and concluding flute gestures) were evidently chosen to recall important events of the preceding movement. Because of the combinatorial properties of the series, the transpositional level (T9) of both hexachords results in the hexachordal levels of the same row form's concomitant hexachord, so that in terms of pitch content, T9[RIα] = RIβ and T9[Rβ] = Rα (almost reproducing the ordering

[7] Cf. order positions 4/3 of the RIα hexachord in both sketches.

of Pα5). This enabled the composer to distribute the hexachords in such a way as to suggest the opening pitch and intervallic configuration of the movement (also involving flute timbre), confirmed by a more categorical reference to this opening gesture in b.45, and to impart an emphatic Eb centricity to the passage[8].

The Second Interlude

Sketches for this interlude occupy the four pages M314, M315, M316 and M317. Sketchleaf M314 is a draft of the complete interlude, timed to eighteen seconds, with full instrumental indications close to the final score, while M317 is identified by the composer as a draft for the '2-piano reduction'. The principal work for the interlude took place on M316, where the composer carefully aligned a number of row forms beneath each other, in staggered formation, and made brief preliminary notations for the rhythmic and registral distributions of parts of this material. The other preparatory sketchleaf, M315, merely transfers some of the material drafted on M316, with only slight advances in detail (all registers now correspond to the final score), and indicates the transition to the opening piano phrase of movement III in its ultimate form.

The row forms outlined as rhythmically indeterminate noteheads on M316 derive directly from the beginning of the third movement, this time without any occurrence of

[8] D#/Eb is sustained as a pedal throughout the passage, being transferred downwards an octave on the entry of the oboe in b.45.

transposition. All constituent row forms and their associated colour-coding, together with their respective alignments, suggested elisions and various other serial eccentricities, are transferred unaltered from bb.74-76 in their serially convoluted final form, as displayed in the particell draft, M346 (see Chapter 4). The outline thus begins with RI5, drafted in normal pencil and stated complete, and in correct order, on the upper stave, overlapping with the beginning of [Iβ5]r, indicated, as on M346, in blue pencil, which unfolds slowly across the remaining partial statement of [I5]r (order positions 8 through 1, in green pencil, precisely as in the third movement template source) and of Rβ4 (red pencil)[9]. The two final pitches of [Iβ5]r are elided with those of the Rβ4 hexachord (Example 7:1). The resulting configuration acted as a framework model for the entire interlude, and was essentially pursued, though with some skewing of the vertical alignment, through to the final version.

Stravinsky's initial, tentative, experiments for the distribution of these predetermined successions, entered directly underneath the appropriated framework on M316, reveal further influences from the template source. This sketch, using coloured pencil indications corresponding to those of the framework model and M346 template, outlines an early version of what would become the first violin and cello lines at the end of the interlude (bb.71-73), with partly-erased suggestions for the corresponding second violin part entered directly above. The sketch already suggests the rhythmic juxtaposition of fluctuating irrational values with steady quaver pulsation that is a significant feature of the completed interlude at this point.

[9] Stravinsky originally notated a more temporally condensed unfolding of [Iβ5]r, which remains visible as blue-pencil *pentimenti*. The final spacing corresponds to the alignment of the M346 particell draft.

Most of these rhythmic features clearly follow suggestions provided by the template model, particularly the central pattern of quintuplet quavers followed by triplet crotchets, which derives from the rhythmic configuration associated with the same pitch succession in b.75 in the third movement model. These patterns are identical (equivalent to quintuplet components at 180, triplets at 108 per minute), although disguised somewhat by the modified rhythmic notation resulting from the substitution of quaver for crotchet pulsation at the beginning of the third movement. Like this template, the pattern begins on the second quintuplet, following an initial rest, a feature retained into the final score (where the first quintuplet pitch is tied over from the previous bar). Stravinsky indicated, by noteheads below the stave, in the same green pencil as the quintuplet, the rhythmic alignment of the second violin line (2 against the first's 5) in bb.71-72, before entering the associated pitch material, suggesting that he was again referring to the template source for this construction.

The registers associated with some of the pitches also betray occasional template influences (see the Bb/Ab in the quintuplet, for instance, and also the initial B/C in the Rβ4 hexachord (cello, b.72), which may reflect the earlier appearance in the template of the same pitches within [Iβ5]r (bb.74-5))[10]. Although no preliminary outline survives, the first phrase of the interlude (bb.68-69) also reflects some influence from the template source in the intervallic spacing of the viola's opening pitches and the verticalisation of order positions 4 and 5.

[10] In the final version, this echoes the occurrence of these same pitches in the viola in b.71, itself clearly influenced by the spacing of these pitches (including the D) in b.74.

As in the third movement that it introduces, this interlude recapitulates gestures from the first movement, most notably the metronomic tempo of the latter's second half, the numerous hemiola constructions (cf. bb.68-69 with bb.40-41) and the timbre and interval-class 7 bias in the spacing of the opening string configuration (cf. bb.68-9 with bb.5-6).

The Third Interlude

This interlude, for which only a single full-score draft (sketchleaf M318(b)) is to be found amongst the sketches, seems to have occasioned the composer the least problems of construction. In view of this, it is not surprising to find that it remains closer in gesture and intervallic construction to its template model than the other three interludes, a phenomenon perhaps conditioned by the relative simplicity of row usage and texture observable in the fourth movement template model itself. However, occasional *pentimenti*, indicating an earlier conception of the barring and instrumental distributions, together with a number of further, indecipherable, erasures suggest that Stravinsky only achieved the definitive form of the interlude following several revisions, including the notationally improved opening, redrafted to the right-hand side of the principal sketch.

Direct comparison of the interlude with its template model, the opening of the fourth movement (b.96-99), reveals a high degree of correspondence between the gestural and intervallic character of the two passages. Although occupying a lower tessitura, evolving from the close of the third movement, the interlude is clearly calculated to adumbrate the

rhythmic configurations, long-sustained pitches, and timbre distinctions of the model (Example 7:2).

The paired flute pitches in the fourth movement's opening RI statement are here reinterpreted with only minor alterations in intervallic configuration and attack characteristics. The rhythmic pacing (an iambic figure followed, after a rest of similar duration, by a augmented variant of the same) is also analogous, and the same order positions (3, 4, 7, and 8 of RI) are sustained to form the '*Gagaku*' chord (pitch-class set [0158]) that dominates the texture of movement IV. The entry of the bassoon in b.93, an apparent solecism of timbre within the brass-dominated texture of the interlude, forms an analogue to the solo cello oscillation in b.98, the conspicuous pitch repetitions of which are mimicked by the bassoon's nervous tics[11]. Finally, the isolated staccato brass chord that concludes the interlude may be viewed as corresponding to the *sforzando* doublebass pizzicato in b.99.

The Fourth Interlude

The three pages of sketches for this interlude consist of a dated full-score draft (M319), together with two differently distributed particell drafts (M320 and M321). This last,

[11] This bassoon figure has the same number of repetitions as the early sketch for the fourth movement opening on particell leaf M349 (which uses the same pitch material). It also bears a striking, though perhaps coincidental, resemblance to the repeated F/D figure in the top draft of M324 (an early sketch for the first movement *prima volta*).

which bears some evidence of alteration, is a draft for the two-piano reduction and corresponds closely to the disposition of the music between the four hands in the published score. M320 is a neat draft, containing few erasures, which acts as another reduction of the full score, corresponding directly to its instrumental indications and red-pencil markings indicating the violin *cantus*. The precise manner of its distribution across four staves, together with its somewhat pianistic design, suggests that it was a rejected preliminary attempt at the four-hand score.

The principal sketch for the interlude would therefore appear to be the full-score draft M319, an assessment supported by the appearance of numerous *pentimenti* together with a brief marginal sketch corresponding to the pitches at the end of the RIα hexachord. The sketch furnishes the full texture of the interlude[12], comprising eight superimposed hexachords resulting in a predominantly block-chordal succession, offset by a more contrapuntally imitative engagement between the upper and lower string sections. The majority of the hexachordal lines are also assigned specific instrumental timbres, and the sketch, except for its layout, is very close in all respects to the published score.

Once again, this rapid gestation into full score, with minimal preliminary sketching, was assisted by the use of a template source. For this, Stravinsky returned to his earlier template used in the construction of the fifth movement verticals, the boxed chart on SNP/0, and copied out a transposed version directly to the right of the original sketch. The

[12] This combines the instrumental families treated in isolation in the preceding three interludes. The preceding fourth movement hints at this impending integration through its systematic rotation of timbral groups with each succeeding isorhythmic cycle (cf. bb.98-99, 111-112 and 125-127).

resulting chart which, like the M319 interlude sketch, fails to identify any transpositional determinant for the constituent hexachords, proceeded once again to form a template for the instrumental lines generating the eight-factor wind chords of the interlude[13].

Once more the visual organization of the chart, with its superimposed boxes, is fundamental to the manufacture of the verticals. As with the preceding fifth movement verticals, the boxes are regarded as simultaneously unfolding layers, though here the process is more straightforwardly harmonic, with little skewing of the chart alignment. Thus the chart is, in itself, essentially a rudimentary outline of the interlude wind music. In the final score, only three of the six eight-factor chords have displaced elements, involving only one pitch in each instance (Example 7:3). The E of chord IV (a composite of verticals 4 and 10) appears early – while chord III (verticals 3+9) is still sounding (bass trombone b.139) – with its constituent E# (trombone I) tied into the following chord V (verticals 5+11), of which it is not a factor. The treble G in oboe and cor anglais (b.140) is also an anticipation of the final chord VI. The B and D# struck with this latter (trumpet and trombone I, b.140) are factors of the prevailing chord V. The first three chords are struck as denoted by the chart, with no displaced factors

The remaining element of the interlude texture, the contrapuntal string music, though its serial provenance is not provided in the sketch, may be easily identified as consisting of the first nine order positions of R (violins I and II)[14] together with T1 of the complete R

[13] The serial provenance of these constituent instrumental lines is correctly identified, though without allusion to the composer's chart, in Ex.4 of Müller, op.cit.
[14] Order positions 8 and 9 are reversed.

(violas, cellos and basses), which produces the hexachordal levels of the RI form. Several features of the M319 draft for these bars suggest that the lines were derived using the beginning of the fifth movement as a template model. The untransposed R form in the violins represents an analogue to the R-derived trumpet *cantus* at the beginning of movement V in terms of its timbral separation, rhythmic structure, registral distribution/intervallic configuration and general alignment with the remaining vertical-derived texture. Both lines commence with an identical grace-note gesture, and continue with order positions 3 though 7 allocated identical registral positions (6, which occupies the same register in the M319 sketch as its corresponding pitch in b.143, was subsequently transferred an octave lower). The rhythmic placement in the first two bars of both passages is also perceptibly close.

The line in the lower strings was probably layered in at a later stage, using, as a model, elements of the violin's R statement, of which it is a transposition, and whose intervallic and rhythmic patterning it imitates. In addition, no analogy for this layer is to be found in the opening passage of the fifth movement, which otherwise provided a template for the remainder of the interlude texture. The 'auxiliary' bar 136 may be thus be regarded as a buffer echoing certain pitch components and rhythmic gestures from the end of IV (cf. bb.135 and 136).

It is more difficult to speculate on reasons for the transposition of the original template model on SNP/0, especially as the R form of the template model is not subjected to the equivalent transposition. Evidently, Stravinsky considered that the direct reapplication of

the twelve verticals in the context of the interlude would create a perceptible tautology with the opening of the fifth movement and the inserted block following this in bb.145-50. Examination of the SNP/0 chart, however, reveals a logical reason for the choice of transpositional level, based once again on the propagation of serial invariants. The chosen transposition, T4, results in the retention of dyad pairings from both the α and β hexachords of the original template chart, in other words, as observed in all previous template-based procedures, the composer exercises specific serial choices in order to reconstitute invariant configurations within a new overall context (see Example 5:10)[15].

In the transposed chart, all dyads (including repetitions) of the P/I α and β hexachords (notated on the top two staves of both the upper and lower boxes in the chart) are reproduced a tone lower than in the template model (the original chart) and with a reordered sequence within each hexachord (cf. the original P/I with the transposed P/I in Example 5:10, indicated by the broken arrow). Those of the R/RI β and α hexachords are duplicated at the original pitch level of the template, with a similarly revised ordering (cf. the original P/I with the transposed R/RI, relationships similarly indicated by solid lines in Example 5:10). Though clearly an important factor in the choice of transpositional level, this process would appear to be a purely recondite technical procedure for generating cloned material, as the final distribution of the transposed verticals in the texture of the interlude does not attempt to project such invariant formations in an explicit manner.

[15] The same dyad pairings may be reconstituted, though with different ordering, under transposition T10.

Summary

The four interstitial insertions – referred to in the sketch material as 'interludes' – were the last sections of the composition to have been written (in August 1959) and, along with the substantial insertion in movement V, reveal another aspect of template methodology, whereby surrounding blocks are employed intact as template models for new passages, with which they share not only their serial treatment, but also certain features of intervallic and rhythmic layout, texture, alignment, and instrumental timbre. Such templates may be used as direct models (as is the case with interludes II and III) or subjected to transposition (I and IV) or retrogression (the fifth movement insertion).

CHAPTER 8

A Sermon, a Narrative and a Prayer : The Evolution and Development of Early Template Notations in *A Sermon.*

Introduction – The Materials and Compositional Chronology

Between the completion of the *Movements* interludes in August 1959 and the work's first performance in New York on 10 January 1960, Stravinsky's compositional activities consisted of reconstituting lost parts for the Gesualdo motets *Da Pacem Domine* and *Assumpta est Maria* (included in the set of *Tres Sacrae Cantiones*) and completing the brief *Double Canon* for string quartet dedicated to the memory of the painter Raoul Dufy[1]. His next major work, *A Sermon, a Narrative and a Prayer*, was a commission from Paul Sacher with the ultimate result that the holograph full score for the work and the vast majority of the sketches are included among the Paul Sacher Stiftung's pre-*Nachlass* acquisitions[2]. However, a small number of additional preliminary sketches are also to be found within the

[1] See Griffiths, *Stravinsky*, 229. *Illumina Nos*, the third of the *Tres Sacrae Cantiones,* had been completed as far back as 1957. Two of the three drafts that constitute the *Double Canon* sketch materials in the *Nachlass* are dated respectively 'IStr, Venezia Oct 10/'59' and 'IStr, NY Nov 24/'59'.

[2] The *Sermon* sketch material was acquired in 1976. The background to this purchase is outlined by Albi Rosenthal in the Paul Sacher Stiftung's commemorative publication *Paul Sacher in Memoriam*, p.37.

materials of the *Sammlung Robert Craft*[3].

The earliest stages of gestation (for *A Sermon*) are more fully revealed in the present sketch collection than in any other late collection discussed in the present study. The following discussion deals principally with a circumscribed group of related early sketches (viz. SNP 11, 12, 13 and 32, together with C61), and aims to illustrate how exploratory configurations (dated January 19, 1960) based on a provisional, non-combinatorial, twelve-note row are expanded into template notations employing the definitive row of the piece (February 8/9, 1960). In spite of the many modifications to which these early ideas were subjected, the composer tenaciously pursued certain template configurations that were subsequently developed into material incorporated in the finished score. This process seems to suggest that Stravinsky considered the various properties of his template models to be essentially independent parameters.

Although no extensive evidence of a similar preparatory process can be traced within the *Movements* material – probably having been superseded by later layers of the palimpsest 'scratchpad' sketch M332 – the present collection, and those for later works to be discussed in subsequent chapters, suggest that this may have been an habitual procedure for Stravinsky in the early stages of composition, representing his earliest investigation of 'melodic or harmonic relationships' before 'pass[ing] to composition'[4]. The two dated

[3] The sketches are numbered here by the order in which they appear on microfilm 14-11 in the Paul Sacher Stiftung (pre-*Nachlass*), even though this includes occasional duplications and intersperses textual sources with the sketch materials. The *Sammlung Craft* contains one sketchpage for *A Sermon* (C61, discussed in the main text) and three associated (unnumbered) fragments for *A Prayer* (alto and tenor solos at b.240 foll., without chorus parts, and sketches for basses at bb.249-251, i.e. a texturally incomplete draft of bb.240 through 251).

[4] *Conversations*, 15.

sketches among this early group facilitate a reconstruction of the piece's early chronology and demonstrate unequivocally the emergence of specific material for the piece from rudimentary templates. As with those found in the *Movements* material, such dates are infrequent and appear to denote crucial advances in the compositional process.

The earliest sketch that clearly relates to the piece is SNP11, which consists of a background pink sheet (ca. 8 x 6 inches) filled with pencil notations, onto which the composer has stapled a small piece of torn-off blue card, containing a rhythmically-notated contour devoid of any specific pitch dimension. The sketch on the card is dated 'Jan 19/'60', i.e. it was made while Stravinsky was still in New York, following the *Movements* premiere[5].

SNP13 is a related, composite pencil sketch consisting of two pages pasted together. The upper, much smaller, leaf consists of a rhythmically-notated version of the P form of the work's definitive row, dated 'Fbr [February] 8-9/'60' in the upper left corner[6]. Notations on the lower sheet derive from this notation and also integrate other configurations found, in earlier variants, on SNP12 and C61.

SNP32 acts as the principal referential row chart for the work, and is similarly composed of several discrete fragments. The larger background sheet contains typical hexachordal rotation-transposition charts for the R and I forms, with sectional timings for the

[5] See *Chronicles*, 93.
[6] 'Fbr' appears to have been the composer's customary abbreviation for February at this period – cf. the dating on the *Introitus* sketcheaf I/551.

movement, as well as the four primary row forms (P, R, I and RI), attached on separate leaves stapled to the top right and centre of the page respectively[7]. The curious notation of the RI form on the latter fragment indicates once again the establishment of contour templates that could subsequently be employed as compositional models for later stages of sketching[8]. As a literal inversion of the R contour, directly above, the composer required the bass register (and thus a second stave) to accommodate the row's second hexachord. The fact that he eschewed the easier option of accommodating the pitches, by octave transposition, on a single stave demonstrates the significance of the contour as a potential template.

Faint rudimentary sketches, visible on the background page directly beneath this fragment, are also concerned with contour manipulation. Together with what would appear to be brief (illegible) experiments, these consist of noteheads outlining Rδ hexachords 4 and 6 with barely adjusted contours (affecting only the outer hexachordal order positions 6 of rotation 4 and 1 of rotation 6). The vertical alignment of the two forms, and their appearance in a register lower than that of the R rotation chart directly to its left (bass clef is implied in the notation), indicate incipient details in evolution for a specific passage of the work, suggesting that Stravinsky had, by the time the charts were elaborated, 'pass[ed] to composition' proper[9].

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[7] The hexachords of R are identified as χ/δ, those of I as α/β. The R contour here is identical to that of the stapled fragment. Similarly, the contour of the α hexachord of I is identical, though octave transposed, while only the first order position of its β contour is adjusted (i.e. the first seven order positions are octave transferred).

[8] See Chapter 11 for further discussion of the manipulation of contour templates in the shorter vocal works (*Introitus*, *The Owl and the Pussycat* etc.).

[9] This is, in fact, a sketch for the tenor and bass lines at b.23, later developed on the upper fragment of SNP1. This is probably the earliest notation for the choral music between bb.12-23, which otherwise only appears in a single developed draft across the lower portions of SNP 18 and SNP 1.

SNP 18, a large particell-format page, plays a pivotal role within the early evolution of the movement, in that it concatenates and refines earlier fragments into continuity drafts, as well as anticipating later passages by additional shorter notations. The draft thus gives several clues as to the compositional chronology of the movement. A developed draft for the opening instrumental introduction, very close in detail to the final score (bb.1-11), is located across the entire top of the page, with a correspondingly detailed draft of the ensuing passage (bb.12-21) occupying its lower half[10]. This draft is continued on SNP 1, another composite sketch consisting of two fragments. Surrounding and between these semi-final drafts, timed respectively at fifteen and thirty-seven seconds, are found much more rudimentary sketches for the choral refrain 'And our Lord is a consuming fire' (bb.31-34 and 68-71) and the tenor solo at bb.24-26. The former passage appears a semitone lower than in the final score, whilst the latter is notated without a specific rhythmic dimension simply as a sequence of noteheads. Later sketches, to be discussed below, reveal further aspects of the movement's compositional sequence.

The January 19 'Concept' Sketch and the Genesis of the Series.

The notations on the background sheet of SNP11 are extracted from primary forms of a twelve-note series that differs considerably in its intervallic structure from the definitive

[10] This is the only preparatory sketch for the passage, although the music appears without the supporting lines in trumpet and trombones, which were later added directly into the four-page particell draft for the movement. In contrast to the clean appearance of the parts previously sketched on SNP18, the added parts are written over extensively in red and blue pencil, with copious serial indications.

row employed throughout *A Sermon, a Narrative and a Prayer*. Four forms of the row are presented, with P and R written across the top of the draft and I and RI aligned lower down. Although there are some orthographic inconsistencies in the notation of accidentals between them, the four forms are literal transformations in terms of their respective contours. The putative P form (top left) is presented in its entirety in a rhythmically-defined notation directly beneath its linear presentation in notehead form. As considerably more fragmentary experiments (employing only segments of the series) are associated with the R and RI forms, it seems probable that this P 'concept' preceded the series, which is therefore a subsequent distillation from it[11]. This interpretation is supported not only by comparison with similar rudimentary 'concept' sketches for other works, particularly *Requiem Canticles* and an unfinished piece from 1966 (see Chapters 12 and 13, below), but also by its relationship to the dated, rhythmicised contour on the card.

This card is roughly torn-off, suggesting that the notation was made in some haste and probably in the absence of manuscript paper, and its limitation to rhythmic and contour parameters indicates that no piano was available on which to verify more detailed pitch configurations. It would thus appear to represent a spontaneous attempt at capturing a

[11] The range, together with the verticalisation of row adjacencies in all three notations suggest that the composer was thinking in primarily instrumental terms at this point.

fugitive aural impression as a nucleus for the new work[12]. It also seems likely that this card was added to the background page as a guide or model while drafting the notations therein, its position impeding the composer from entering notations directly beneath the I form of the series as he had done for the other three forms.

It seems evident, therefore, that the P 'concept' sketch is a later attempt to develop a precise pitch dimension for, and refine details of, the January 19 idea. Parts of the contour together with the entire rhythmic configuration represented on the card – an initial semiquaver group followed by a sequence of syncopated quavers – are retained into the P 'concept'. Stravinsky clearly noted the hexachordal division of each of the four forms of the series (although the row is not hexachordally combinatorial), and the fragmentary explorations for the R and RI forms indicate similar treatment of the row in the form of verticalised adjacencies and the relegation of certain row pitches through the use of grace notes.

Although the definitive series of the piece is substantially divergent in its hexachordal content and intervallic profile, certain key features of the provisional row are retained

[12] The well-known 'concept' for the Huxley *Variations* (which, in *Themes and Conclusions*, 62, the composer states 'first occurred to me...as a melody') employs a rhythmicised version of the final series, and appears twice within sketch material for the work. It is found on a similarly torn-off corner of newspaper page (thereby excising the first pitch), with staves drawn freehand, accompanied by rastrated staves (probably later additions) on which the R and RI forms (once again both literal transformations from P) are elaborated (sketchleaf in *Sammlung Robert Craft*)). The appearance of the same 'concept' on page one of the C115 pocket sketchbook would thus appear to be a later *Reinschrift* copy of this sketch. The facsimile on p.130 of *A Stravinsky Scrapbook* (plate 266), presenting the same 'concept' with an additional dedication to Craft, seems to be more in the nature of an autograph which probably postdated the composition of the piece. Nevertheless, these reappearances suggest that Stravinsky attached some importance to the configuration, which does not appear in either the subsequent sketches or in the completed piece. (This 'concept' is also referenced in Spies 'Some Notes on Stravinsky's *Variations*', 214, and 'The Influence of Russian Composers on Stravinsky', 85).

(see Example 8:1), most notably the trichordal grouping identified here as 'X'. This becomes an important cell in the construction of the definitive row, its exact intervallic succession being replicated in transposition by the opening trichord, and its pitch content by the final trichord of P, whilst the second trichord simply reorders the intervallic succession.

Later Expansions of the 'Concept': the Influence of the February 8/9 Template.

The definitive, hexachordally combinatorial series of the piece forms the basis for the remainder of the sketches, beginning with SNP 13 and its satellites, SNP12 and C61. As the date entered on the upper segment of SNP13 demonstrates, Stravinsky had determined this series by February ('Fbr') 8-9 1960, approximately three weeks after his initial exploratory notations for the work were made on SNP11. Despite the extensive modification of the series, the composer preserved the rhythmic configuration of the January 19 'concept' here, and through several stages of drafts found on all three associated sketchleaves, thus confirming that SNP11 was indeed intended as an incipient experiment for the work. The rhythm of the 'concept' configuration is first incorporated directly into the dated top segment of SNP13 (see the final two bars of the sketch, commencing on Bb), with an additional opening figure that extends from its principal gestures. The dating, the appearance of the sketch on a separate small strip, the single linear unfolding of the series (unlike the verticalisations on SNP11) with its concomitant

expansion and its ostensible influence on several contemporary sketches (though it is not incorporated directly into these) all point to its role as a definitive template extrapolated from the January 19 'concept'. Retrospectively, therefore, one may regard SNP11 as embodying exploratory sketches towards an initial template, rather than as specific notations for surface details of the work.

Closely related material found on satellites SNP12 and C61 demonstrates that both sketchleaves were in use during the same period of early February 1960. The upper fragment of SNP12, yet another composite sketch, would appear to have been initially used as a scratchpad for the definitive series and 'February 8/9' template (i.e. chronologically intermediate between the January and February templates) before being expanded by additional notations to incorporate all four primary forms. Three forms of this series are located towards the top right-hand side of the sheet, reading downwards as I, P (in three closely related versions) and RI. The I and RI contours, together with most of P, are reproduced directly on the SNP32 row charts. Several features of the compositional process are at once revealed by these notations:

(i) The I form (possibly the earliest addition to the draft, as it is found at the head of the page towards the centre of the sketch) is a palimpsest showing evidence of considerable erasure to earlier layers. The conclusion that this represents a working draft for the definitive series is supported by the occasional visibility of the underlying strata. Although it is not possible to determine the precise number, or separate the explicit content of these preceding layers, the original opening pitches

G/Ab (the latter notated in two different octave positions) are identical to those of the provisional I form as it appears on SNP11. Visible erasures further into the series seem to show the composer experimenting with pitch sequences unfamiliar from either series, although the combinatorial properties of the final series would seem to imply that the hexachordal content had been established before internal re-ordering was attempted. It thus appears that the composer derived the definitive prime row from the provisional I form. In any case, the alignment on SNP12 demonstrates the definitive P to have been inverted from I, rather than the reverse. (I is also notated within the compass of a single octave, whilst P exceeds this ambit).

(ii) This P form, almost a literal inversion of I (the final unit of four pitches is octave-transferred), was then used as the basis for the February 8/9 template, evolved in two very similar drafts directly beneath, both largely based on the same contour as the P noteheads, and already superimposing the rhythmic configuration of the January 19 'concept'. Both these drafts are only a short stage from the form of the February template, and the first of them (third stave from the top) reveals a further step in the direction of the details of this template through the registral and rhythmic alteration made to the first order position (the incompletely erased original remaining visible). The lower draft, also identified as 'O' (fourth stave), was transferred unaltered to C61 along with the I form of the row, which also retains both its contour and rhythmically undifferentiated notational appearance. (The B natural remains visible as a *pentimento* in the February template).

(iii) The configuration associated with the R form on SNP 12 was probably the last addition to the page and was once again transferred directly to C61. (This latter page must therefore be regarded as a referential *Reinschrift* copy of most of the notations evolved on SNP12). These R-drafts are further related to the RI-based notations directly beneath, in that both introduce an extended low tessitura into the sketches for the first time. The R configuration is developed in two stages on this sketch. It is found in a rudimentary outline (employing decelerating semiquaver groups) directly to the left of its evident pitch source, the first P form, and followed directly beneath by a rhythmically more evolved draft (nevertheless retaining the rhythmic premise of the original) which is identical (apart from expansion by added rests) to its later appearances on both C61 and in the published score (bass clarinet b.9).

(iv) Stravinsky first outlined RI on SNP12 in notehead form using P as his model, as shown by the arrow extending from the final order position of this form, thus confirming that R, the natural first choice as a source for this form, had not yet been notated[13]. He then employed this extrapolation as the basis for the encircled notation directly beneath, which reveals unmistakable pitch and intervallic associations with the configuration extracted from the 'provisional' RI form on SNP11. The subsequent RI draft on SNP12, indicated by the second arrow (left-hand side of sketch), refines details of rhythmic structure (cf. order positions 6-8), whilst retaining the same contour as the earlier sketch. There is some evidence that

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[13] The RI contour here is identical to that on the chart, SNP32.

the angularity of this configuration, with its emphasis on projecting compound intervals, may have influenced the form of the subsequent R notation (directly above), an impression strengthened by the observation that the first four pitches of each are inversionally related.

(v) The RI form was the only notation evolved on SNP12 not to have been transferred directly to C61. The RI form represented on C61 differs not only in its overall intervallic emphasis, but also in its employment of a high tessitura and consistent semiquaver-based movement (like the R configuration directly above it). Parts of its contour, together with specific intervallic similarities at the extremities of the sketch (order positions 1,2 and 10-12), point to associations with the SNP12 RI, while its contour between order positions 6 and 11 directly inverts that of the same draft's R form (copied directly above it). The C61 configuration therefore seems to have been constructed by combining features extrapolated from two previous models originated on SNP12.

The detailed draft of the opening instrumental introduction (bb.1-11), located across the top of SNP18, was preceded by a hasty and very heavily-worked rough draft stapled on beneath the February template on SNP13, with a somewhat neater clarification for the end of the passage (bb.9-11) attached in similar fashion to SNP 12. The sketch on SNP13 acts as a rudimentary continuity draft for the passage, with several subsequent alternative readings added above the original single-line draft. As one of these additions (for the

flauto grande figure in b.4) traverses both fragments, it is clear that Stravinsky had added the February template as a guide whilst engaged in work on the lower sketch.

The composer began the sketch by juxtaposing two consecutive linear statements of P as a *cantus* (retained as such into the published score, where it is projected exclusively in the alto flute part, with the exception of the initial Eb), although the original ending of the second statement is incompletely erased. The entire rhythmic configuration of the February template (attached above the sketch) is unfolded, unaltered, across the two P statements, commencing with order position 8 of the first statement. There is some evidence that the contour of the February template may have exercised an additional degree of influence on the first version of the *cantus* (the contour – though not the intervals – of the template's first two bars being inverted in conjunction with its appearance in the *cantus*). The later alternative readings, added above the *cantus*, begin to approach the contour of the published score, although some segments at the beginning and end of the later version await further revision via octave transfer[14]. However, the intervallic quantities of the subsequently transposed segments are already those of the final score (E/C, b.2; G/A, b.9). The most conspicuous differences with the final version are rhythmic ones, and it is significant that the only segment of the original *cantus* which is not subjected to registral revision, and also offers the closest correspondence in matters of local duration to the final score, is that appropriated from the February template (alto flute, bb.4-9 of the published score).

[14] The revision of the beginning ostensibly corresponds to the extrapolated notation associated with the RI form of the provisional row on SNP11 (cf. the spacing of the Eb/E and D/C# dyads in both sketches).

The lower sketch on SNP13, revised and clarified on the bottom of SNP12, shows the composer adding accompanying contrapuntal lines to the *cantus* by transferring the complete R configuration directly from SNP12/C61, a seemingly fortuitous juxtaposition of independently formed elements. Certain aspects of the instrumental introduction's remaining contrapuntal figurations (segments of R and RI interjected in the final score by flute, clarinet and violin)[15] also contain intervallic resemblances to early configurations (cf. *flauto grande*, b.3 with the beginning of the RI contour on SNP12, the latter including a partially-erased Eb which identifies with the former configuration). This introduction (bb.1-11) was later used in its entirety as a template for the corresponding instrumental interlude (or introduction to the second half of the movement's binary structure, following the first refrain) in bb.35-44, which is essentially a slightly varied retrograde presentation of the same material. As such, its elaboration required only a single draft (SNP24) which already includes considerable details of articulation and instrumentation. Visible erasures and revisions on the sketch mainly concern adjustments to local detail, synthesising several earlier configurations[16].

Sketches for the refrain block 'And our Lord is a consuming fire'(bb.31-34 and 68-71), contemporary with the detailed drafts of bb.1-11 and 12-21 on SNP18, are also conspicuously related to the rudimentary configurations on SNP12/C61. Stravinsky appears to have added the first notation for the vocal parts directly above the end of the

[15] The provenance of these interjections is indicated by the serial designations on SNP18. The retrograde enumeration here of R pitch-classes (instead of the more logical P) for the clarinet/violin music in bb.5-7, suggests that the composer was working from the R configuration on C61, speculation supported by the similar interval and grace-note figure associated with order positions 8 and 9, and the subsequent slurring of the Bb/B, already present in the sketch.

[16] E.g. b.35 is modified to recall both the work's opening intervallic configuration and the rhythmic structure of b.11.

draft for the instrumental introduction. The notation cannibalises segments drawn from two row forms, combining the first hexachord of RI with the second of R. The RI hexachord was probably derived with reference to two possible sources: the contour of this form as it appears on C61 (the Eb being octave transferred) and (exploiting an invariant intervallic property of the row) by analogy with the contour of the second hexachord of the same form on SNP12 (Example 8:2). In the later, more detailed draft below the beginning of the introduction, the original vocal configuration is preserved, with additional instrumental lines layered in. Here the RIβ hexachord is transferred, its contour unchanged, from the SNP12 template, creating an imitative effect, with possible extra-musical implications in view of the text at this point[17]. A similar contour relationship is exploited between the similarly intervallically-related R hexachords of the consequent phrase.

Extended Implications of the Templates and Further Aspects of the Compositional Sequence

Stravinsky developed the refrain, setting the words 'And our Lord is a consuming fire', on SNP10, but the lower pitch level, identical to that of the SNP18 sketch, shows that the

[17] Stravinsky similarly sketched music for keywords of the *Abraham and Isaac* text (e.g. *Elohim* = God) out of context at an early stage of composition (see Chapter 10). The imitative effect for high equal voices and instruments in bb.31-34 of *A Sermon* parallels the analogous coupling of low voices representing God in *The Flood* and the composer's abandoned initial conception for the deity's first address to Abraham in *Abraham and Isaac* (sketchleaf AI/5 – see Chapter 10). One must presume that this device possessed symbolic meaning for the composer.

music still had no context. Rough sketches for the setting of 'The substance of things hoped for', which precedes the refrain on both its appearances (bb.27-30 and 64-67), first occur on SNP 9. The concluding pitches of the tenor solo (A, Ab, F) and the C/B in the lower horn parts (b.26) are prominently picked up by the distribution of the incipient R and RI verticalisations in the first sketch at the top of this page (q.v. beginning and end of the sequence), and are retained in the lower sketch, and thence into the developed draft on SNP7. As observed in *Movements* I, concerns involving local aspects of pitch continuity – e.g. the reiteration of the upper chorus Eb/F# (b.30, doubled in solo violins) at the start of the following block (b.31) – apparently prompted the transposition of the 'And our Lord' refrain, rather than any larger context within the movement as a whole.

The pitch connections on both SNP 7 and 9 demonstrate that 'The substance of things hoped for' block was composed specifically to precede the first appearance of the refrain in bb.31-34 (c.f. b.30, (Ab, C, F#, Eb) with bb.31/2 (F#, Eb, C), with G# (=Ab) still at the bottom of the chord in bb.33-4). By the time the music preceding its second appearance (b.53 foll.) had been sketched on SNP31, the composer was able to indicate the end of the movement by the abbreviation *come sopra* together with a brief incipit for b.64 (lower right of sketch). Stravinsky's first idea for the tenor/bass solos in bb.60-63 (first sketched at the bottom left of SNP 31 as a series of noteheads) was to employ as a template the P contour from C61, which would have created another distinct pitch anaphora across the division of the blocks. In the subsequent sketches (SNP29, 28) this contour was modified and the row itself transposed a tone lower.

Further uses of existing material as template models for fresh sketches throughout this and the ensuing movements of the work are evident. Some of the more striking correspondences are as follows:

(i) SNP3 top fragment. Stravinsky constructed a rudimentary outline of the vocal parts (only) between bb.45 and 50 by aligning pairs of Rδ hexachords, drafted on three separate, similar-sized, fragments – viz. SNP3 (i) and (ii) together with SNP4 (see appendix table of sketches for further information)[18]. These formed the basis for more detailed attempts at the music on SNP2 (fragments (i) (ii) and (iii)) and a near-final version (still lacking instrumental support, which was once again layered directly into the particell) drafted across SNP22 and 23. The hexachord initiating the SNP3(i) outline, [Rδ1]r (effectively Pα), repeats the contour of the opening instrumental gesture in its final form (SNP18), although it was significantly modified by the draft on SNP22.

(ii) SNP 44. The contour of the opening figuration also appears prominently on this early sketch for several sections (including the opening bars) of *A Narrative*, in conjunction with the 'scotch snap' motif of the February 8/9 template. The trichordal row partitioning (evolved in the boxed notations down the left side of the sketchleaf), derives principally from verticalised adjacencies of the RI and P forms, and is a strikingly new sonority at this point in the score (b.72 foll.). The spacing here would seem to extend from notations made beneath the provisional R form on

[18] Volume II, 14-15.

the 'January 19' template, SNP11 (cf. especially b.75)[19], with the violin solo bearing a generic resemblance to the gestures of the concomitant P 'concept' template in its intervallic spacing and rhythmic configurations. The sketch for bb.98-101 at the bottom of the page relates (in retrograde) to the earliest P contour (noteheads) on SNP12.

(iii) SNP45(i) (upper fragment) and SNP38, sketches for bb.86-89, rework familiar configurations from the earliest sketches. As demonstrated by SNP45(i)[20], the composer first sketched a setting for 'of the word', employing the 'last 7' pitches of RI in a form closely resembling its appearances on SNP12/C61. He then set the preceding text, 'and to the ministry', using the '1st 9 notes' of I, again modelled on the contour of this form as it appears on these same pages. (Only the C in order position 8 is octave transferred, presumably in order to adumbrate the identical formation at the beginning of the RI segment). Modifications to this basic melodic outline take place on SNP38 and in the particell (where the D (on 'and') is octave transferred). The rhythmically canonic instrumental lines were evolved on SNP38 by inverting the vocal part (as traced by the composer's coloured lines in the particell draft of this passage).

[19] Similar trichordal spacings are found in the instrumental postlude to this movement, sketched on 114:0112 (*Robert Craft Nachträge*). This passage (draft dated 'Oct 31/60') was an insertion, added after the completion of the particell draft for the remainder of the movement (dated '20th Oct/60', on SNP55).
[20] This page is reproduced in colour facsimile in Kunstmuseum, *Strawinsky: Sein Nachlass, Sein Bild*, 170.

Similar approaches to melodic sketching are found on SNP 42 and 47, notations for the music between bb.130 and 141. The former is a composite sketch beginning with rudimentary notations for the alto solo across the top of the page. A partially erased sketch for the same music, lower down the page (not transcribed in Volume II), is overlaid with a stapled fragment presenting a late version of the full texture for these bars, timed to 37 seconds. The rudimentary sketch presents rhythmically crude experiments referencing the R and I contours on the SNP32 row charts. The first five pitches of the R contour are used in setting 'And all that sat in the council' with the remaining seven aligned to the right of (but not underlaid to) the text 'looking steadfastly on him'. The setting of 'saw his face as it had been' uses the row chart's Iα contour, with erasures visible beneath 'the face of an angel' suggesting that Stravinsky first notated a version employing the concomitant Iβ contour before octave transfers were employed.

(iv) SNP48 is an annotated typescript on which the composer has designated the passage 'Then they cried out...and stoned him' (bb.179-185) as intended specifically for alto solo (rather than the shared line of the final score), with two additional brief musical phrases added respectively beside and below the words 'Lord, lay not this sin to their charge' and 'he fell asleep' (bb.203-6 of the published score). These first ideas for the text are rhythmically proximate to the ultimate settings, but differ considerably in their pitch content. The two settings between them unfold a single R statement, which corresponds closely to, and combines features of, the contours of both the early P form on SNP12 and that of

the row chart SNP32[21]. The final version replaces this row with its inversion, RI, its contour now referencing the relevant SNP12 configuration with the single exception of the tenor's high A in b.205[22]. The original R configuration was cannibalised as the basis of the preceding passage, bb.187-92 (cf. also bb.196-98).

(v) The words of Stephen's vision in bb.171-178 (sketched, with all main features present, down the right-hand side of SNP56) are similarly articulated by a return to the primary P configurations of SNP12/32. This, together with the rhythmic and pitch canon that constitutes the accompaniment, would appear to have symbolic significance (see footnote 17). Related configurations (using as a template the SNP32 R contour) are found in the voice at bb.159-162 and bb.99-101[23].

(vi) Primary configurations surface once again within the small amount of surviving loose sketch material for *A Prayer*[24]. SNP60 contains sketches for the vocal lines of bb.262 through 266, apparently drafted in three stages in reverse order to the final score (numbered I-III by the composer in blue pencil). These notations reference contours from SNP12/32: Pα (sopranos, upper left), R (hexachord on

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[21] These rows differ only in the registers assigned to certain pitches in their respective second hexachords.
[22] This is, significantly, the highest tenor pitch in the movement.
[23] The second hexachord of the latter row is octave transferred in the ultimate version, though in the earliest sketch (top of 114: 0114 (*Robert Craft Nachträge*)) only the final tetrachord is lower.
[24] In addition to the (unnumbered) composite sketch in the *Sammlung Craft* (see note 3), there are seven small fragments relating to *A Prayer*, viz. SNP58 (i)-(iii), 59, 60, 61 (a composite consisting of two pasted leaves), and 62 (dated, like the published score, 'IStr, Janv[ier] 31/61'). The majority of these sketches are concerned with the vocal parts, the instrumental music having been largely added directly into the four-page particell draft for the movement (SNP 64-66 = pp.1, 2 and 4 of the draft, with p.3 located in the *Robert Craft Nachträge*, 114-108). Erased marginal sketches, together with further dates and timings in the particell ('[0']47"/Jan 15/61' at b.226 and '0'57"/Jan 19/61' at b.239), suggest that these loose sketches were contemporary with the construction of the particell draft.

lower right marked 'alti') and RI (in the centre of the sketch: second hexachord, crossing between alto and soprano lines, as indicated by the composer's red pencil lines).

(vii) SNP 61, a sketch (timed to 1'00") for the solo vocal lines in bb.227 through 239 (q.v. note 24 for information on the particell draft of this block) makes considerable template use of the contours associated with the Iα rotations on the SNP32 row charts. The contralto line tracks systematically through the first five rotations of Iα, as indicated above the pitches, beginning with the primary hexachord, alternating forward and retrograde presentations, i.e. Iα: 1, [2]r, 3, [4]r, 5. The tenor line follows the same principal, beginning with a forward presentation of Iα2, i.e. rotations 2, [3]r, 4, [5]r and 6. With the exception of the C and B setting the word 'pleasure' in b.233, the entire contour of the alto line is transferred directly from the row charts. In the tenor line, rotations [3]r, [5]r and 6 observe the contour model of the charts, whilst the remaining rotations are sufficiently close for the chart to have provided a template framework for the passage. (For example, in rotation 4, only the G is displaced from the chart configuration). The composite sketch in the *Sammlung Robert Craft*, which acts as a similarly-constructed draft for the vocal parts of the subsequent passage (bb.240 through 251), derives its pitch material in a analogous fashion from the same Iα rotations, and shows in its registral assignments a similar degree of proximity to the chart contours.

Summary

Preliminary sketches for the work, explicitly dated to the early months of 1960, along with a number of associated satellite materials, allow for a detailed reconstruction of the piece's early chronology, in particular the manner in which the composer formulated a final series and key template configurations via a provisional row and its primary derivatives.

This non-combinatorial provisional row was presented in its four primary aspects on SNP11, accompanied by extracted configurations that clearly relate to a rhythmic- and contour-based 'concept' template, dated 19 January 1960, on a separate card attached to the same page. As suggested by the appearance of the 'concept', these parameters remained essentially independent of pitch content, and they are subsequently associated with a different (now hexachordally combinatorial) row on SNP 12 (dated 8/9 February 1960, though displaying clear intervallic associations with the earlier series).

This page and its satellite, C61, evolve rudimentary configurations from the new series that act as important template formations throughout many of the subsequent sketches. Of these, SNP18 is a focal point, conspicuously employing many of these early configurations (via several preparatory satellite sketches) in constructing the first section of the movement – its opening instrumental introduction (bb.1-11), the first choral statement (bb.12-20), the

tenor solo at bb.24-26 and the choral 'refrain' first heard in bb.31-34. Despite the extensive modifications undergone by the original 'concept' template, several of its original features are carried through to the completed score.

Rudimentary sketches for later sections of the composition additionally reveal how, in numerous instances, the composer continued to reference these early preparatory sketches as direct sources for melodic contours and intervallic outlines.

PART TWO

The 'Last-Ditch-Period'

The Serial Music of the 1960s.

CHAPTER 9

A Compositional Crucible: The Pocket Sketchbook, C115

A highly significant document for the study of Stravinsky's sketch collections of the post-*Flood* period is a small pocket-sized notebook listed as item 115 in the *Sammlung Robert Craft* at the Paul Sacher Stiftung[1]. Robert Craft's provisional catalogue of the material describes this sketchbook as follows:

> Small music notebook: "Music Notes" in gold letters on blue cover ("The Featherweight Books" 54 Bond St., London). Blue perforated detachable paper. Notations in pencil and ink on the first four [*sic*] pages: derivation of *Variations* series; sketch for *Elegy for JFK*; 17-pitch [*sic*] series to the words "Merci pour le ravissant petit mouchoir" marked 'for permuting' then written in chordal and rhythmic form; melody from first scene of *Rigoletto* (showing that Stravinsky did not remember the music at its actual pitch); "seasons greeting to Vittorio Rieti" with other notations on the same page. Stravinsky carried this notebook in the left pocket of his jacket in the last years of his life[2].

Craft's description may be expanded and corrected in a number of ways. The hardcover book measures approximately 14 by 8.5cm and contains printed staves running top to bottom; notations were thus made by turning the book on its side. Entries are to be found on the first *five* pages and are entirely in pencil with the exception of the blue ink used for

[1] At the time that it was consulted there in December 1997, this item was located in a folder of miscellaneous unidentified sketch materials dating largely from considerably earlier stages of the composer's career.
[2] See photocopy, in the possession of the Paul Sacher Stiftung, of typescript catalogue with occasional handwritten additions.

the *Rigoletto* quotation. All pencil entries are hasty in appearance and many show copious evidence of erasure and alteration. One page later on in the book has been removed (though the appearance of a number of blank pages following the last notation makes a lost sketch seem unlikely), and an acid tape mark inside the front cover suggests that some manner of additional notation was originally present there. Three staves on page one are filled. The upper stave furnishes the *Rigoletto* quotation, which occurs shortly after the first curtain of the opera. This notation possibly dates from as early as September 1961, when, according to Craft, Stravinsky attended the first act of a production of the opera, and subsequently displayed interest in this melody[3]. In any event, the pitch-level and rhythmic notation (halving the values) both demonstrate that this notation was not transcribed from the score.

It is tempting to suggest that the second notation was made during one of the composer's numerous visits to Hamburg during this period (25 September 1961, June 1962 for his eightieth birthday celebrations, April 1963 for the first staging of The Flood, June 1963 (when he conducted *Oedipus Rex*), and September 1965)[4], and may represent possible explorations for a twelve-tone series via a source hexachord.

The lower notation presents the series of the Huxley *Variations* in a rhythmicised version, and seems to support the composer's recollection that "the series first occurred to me as a

[3] See entry in Craft, *Chronicle*, 118, for September 21 1961.
[4] Ibid., 110, 118, 147, 212-213, 261.

melody"[5]. The loose sketch material for this work contains two further presentations of the series in this form.

Pages two and three of the sketchbook are devoted exclusively to material related to the *Elegy for JFK*, the first page primarily concerned with the sketching of melodic ideas which coalesce into a twelve-note series, the second presenting four versions of the final row. These notations will be discussed in detail in Chapter 11, but it should be noted that the provisional nature of these sketches (they are strikingly distant from the ideas for the piece eventually developed in the loose sketchleaves housed in the *Sammlung Robert Craft*) identify these notations as the first ideas for the work. Stravinsky's later recollections concerning the origins of the piece[6] seem to confirm this, and also to fix the date and place of the sketchbook notations as 8 March 1964, in flight between Los Angeles and Cleveland[7]. Thus the pocket sketchbook seems to have functioned as a means of recording early ideas conceived away from the piano[8].

Page four of the sketchbook begins with notations, not specified in Craft's catalogue description, for *Abraham and Isaac*, identifiable, despite the lack of rhythmic definition (noteheads only), as belonging to the incipient instrumental and vocal events of the piece. This may be ascertained by virtue of the row forms and respective contours employed, as well as remarkably early specifications for instrumentation (retained in the final version).

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[5] *Themes and Conclusions*, 62.
[6] Ibid., 60-62.
[7] See also *Chronicles*, 256.
[8] In *Chronicle*, 311, Craft remarks on Stravinsky's 'impatien[ce] to play notations made in the last few days, when he was without an instrument'.

The sketch employs several closely-related row forms, that for 'Fg & Vle' (i.e. bassoon and violas) beginning as a retrograde of the upper sketch with the central stave its inversion. As will be seen in Chapter 10, this sketch may be linked directly to several other early notations within the loose material for the work.

Beneath this comes the seasonal thank-you greeting to the composer Vittorio Rieti ("Totor") in the form of a twelve-tone series continuing onto the top of page 5. Here, the retrograde form of the series is presented in conjunction with a switch from English to French text underlay ("merci pour la ravissant petit mouchoir"). The presentation of the prime form of the series on page four is rhythmically outlined with carefully-notated intervallic and rhythmic correspondences between the names of the composer and putative recipient (probably suggested by the assonance created through the use of the Italian composer's sobriquet). The retrograde extension, which seems not to have been part of the original idea, elides the common pitch C, is literally derived (apart from the octave position of the D) and is devoid of rhythmic differentiation (save for the C#). The composition of this fragment was either abandoned at this point or completed elsewhere. The effort which Stravinsky evidently expended on such an apparently insignificant item (the row is, in addition, combinatorial with an I form at one level of transposition) is surprising. Its appearance within this sketchbook perhaps suggests that such trifles had a serious purpose in exploring serial possibilities for rows intended for larger compositions[9]. The two

[9] A similar 'singing telegram' intended as a silver jubilee present for Goddard Lieberson, and dated May 1964, is sketched on the independent leaf C114. The melodic line, underlaid with a text beginning 'Twenty-five notes of warmest congratulation . . .' in fact unfolds two consecutive, separately numbered, twelve-tone rows (the first pitch being immediately replicated at the octave to provide the appropriate number of notes). The rows cannot be associated using standard serial transformations, and carefully arranged numbers from 1 through 24, together with a related diagram, on the obverse of the sketch would seem to suggest that cryptic permutational procedures were somehow involved.

sketches on page four would appear to support the composer's assertion that he usually began to work "by relating intervals rhythmically" and "improvis[ing] rhythmic units on a provisional row of notes (which can become a final row)".[10]

The Craft catalogue is also inaccurate with regard to the final sketch in the notebook. The text incipit reads "for Princton" [*sic*] (not "for permuting") and clearly relates to this sketch, and not to the Rieti greeting above, by virtue of its placement beneath the dividing line. It thus identifies the sketch as an early (probably the first) notation for what was to become *Requiem Canticles*[11]. Furthermore, the sketch is obviously not a "chordal and rhythmic version" of the greeting, but has its own very distinct series extracted beneath, this being very close to series II of *Requiem Canticles*[12]. The first hexachord is identical to the final row, while the second underwent some minor reordering later in the compositional process[13]. The sketch, though apparently a self-contained statement of the row, already provides a suggestion for expansion, in that the final C# can only be explained by hypothesising that Stravinsky had intended to continue by presenting the R form, with the treble-register triad acting as a pivotal shared group somewhat in the manner of the Rieti and *Abraham* notations. Striking procedural similarities are to be found between this notation and that made for an incomplete piano sonata/orchestral piece sketched during 1966/67, the composition of which was captured on film by the photographer Arnold

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[10] *Conversations*, 15.
[11] The work was commissioned in memory of Helen Buchanan Seeger, who had left a sizeable legacy to Princeton University Music Department. See Libman, *And Music at the Close*, 176.
[12] Craft's error may have originated through observing the relationship of the pitches on the word 'merci' in the Rieti greeting with those initiating the upper voice of the Princeton sketch, directly beneath. This may have been deliberate on the composer's part, but there are no other appreciable relationships between the sketches.
[13] See Chapter 13.

Newman[14]. In a well-known sequence of photographs, Stravinsky is shown sketching and making alterations (by erasing) to a rhythmically moulded aggregate, the serial ordering of which was only subsequently clarified beneath. This row was later expanded through a sequence of sketches to be discussed in Chapter 13. Robert Craft's published captions for Newman's collection confirm that the sketch was created away from the piano[15].

This pocket sketchbook therefore comprises identifiably early compositional experiments for three major works and one shorter piece from the 1960's, which Stravinsky apparently saw no reason to integrate with the main sketch collections for these works. In the case of both the *Elegy for JFK* and *Requiem Canticles,* experiments were conducted with materials based on interval sequences differing from the final construction of the series, and in both cases the row was extracted from the sketch and not *vice-versa*. Strangely, given the ostensibly seminal nature of the notations contained within, the pocket sketchbook C115 is ignored in Robert Craft's discussions on the evolution of these works[16].

The entries in the sketchbook would seem to indicate its sporadic use between, at latest, August 1962 (though possibly earlier) and about March 1965, when the principal compositional work on *Requiem Canticles* was initiated. Entries in the book occur out of chronological order, with the earliest identifiable sketch (for *Abraham and Isaac*, begun in Santa Fe in early August 1962) occurring in between *Variations* (begun July 1963)/*Elegy for JFK* (which briefly interrupted work on *Variations* in March 1964) and *Requiem*

[14] See Newman and Craft, *Bravo Stravinsky*.
[15] Republished in *Chronicle*, 303.
[16] For example in appendix G, 'On the Chronology of the *Requiem Canticles*' in *Selected Correspondence* II, 467-471 (discussed in Chapter 12).

Canticles. There are no sketches relating to other works of the period, *Fanfare for a New Theatre* (end of March 1964), *Introitus* (January-February 1965), *The Owl and the Pussycat* (October 1966) or the incomplete work begun in mid-December 1967[17]. Thus the exclusive purpose of the sketchbook appears to have been to record initial or early exploratory ideas recorded away from the piano or whilst in transit. They are thus not so much sketches for specific passages of music as investigations of compositional potential. Their later adaptation and alteration was undoubtedly as a result of subjection to aural scrutiny at the piano[18].

[17] These dates are provided by the individual sketch collections concerned (see below).
[18] See *Chronicle*, 311.

CHAPTER 10

Abraham and Isaac

The sketches for this work reveal a large number of ongoing template-based procedures linked directly to the use of row invariants as a filter mechanism. Most conspicuously, rejected sketches for the opening vocal paragraph, made at an incipient stage of composition, are cannibalised as templates for use later in the work, with concomitant adjustments and extensions to the serial distributions. Though the re-channelling of these early ideas created a consequent change of prevailing row usage in the vocal opening, the composer was able to adapt some of his existing sketches for this section by substituting serially invariant components in order to retain certain pitch configurations of the original. These early sketches therefore act as templates for subsequent serial selection procedures. Also of interest is the interaction of pitch and rhythmic configurations, as well as overall serial patterning, between a number of these sketches for the opening section and other early rudimentary notations for such non-consecutive passages as the coda (b.240 foll.) and flute cadenza (b.89 foll.). Later examples of template procedure will consider the evolution of the coda from the early 'concept' template and the composer's experiments with recondite serial permutations as a means of reconstituting familiar material within new contexts.

Unusually for Stravinsky's later serial compositions, the series of this work is not hexachordally combinatorial, though it nevertheless displays interesting properties and relationships[1]. Stravinsky elaborated charts on sketchleaf AI/3 (two fragments taped to a single background page) which provide α and β rotation-transpositions for four forms of the row, labelled O, I, R and RI. Much of the β hexachord of the RI form has been cancelled and hastily revised due to an erroneous interval in the second rotation that had initially been duplicated down the chart.

The material in the Paul Sacher Stiftung's *Sammlung Robert Craft* incorporates the complete sketch material, a working particell short-score draft on six very large sheets (incorporating timings and serial annotations), together with an amount of textual source material for the work. Also included are a corrected *Reinschrift* full-score ozalid[2], a 'second copy' of the work's first proofs for the Boosey and Hawkes edition, and Robert Craft's conducting score, signed and dated in Stravinsky's hand 'I Str, March 27/65' on the front cover[3].

[1] See Spies, 'Notes on Abraham'.
[2] The holograph is housed in the Museum of Israel, Jerusalem.
[3] This latter contains Craft's conducting marks, plus a large number of intriguing critical remarks on an unidentified previous performance (though apparently not the original Columbia release with Richard Frisch as solo baritone), such as "he's ahead and stays ahead", "fills the rest in" (at b.155), "all wrong" (b.160), and "adds appoggiatura" (b.194).

Textual Sources

Textual materials (summarised in Table 10:1) consist of Sir Isaiah Berlin's ten-page typescript of the complete text in Hebrew phonetic transliteration, with supplied English translations, plus an incomplete text in Stravinsky's hand[4]. The former (except for occasional alterations to details of the phonetics) is essentially the text that was to appear in the published score. The latter source consists of a single sheet in Russian Cyrillic phonetics, with English translation, for the passage "And he rose Abraham in the morning . . . unto the place whereof spoke to him God" (published score bb.52-72), together with the remainder of the text on five sheets from verse four only (i.e. continuing forward from b.73). These five sheets repeat the phonetic Hebrew transliteration of the Berlin typescript, in pencil, with English translation in red ink[5]. In addition, there are two small charts of phonetic sounds relating to the Berlin transliteration. None of the textual materials furnishes the original Hebrew lettering that appears in the published score[6]. Stravinsky's sketches reveal that he initially drafted the vocal line between bb.56 and 72 using the above-mentioned Cyrillic transliteration, and not Isaiah Berlin's English phonetic version[7]. A small number of other isolated shorter passages also reveal this approach, although no Cyrillic textual sources survive for them. The composer, however, added a number of phonetic aids, in English and Cyrillic forms, to both the Berlin typescript and his own manuscript copy.

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[4] For an account of Isaiah Berlin's involvement in the text see *Ignatieff, Sir Isaiah Berlin: A Life*, 238.
[5] A facsimile of the last of these pages is reproduced in *SPD*, upper half of plate 19.
[6] See letter of 23 September, 1964, in *Selected Correspondence* III, 450.
[7] See sketchleaf AI/24, fragments (i), (ii) and (iii).

Microfilm No.	Total pages	Description
AI/131-140	10	Isaiah Berlin's typescript with Stravinsky's holograph additions, including Cyrillic phonetics, accentual markings, bar numbers and rhythmic notations.
AI/143-148	6 (last page reproduced in *SPD* Plate 19)	Stravinsky's handwritten libretto: 1 page in Cyrillic phonetics with English translation (=bb.52-72), remainder in English phonetics with English translation.

Table 10:1: Textual sources for *Abraham and Isaac*.

Two small leaves list a number of phonetic symbols relating to Isaiah Berlin's phonetic transliteration, which were presumably employed by Stravinsky to fix the pronunciation of certain words of the Hebrew text. The small number of similar phonetic aids added to the Berlin typescript use both English and Cyrillic transliterations, with, for instance, the syllables *V'* and *B'* marked "very short sound", and the equivalent Cyrillic letter "Ц" (distinguishable only because of its context and alignment from a rhythmic notation of two beamed quavers) added below the *tz* sound in *la'etzim* in b.156[8]. This is the only Cyrillic notation in the Berlin typescript, but others appear in the composer's handwritten copy[9].

Both copies of the libretto reveal a considerable number of supplementary rhythmic notations (stems only, without the suggestion of contour), in the composer's hand, above selected words. These are, without exception, very brief, and appear to indicate the natural accentuation of the Hebrew text, as Stravinsky's recollections in a programme note for the work implies[10]. The majority of these notations are identical in both copies of the text, although the Berlin typescript offers more examples.

The top left-hand side of the Berlin libretto's first page (AI/131) contains Stravinsky's grouping of the nineteen constituent verses of the story, using the numbers employed throughout the typescript: "1-3, Prelude; 3-6, [part] I; 6-13, [part] II; 13-end, [part] III". This numbering would not appear to be inclusive of the final figure in each group and thus corresponds to the appearance of double bars in the published score.

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[8] *Sic*, the typescript sometimes offering different phonetic spelling from the published score.
[9] See, for example, the facsimile of Stravinsky's holograph libretto in *SPD* (note 5, above).
[10] '...the verbal and musical accentuations *are* identical...' Republished in *Themes and Conclusions*, 58-59.

The Appearance of the Sketch Materials

Stravinsky preserved the sketch materials for the work in a large ring-bound folder consisting of 12 pages (currently filed alongside the other material) onto the recto and verso of which he attached the loose sketchleaves using adhesive tape. These were enclosed in cardboard covers marked on the front "Abraham and Isaac, Rough Sketches 1962-63", with a title page dated "March 1963". The Paul Sacher Stiftung has recently reconstructed the ordering of this material on acid-free backing paper. However, the largely chronological succession of the sketches within the folder – despite evident continuities such as the drafting of bb.147 through 180 (principally the vocal line) across four numbered fragments[11] - may have little relevance to their original compositional sequence, as the composer only appears to have arranged the folder following completion of the work on 3rd March (as the title page implies)[12].

The particell draft, occupying six very large leaves, and preserved in the Paul Sacher Stiftung within a separate folder, contains the composer's habitual segmental timings as well as a separate timing sheet attached at the end of the final page, together with several dates[13]. Information on chronology supplied by the sketch and particell material is summarised in Table 10:2, and will be discussed further below.

[11] AI/16, fragments (i) and (ii) together with AI/17, fragments (i) and (ii).
[12] See the date on AI/22(ii).
[13] See appendix, Volume II, 23.

Date	Position in score	Sketch source	Other sources
2 August 1962, Santa Fe (I.S. to Santa Fe, 28 July)	Opening	AI/4 (top).	Craft *Glimpses* 304 (year incorrectly given as 1964) *SPD* 471
28 August –7 September [I.S. in Israel]			Craft *Chronicle* 147, 169-177
8-16 September 1962 [I.S. in Venice]	38-45 105 foll. (version with chorus) 16/17 (3 chords)	AI/5 (n.d. but on notepaper from Hotel Bauer Grünwald, Venice.	Craft *Glimpses* 308, note 14 Craft *Chronicle* 177
"Sept 8 '62, Venezia"	Opening (draft)	Top of particell p.1 (AI/28).	Kunstmuseum, *Nachlass* 176 (facsimile)
September 21-October 11 1962 [I.S. in Russia]			Craft *Chronicle* 179-209
Ca. 16 January 1963	73-83 with variants	AI/7 (n.d. but rhythmic schemes for canons match unidentified sketch C110 dated 16 January 1963 in Craft's hand.	Craft *Chronicle* 212 (January-February 1963)
28 January 1963	probably 128	Particell p.3 (AI/30).	Kunstmuseum, *Nachlass* 177 (facsimile)
29 January 1963	129 foll.	Particell p.3 (AI/30).	Kunstmuseum, *Nachlass* 177 (facsimile)
31 January 1963	136-145	AI/15, upper fragment.	*SPD* 471 (but b.135 specified)
February 12 1963	181	Particell, p.4 (AI/31).	
February 15 1963	184-187 outline of voice	AI/19 lower fragment.	
February 16 1963	184-188 voice and instruments	AI/18 middle fragment.	*SPD* 171 (but b.190 specified)
March 3 1963	243 to end	AI/22 lower fragment, End of particell p.6 (AI/33).	*SPD* 171

Table 10:2: Chronological table for the composition of *Abraham and Isaac*.

Spies implies that the entire text was initially transliterated into phonetic Russian (being closer to Hebrew phonemes than the final English transliteration provided in the score), and that Stravinsky made his setting directly from this text[14]. However, the sketches (which mostly employ the English phonetic transliteration) suggest a more circumscribed and limited use of Cyrillic characters, which proves useful in determining a general chronological succession for the materials.

As Spies observes, the work falls clearly into six subsections distinguished by successive changes to slower tempi[15]. These sections, together with their smaller internal divisions, were mostly sketched separately on individual leaves. As with *A Sermon, a Narrative and a Prayer*, the voice parts were frequently drafted independently of the accompaniment. A considerable number of sketches consist of the vocal part only, sometimes (as in AI/16 and 17) with one or more blank staves rastrated beneath. Occasionally the complete texture is not to be found in the preparatory sketch material, implying that, as in certain passages of *A Sermon, a Narrative and a Prayer*, the accompaniment was subsequently added directly to the working short-score.

[14] Spies, 'Notes on Abraham', 186, where he also maintains that the Hebrew setting was initially suggested by Nicolas Nabokov.
[15] Ibid., 192, echoing *Themes and Conclusions*, 58-59.

Early Notations and 'Concept' Sketches

One of the small sheets of phonetic symbols (AI/142) was written on notepaper from the *La Fonda* inn, Santa Fe, New Mexico, where Stravinsky stayed from 28 July into early August 1962, immediately before his concert tour in Israel from 28 August to 7 September[16], although a draft programme note in the composer's hand states that the work was only officially commissioned during this visit[17]. This evidence confirms the contemporary large sketchleaf AI/4, also sketched on rastrated *La Fonda* paper and headed with the date "Aug[ust] 2 '62", as amongst the earliest notations for the piece, predating the official commission[18].

Stravinsky was in a position to transfer and elaborate material drafted on this sketch into the particell score immediately upon his return from Israel to Venice on 8 September 1962[19]. This date, together with the location, appears on the top right-hand side (over the vocal entry, b.12) of the first of six large pages, AI/28-33, which constitute the complete particell short-score draft of the work[20], and was later recalled by the composer as the date on which he 'composed the first line of the text'[21]. The instrumental lines accompanying

[16] Craft, *Chronicle*, 147, 169, 177. An account of Stravinsky's activities in Santa Fe in August 1962, during a festival honouring his eightieth birthday year, is given in Horgan, *Encounters with Stravinsky*, 150-160.
[17] Facsimile reproduction in Craft, *A Stravinsky Scrapbook*, plate 247, p.120.
[18] This date and location, identified as the first notation for the work, is erroneously transcribed as Santa Fe, 2 August 1964, in Craft, *Glimpses*, 304.
[19] Cf. Craft, *Chronicle*, entries for 7 and 10 September 1962, 176-177. The former entry shows that Stravinsky left Israel for Venice on 7 September, whilst the latter refers to the ongoing composition of *Abraham and Isaac*.
[20] Pages 1 and 3 of this particell draft are reproduced in colour facsimile in Kunstmuseum, *Sein Nachlass*, 176-177.
[21] *Themes and Conclusions*, 59. This information, however, (and that of the other dates provided in the same source) appears not to be based on the composer's direct recollection, but on a retrospective examination of the particell draft.

the voice part from the beginning (b.12) as far as the end of the first vocal paragraph at b.45 (sketched on AI/4, and continuing down the left-hand side of AI/5) were clearly added directly to the particell draft following completion of the vocal line, as they do not appear in any form within the remaining sketch materials for the piece. This working method is confirmed by the rather uncommon appearence of cancelled and re-drafted notations on the first page of the particell draft in the accompaniment at bb.44-45. Stravinsky evidently began constructing the short-score draft before completion of the entire voice line for this section. AI/4 presents sketches for the opening instrumental introduction together with a version of the vocal part (only) as far as b.37. The completion of the vocal line to b.45 on AI/5 is sketched on notepaper from the *Bauer Grünwald* hotel, Venice, and therefore must postdate the beginning of the particell draft, which presumably could have initially extended only as far as b.37. Other evidence, to be discussed below, suggests that Stravinsky had not progressed quite this far by the second week of September, and that AI/4 therefore contains material sketched at quite different times. Much of the lower half of AI/4 must be, at the very earliest estimate, contemporary with the September 'Venice' sketches, i.e. considerably later than the sketches on the upper part of the same page made at Santa Fe and dated 'August 2'.

This large, rastrated sketchleaf (AI/4) probably represents first notations for the work, beginning at (a) in the top left-hand corner (next to the date) with a sequence of twelve unpitched stems, beamed in semiquaver groups, followed by five smaller descending vertical strokes. This notation, made on an unrastrated section of the page, bears remarkable physical similarities to the 'January 19' concept sketch for *A Sermon, a*

Narrative and a Prayer (SNP11) and evidently represents the same process of formulating a generalised musical template. Directly to the right of this dated 'concept' notation appear noteheads (b), outlining both the P and I forms of the definitive row used in the work, without rhythmic configuration, and with the final five pitches of P encircled, suggesting a direct, though cryptic, association with the grouping and pattern of the 'concept'[22]. It would thus appear that, as in the *Sermon* sketch, the 'concept' and series were conceived separately, and that the composer originated compositional ideas by synthesising a rhythmic scheme and contour with independently-generated row forms. While it is difficult to reconcile the contour of the 'concept' as a whole directly to either the P or I form as given, its opening shape suggests an association with the P form.

This appearance of the row in the sketches would appear to predate the elaboration of the row charts themselves. A comparison with the row charts used throughout the compositional process (AI/3) reveals that this was not the source for the registral positions of the constituent pitches on AI/4(b).

Of particular interest is the manner in which these incipient notations relate to their respective extensions beneath. The final form of the opening bars was achieved following two further drafts, only one of which, (c), is to be found on the present sketchleaf, AI/4. Sketching of this passage must have been interrupted following the completion of AI/4(a) and (b), because the chronologically succeeding notation, intermediate between these and AI/4(c), appears in the pocket sketchbook, C115. The given date therefore pertains only to

[22] The brackets beneath the right-hand side of the I form (the lower bracket marked 1/2), perhaps concern a putative rotational design or related permutational scheme.

the notations on the very upper portion of the page, (and probably specifically the 'concept') suggesting that the 'concept', which relates closely to several subsequent stages of composition on this page, is at least roughly contemporary with the noteheads (b).

The sketch on p.4 of the C115 pocket sketchbook restricts itself exclusively to explorations of the P and I forms presented on AI/4. All pitches are still represented as noteheads, but otherwise the sketch makes several important advances in detail. The three filled staves present (a) a reordered version of P, (b) a statement of I (bass clef – though the first two pitches are illegible), and (c) a statement of P in its original ordering. The reordering of P in (a) is effected by transferring the five encircled notes of AI/4 to the beginning of the row, and by retrograding the remaining pitches. The resulting order, as subsequently identified in Stravinsky's particell, is thus P 8-12, followed by 7-1. Stravinsky's purpose in so doing may have been connected with finding a workable means of realising the 'concept' template in terms of concrete pitch and intervallic structure, but it also has the effect of creating a fulcrum by eliding P and I, through their common boundary pitch F, and exploring potential intervallic connections. Certainly the analogous contour and intervallic treatment of (a) and (b) in the sketchbook – note the symmetrical intervallic relationship that results between the beginning of the reordered P and the end of I[23], as well as the central invariance (E/F#) visually emphasised by the overlapping alignment of both rows (o.p. 10/11 of the reordered P (= P: 2 and 3) and 2/3 of I) – suggest that Stravinsky was still engaged in abstract 'pre-compositional' stratagems with row properties. On the other hand, (c) is much more developed in terms of its registers and precise intervallic

[23] Order positions 1-5 of the reordered P at T2 = the retrograde of order positions 8-12 of I.

definitions, all of which were retained into the final version of bb.5-6, although the intermediate sketch on AI/4 employs a considerably different rhythmic outline from the published score. Stravinsky created a similar central invariance by finally selecting the two P forms for elision, as outlined by his added bracketing in C115. Astonishingly, given its seminal nature, the sketch also outlines instrumentation for this new unit, which was again retained into the published score (if one understands 'Fg & Vle' as intimating an alternation, rather than combination, of bassoon and tutti violas).

This unit was subsequently further elaborated back on AI/4, whilst the I form, eventually to become the opening vocal statement, underwent intermediate treatment on AI/6, fragment (i), before its near-final appearance as part of the vocal-line draft beginning in the middle of AI/4. In both of these sketches, and in the published score, it retains the same contour as in C115, where it also appears with implied bass register, suggesting perhaps that Stravinsky may have already intended it as part of the vocal line. The composer wrote out a complete preliminary draft of the monodic opening phrases of the work (the permuted P followed directly by its original ordering, eliding the common F) through b.6 at (c) on AI/4[24]. This assigns registral positions for the first time to the initial reordered statement of P, whilst retaining for the subsequent original ordering those of the C115 sketch. The rhythmic grouping of the reordered P (five beamed semiquavers followed by a group of septuplet semiquavers) is clearly linked directly to the pitch-permutation operation itself,

[24] Spies ('Notes on Abraham', 201), White (*Stravinsky: The Composer and His Works*, 530) and Van den Toorn (*The Music of Igor Stravinsky*, 448-449), erroneously regard the work's opening dodecaphonic statement (in violas/bassoon) as the unique appearance of the ordered P form. (This suggestion has already been refuted in a review of Van den Toorn's book in Craft, *Glimpses*, 305). Subsequently-elaborated rotational matrices, on which their serial analyses are based, are therefore viewed by all three from a different perspective than that of the composer's own row chart.

and is then applied, like a template, across to the original set, so that an interplay is manufactured between pitch/intervallic distribution and rhythmic formulae.

Conspicuous associations are perceptible between the reordered P in this sketch and the contour at (a) aligned directly above it. Particularly striking are similarities between the general contour of the first group of five pitches and the first six noteheads of the contour, as well as the beaming of the last group of seven in both (2+2+3, excluding the grace note in the contour). Stravinsky's prescription to maintain equal semiquavers throughout the contour sketch suggests that a shift of emphasis had occurred between the two notations, and confirms that the 'concept' was an earlier sketch that the composer continued to use as a template guide throughout the initial stages of constructing this passage. At any rate, a considerable amount of experimentation at the keyboard must have preceded the appearance of the near-final version of the passage at (d) on AI/4, as the divergences of pitch and rhythmic grouping between the sketches are not what one might naturally have hypothesised.

The leap of imagination occurring between these sketches is immediately obvious even in secondary features, such as the addition of a precise metronome mark (slightly slower than both the particell and published score) and the rationalisation of serial assignments – demonstrating that the composer had elaborated his row charts in the interim period. The AI/4 sketch was constructed in at least three segments, as evinced by rastration breaks, and clearly derives from the earlier sketch (c) (directly above) via an amount of interim keyboard experimentation. Evidence of the source remains in the (largely retained)

registral layout, and in features such as the transfer of the semiquaver septuplet group backwards to b.5. The instrumental indications are a curious mix of progress and regression, as they appear to represent a short-lived rethink on mixed timbres, introducing the clarinet sonority that would perform a prominent role in the immediately following bars (bb.8-15) (as well as at the very end of the piece), but eliminating the violas which would eventually dominate both the beginning and conclusion of the work (in the latter instance as a solo *obbligato*). These sketches thus show a remarkable mobility in the treatment of independent musical parameters.

These opening phrases were later joined to the opening I presentation in the voice via two inserted links employing statements of R and P. Stravinsky composed the R link first (see the erasures at the nexus point where it would presumably have elided (with smooth voice-leading) with the preceding P). The P-derived chords in bb.7-8 were squeezed in, parenthetically, between these drafts, necessitating the addition of guiding arrows to the beginning of the R form.

A number of other sketches may be identified as part of this related group of early notations. AI/5 has already been mentioned as containing, among other seminal material, notations for the vocal line between bb.38 and 45, composed in Venice in September 1962. To this may be added AI/6(i) and AI/6(ii), for reasons detailed below.

Early Templates for the Coda

Sketchleaf AI/6(i) is particularly significant in that it may be safely identified as occupying a chronologically intermediate position between the upper and lower halves of AI/4, i.e. predating the particell segment of 8 September 1962. This is ascertainable through the appearance, at the very bottom of the sketch fragment, of an early incipit for the first vocal entry in b.12 (with Cyrillic text underlay) following on from, but clearly later than that of C115, by virtue of its rhythmic definition and specific text underlay. This sketch sets the first two words of the text, 'Vay(e)hi akhar' (though presented here using Cyrillic phonetics), to the first nine pitches of the I form of the row, preserving the registral arrangement of C115, but with an additional rhythmic *ictus* introduced by the extension of the sixth order-position, B, to a crotchet duration. This emphasis marks the unique appearance in the row of interval class 4 (the only other interval classes represented being 1 and 2), and also creates a caesura between the two hexachords, a feature underlined by the composer's spacing and slurring here. The subsequent draft of this music, back on AI/4, though still a stage from the published score, introduces more detailed rhythmic definition and an adjusted text underlay, but still retains a similar function with regard to the B. A notable feature of AI/6, and a small group of other sketches (see Table 10:3), is the extensive use of a Cyrillic phonetic underlay in place of the Berlin typescript's English transliteration of the Hebrew text. Stravinsky appears to have abandoned this Cyrillic transliteration and reverted to the Berlin version at an incipient stage of composition, thus facilitating a loose chronological grouping of these materials.

Sketch No.	Position in score of sections in Cyrillic	Comments
AI/5	Vocal part only bb.37-45.	One syllable only in Cyrillic (V(e)'ha, b.42).
AI/6 top fragment	Version of "the end" (viola line) Voice opening at b.12 b.105 foll?	'Avraham' in Roman script.
AI/8 top fragment	b.72, bb.70-71.	English translation supplied for 70-71.
AI/9	Text (notes).	Name "Paul Horgan" identifiable.
AI/21	bb.229-239.	One word ("goyey") in Cyrillic.
AI/24 both fragments	bb.56-72.	b.52-55 in English phonetics , English translation supplied for 56-67 only.

Table 10:3: *Abraham and Isaac*: sketches containing Cyrillic phonetics.

The upper notation on the same sketchleaf (AI/6(i)) is unequivocally identified by the composer as a sketch for the conclusion of the work ("the end"). This fact is confirmed by Cyrillic underlay which furnishes the final three words 'Vayeshev Avraham Bivershava', these words being duplicated in large lettering as an incipit (or perhaps as a reference text – note the added accentuation marks) across the very top of the sheet. The experimental nature of this sketch is evident from its hasty appearance, with erasures and faint pencil markings, the unexpected use of Cyrillic, and through its oblique relationship to the eventual conclusion of the piece as it was to appear in the completed score. Particularly striking in this respect is the paradox created by its combination of a precise text underlay with the use of the alto clef. Whilst the former clearly identifies the sketch with the vocal line, the clef – the only appearances of which within the entire sketch folder are found on this page – seems to indicate that the composer was thinking in terms of viola timbre, creating an obvious link with the opening of the piece via the C115 instrumental indications. This juxtaposition of contrasting elements immediately suggests that the sketch was intended to have several independent offshoots, i.e. that it was not designed primarily as the draft of a specific passage of music as much as a template offering a variety of possibilities for the conclusion of the work. This function is confirmed by the later expansion of the sketch into a duet for voice and *obbligato* viola (b.245 foll.), with both lines evolved from this template (see below).

Serial Strategies and Template Models: the Composition of the Opening Vocal Paragraph

The left-hand side of sketchleaf AI/5 pursues the drafting of the vocal line begun on AI/4 through to its conclusion in b.45, though as discussed above, this material was sketched in Venice at least five weeks after instigation of initial work on AI/4. Sketches for the vocal part on both these pages investigate, for the first time in the composition, means by which basic material may be extended in time by following predetermined permutational chains offered by the row charts. Despite acting as a continuation of AI/4, however, the materials of AI/5 can be seen to display serially divergent methodologies. AI/4 manufactures an extended vocal line by tracking fairly systematically down through the Iα hexachords and back up those of the Iβ (though typically including some capricious retrograde forms) in a manner characteristic of Stravinsky's more extended post-*Sermon* compositions. On the other hand, AI/5 *interlocks* α and retrograde β forms of R in alternating numerical sequence, viz. R: α6, [β5]r, α4, [β3]r, α2, [β1]r, α1[25]. All other sketches on this page are analogously R-derived. In this way the sketch may be linked directly to other notations, including those on the same page (right-hand side, employing Rα rotations in sequence), and on AI/6(i) and AI/6(ii) (see below), with which it shares selected Rα hexachords.

More detailed investigation of the notations made on the top right-hand side of sketchleaf AI/5 yields some further important information regarding the general chronological sequence and compositional *modus operandi.* The text underlay here (in English

[25] See the sketches down the left-hand side of the page.

phonetics) clearly identifies the passage as an alternative version of the music that appears on AI/4, for bb.18-22 of the published score ('et Avraham vayomer elav "Avraham"')[26]. The position of these sketches towards the top of the sheet, together with the cumbersome staggered appearance of those for bb.38-45 on the left-hand side (necessitating the addition of guiding arrows), suggests that Stravinsky drafted the music for "et Avraham vayomer elav" first, and that this was therefore his initial idea for extending the vocal part. Visible incomplete erasures at the equivalent point on AI/4 would seem to confirm this interpretation. Here, following the voice's incipient statement of I ("Va[y]ihi akhar hadvarim haeile") Stravinsky had originally set the following word, "v(e)haelohim", to a statement of Iβ2 in retrograde[27]. He then presumably sought to extend this idea by spiralling down through the R alpha hexachords as sketched on AI/5[28]. It would thus appear that the opening vocal line on sketchleaf AI/4 had progressed no further than about b.15 (though in a different form than the final score) before Stravinsky's arrival in Venice on 8 September 1962.

Close examination of the various timings provided within the particell material for the work (see Volume II, 23) appear symptomatic of anxiety concerning the material intended at this juncture. The first page of the particell[29] shows three added timings (1', 1'12" and 0'14") identically encircled in green pencil, at bb.21-22 (i.e. as far as the composer had drafted on the right-hand side of AI/5), b.45 (left-hand side of the same sketchpage) and

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[26] The sketch, with an alternative opening provided directly underneath (see guiding arrow), continues on the middle left of the page (marked 'chorus').
[27] This rotation is identical, except for its final order position, with Rα1.
[28] The Rα 2 and 3 hexachords, together with the erased version of the ensuing α4, closely follow the contours and intervallic profiles of the respective charts on AI/3.
[29] Facsimile in Kunstmuseum *Sein Nachlass*, 177.

b.50 (additional material to end of the particell page) respectively. However, Stravinsky's cumulative timings, given on the sheet inserted at the end of the particell[30], do not entirely concur with these estimates. This sheet transfers all the particell timings (plus a few towards the end of the piece which are not explicitly given in the particell), providing additional timings for each of the six pages (on the left-hand side of their respective boxes) and, as work progresses, timings for larger sections (on the right). Stravinsky's overall calculation for the first page (1'26") accounts only for the latter two timings, omitting the initial minute of music down as far as "Avraham". This perhaps suggests that this section, ideas for which unquestionably date from the beginning of work on the piece, remained in an indeterminate state for some time after the re-disposition of its initial sketches. Whether or not the timing for this section was a later addition (as its cramped appearance on the timing sheet might suggest), Stravinsky was clearly unwilling or unable to estimate a figure on the basis of incomplete or provisional material. He appears to have completed the composition of all sections the work down as far as b.181 by 12 February 1963, as he inserted the foregoing date into the particell at this point and calculated an overall aggregate timing of 8'26", i.e. including the initial minute. The remainder of the piece was added to the particell in three segments which Stravinsky totalled (incorrectly)[31] to 3'25", thus supplying a total length of 11'51" as noted at the bottom of the sheet.

Several clues within the sketch material suggest that the vocal line following the opening I statement was not finally clarified until towards the conclusion of work on this sub-section ending at b.181. Firstly, though he timed each section and page that was added to the

[30] Page 6 of the particell, i.e. AI/33. See details of *Abraham and Isaac* particell in Volume II, 23.
[31] The correct total is 3'31".

particell, dating it at several junctures (notably the two consecutive dates appearing at bb.128-29), Stravinsky, unusually, did not attempt to calculate an aggregate timing until he was approximately two thirds of the way into the work. Further dates within the sketches (see Table 10:2) help to identify material completed by 12 February 1963.

The sketches for the 'original' version of "et Avraham vayomer elav" on AI/5 show considerable evidence of experimentation. Stravinsky drafted the setting in at least three stages, as indicated by the breaks in rastration, and a number of alternative octave positions are visible as incomplete erasures, demonstrating that the composer may have had a more extended vocal range (up to tenor F#) in mind at this stage. He then replaced the opening Rα2 hexachord with its retrograde form (directly beneath) and indicated by an arrow that it was intended to supersede the original beginning. Notwithstanding the altered opening pitch succession thus generated, this modification retains significant aspects of the original, notably the grace-note figure on "et" and elements of the word-underlay (changing to the syllable 'vra' on the note B in both sketches).

The sketch continues immediately beneath with a setting (for chorus) of God's first address to Abraham (appearing in its ultimate form in the score at bb.20-21)[32]. This, though not explicitly designated as such in the sketches, returns to Rα (presented twice simultaneously – the upper part eliding with the C# ending the word "elav" on the top system) in registrally close position, exactly as it appears in the row charts. It was evidently Stravinsky's initial intention to distinguish God's word by using heterophonic music for

[32] 'During the next stage of composition, in Venice five weeks later [i.e. than 2 August 1962 – see note 18], Stravinsky introduced a unison chorus for the response [*sic*] *Avraham*'. Craft, *Glimpses*, 308, endnote 14.

chorus (here five against six semiquavers), thereby recalling the manner employed for the voice of God in the recently completed *The Flood*[33]. Indeed, the three chords sketched in the middle of the page (verticalising adjacent tetrachords of R) – and apparently representing one of the earliest harmonic dimensions of the piece – seem to have their serial origins in the preceding sketch, and form the basis for the tremolando *ponticello* string chords, prompted by the reference to God's name, at bb.16-17. The conceit of associating block chords with supernatural beings (here God and the Angel) is loosely continued throughout the work, most notably at b.69 foll. (employing the identical string effect, once more associated with God), and accompanying the Angel's words at b.173 foll. and b.229 foll. Presumably with the Angel's position as celestial intermediary between the deity and Abraham in mind, 'his' chords appear in the much less nebulous timbres of wind and pizzicato strings. Once again, a similar association is to be found in *The Flood*, following b.180, in what Robert Craft suitably terms the 'minatory character' of God's music following the transgression of Adam and Eve in Eden[34].

Once again however, this chordal sketch is not definitive, but came to be employed as a template basis for later reworkings, in which certain properties are fixed, others interchangeable. That the pitch content here was linked to the prevailing series form is shown by the fact that Stravinsky modified these chords following his ultimate decision to employ I instead of R-based rotation chains in the vocal part. A glance at the particell annotations identifies the final chord sequence (bb.16-17) as employing similarly

[33] This idea extends at least as far back as *Babel*, composed in the mid-1940's, and there are also procedural similarities (in the canonic treatment) with *A Sermon, A Narrative and A Prayer* (cf. Stephen's vision in bb.172-178).
[34] Craft, *Chronicles*, 233.

verticalised adjacencies from the I2 rotation in the sequence β, [α]r, (i.e. order positions [7-10]; [11,12,5,6]; [1-4]). This rotation, and reading thereof, was clearly selected because of the invariant properties of content and ordering prevailing between I2β and Rα (only the final pitch-class of each is different), ensuring that the first chords of both the AI/5 source sketch and the final draft remain identical, despite the exchange of series forms. Both middle chords additionally share three pitches, C, G and B. Thus, although ultimately rejected, the chordal sketch on AI/5 acted as a template guide for the final version of the passage.

A significant characteristic of Stravinsky's template methods is revealed by observing that, although the sketches on the upper-right-hand section of AI/5 were rejected as part of the opening vocal passage and replaced with I-derived rotation-chains, the composer cannibalised this material for use later in the work. These 'rejected' sketches were diverted to provide compositional raw material for the vocal recitative beginning at b.105 (sketched initially on AI/11-12), an application which may have been suggested by the similar manner in which the protagonist's name appears towards the beginning of the new text (see below). Similarly, Stravinsky appears to have cannibalised the short (subsequently erased) [Rα]R continuation of the opening vocal phrase ("V(e)'haelohim") on AI/4, following its replacement by [Iα]R. This reappears, in identical registral formation, on AI/5 as the conclusion of the vocal passage at b.45. An unusually large break in rastration before [Rα]R here demonstrates that Stravinsky added it independently of the preceding notations[35].

[35] On the sketch it is identified as [R] 'α1 canc'.

A number of additional features on AI/5 suggest that various configurations were patterned after the experimental notations on AI/6. AI/6(i) begins with the previously discussed draft of the ending, with the final three words of the text underlaid in Cyrillic script. Stravinsky drafted this sketch in at least three stages, as shown by the rastration breaks, and the visible erasures of earlier attempts towards the end and probably also in the middle of the sketch, where "[Rα]3 canc" is duplicated as an earlier layer. This sketch employs the α6, [α3]r, and α1 rotations of R, apparently derived directly from the row charts, AI/3, with which it shares its contours and registral assignments. The text underlay creates comparatively lengthy *melismata* on the first two words, that on the protagonist's name being particularly striking in view of its vehement emphasis of interval-class 4. There are significant correspondences between the musical settings of the first two words, which the composer separated by an extended barline. Apart from the melismatic setting, both phrases open with interval-class 4 and end with figurations employing similar contours and rhythmic structures: a descending grace-note, followed by a rising iambic motif (this latter perhaps linked to the opening gesture of the work). Both phrases share four pitches and occupy a similar registral space. Rα1, set entirely syllabically, (its initial C# elided with the end of the previous rotation) carries the register downward with a stepwise cadential gesture that conspicuously lacks the interval-class 4 characteristic of its predecessors[36].

Directly beneath, Stravinsky made two further fragmentary notations that extend directly from the upper sketch. The first of these, on the left-hand side, sets the word

[36] This contour and interval sequence is, of course, an important feature of the C115 sketches and their associated AI/4 notations.

"V(e)haelohim" (God) – though once again represented using Cyrillic alphabet – and is transferred directly from the end of the upper sketch[37]. The sketch immediately to its right (the only one on the page set to Berlin's English transliteration) reworks the R[α3]r rotation, retaining the alto clef, grace-note figure and registral assignments from the first sketch, but adjusting the rhythm and underlay to accommodate a repeat of the original word "Avraham". All this would appear to point to a direct stimulus from the Berlin typescript, where (as in the final score) the protagonist's name is twice invoked by the Angel at the climax of the drama (cf. b.167). The extraction of the two key names using configurations from the initial sketch casts some light on the composer's approach to text setting, while the lack of any overt reference here to additional *dramatis personae,* such as the Angel or Isaac, clarifies Stravinsky's conception of the story as being fundamentally concerned with the interaction between God and Abraham. At any rate, his original idea for setting God's words on AI/5 clearly continues from these notations, once again employing the unrotated R hexachord associated with God, together with the name 'Abraham'. In both cases truncated versions of Rα (omitting the initial C#) are used.

Sketchleaf AI/6(ii), which Stravinsky pasted directly beneath in his ring-bound collation of the sketch material, has a sufficient number of surface features in common with both AI/6(i) and AI/5, for it to be confidently identified as occupying an intermediate position between these sketches. AI/6(ii) represents early explorations for the complete texture (including the punctuating string chords) of the flute cadenza passage beginning at b.89 together with the anticipatory chords in bb.87-88. As with the sketches for the vocal lines

[37] Possibly Stravinsky's use of the unrotated R-form of the row for the deity's name conceals an element of symbolism.

on the right-hand side of AI/5, the melodic sequence drafted on the upper portion of AI/6(ii) interlocks clearly-designated α and β rotations of R. The upper right-hand sketch, a continuation of the lower sequence, once again employs Rα6 (present on both AI/5 and AI/6(i)), and borrows from the template sketch for 'the end', directly above on AI/6(i). The close intervals of this earlier Rα6 are largely preserved here (modified only by the relatively lower register of the E#), and the rhythmic structure borrows from a number of features of the AI/6(i) draft, both directly (the syncopated semiquaver-quaver-semiquaver and the final acciaccatura C/B) and more generally (the decorative repetitions on C/E in the middle of the template, analogous with the C/D repetitions in the flute cadenza) – see Example 10:1.

Similarities with the sketches on the left-hand side of AI/5 are more readily apparent. Particularly notable are the mutual rhythmic resemblances between the opening of the AI/5 sketch (the vocal line beginning at b.37) and the Rα6 sketch discussed above, as well as the similarly shared Rα4 form (which initiates the flute cadenza) and the preserved intervals of the [Rβ1]r hexachord. Stravinsky continued to elaborate the cadenza materials after their addition to the particell draft[38], altering registral positions and extending the complexity of the figurations. The opening of the cadenza in the particell, now assigned to flute, additionally seems to find a new application for the 'abandoned' rhythmic formula of 5+7 semiquavers from AI/4(c) – cf. published score, b.89.

[38] AI/29.

Beneath the sketches for the cadenza on AI/6(ii), Stravinsky explored another dimension of the R-rotations by writing out derived verticals. Each of the five boxed pitch collections represents one of the chords which punctuate the vocal *cantus* and its continuation in the flute cadenza between bb.87 and 90 (see below). Stravinsky ruled further pairs of short staves directly beneath these boxes, suggesting that it was his intention to reconstitute the chords, but in the event such changes appear to have been entered directly into the particell score.

The Final Form of the Coda

Stravinsky drafted the final form of the work's coda (beginning at b.240) on two loose pages AI/22(ii) and AI/23, both sketches showing evidence of alteration and erasure. The former sketchleaf, which bears the composer's signature together with the terminal date for the work in its lower right-hand corner, nevertheless appears to chronologically precede the latter[39]. AI/22(ii), notated across three staves (the voice possibly having been drafted first, as with earlier sketches), commences at b.243, continuing through to the end in a version close to the final score, but with some earlier registral placements and orthography. AI/23, essentially employing only two staves, concerns itself with the instrumental introduction to the coda, beginning at b.240 and running as far as b.245, where an incipit is provided for the vocal entry. Thus bb.243-245 appear on both sketches, and it is this duplication that allows a chronological order to be proposed. AI/23 is considerably closer to the final

[39] This date, March 3 1963, is also to be found in the particell and final score.

version of these bars in terms of register, rhythm and barring (cf. in particular, the register of the C natural in b.244 and the entry of the voice, which coincides with the C in AI/22(ii) but occurs, with greater downbeat emphasis, a quaver later than the published score on AI/23)[40].

The relationship of these sketches to the first notations for the ending on AI/6 is oblique in terms of overall musical detail but very direct in terms of the compositional process employed. AI/22(ii) opens with Rα6, in identical fashion to AI/6, and the contour and registral configuration of this hexachord as employed in the later sketch points to an unequivocal association[41]. While the voice exclusively pursues a complete chain of Rα rotations (albeit in non-sequential order)[42], the instrumental line continues with a bias towards RIα hexachords (viz. RI: α2, α6, [α2]r)[43], plus an isolated central [Rα3]r hexachord deriving from AI/6(i)). The appearance, in a median position within both lines on AI/22(ii), of the retrograde Rα3 hexachord (occurring consecutively, and with identical opening contour) evidently derives from its similar relative location on AI/6(i). This is also true of the initial and concluding Rα6 (instruments) and Rα1 (voice) hexachords. Although the manner in which such Rα rotations, shared between the sketches, are presented inevitably produces correspondences, particularly regarding the Rα6/Rα1 presentations that concludes the vocal line, the AI/6(i) template also influences serial

[40] *Pentimenti* here suggest that a number of possibilities were explored.
[41] The low D which begins the sketch is the final pitch of Iβ6 – see AI/23.
[42] Viz. R: α2, [α5]r, α4, [α3]r, α6, α1.
[43] RIα2, though not identified in the sketch, follows [Rα3]r.

selection within the largely RI-derived *obbligato* viola line[44]. In this case, Stravinsky selected RI hexachords with invariant properties that could be employed to amplify R-based elements of the AI/6(i) template. Thus, the RIα2 hexachord echoes the opening C#/E# of both the AI/6(i) template and the preceding Rα6 hexachord, a feature emphasised by the ensuing rest. The two final factors of this hexachord, conjoined with the ensuing [Rα3]r, directly expand intervallic and pitch sequences outlined by the template [Rα3]R, together with important features of its rhythmic configuration[45]. Additionally, a number of conspicuous features of the AI/6(i) template, including the rising iambic configuration at phrase endings, and the conjunct descending opening figure, permeate the final version in a more general manner (Example 10:2).

In this manner, the AI/6(i) template encapsulates within itself several possibilities for outward expansion, quite apart from the actual material (such as the vocal ending) that was transferred directly across to AI/22(i) and AI/23. By using an expanded R-based rotation chain in the voice, and seeking invariants within other rotation-forms to generate an accompanying counterpoint following a similar succession of hexachordal events, Stravinsky was able to create a network of intervallically and gesturally related occurrences from the primary template.

AI/23 expands the coda sketched on AI/22(i) with the addition of an instrumental introduction, which employs the three I hexachords β1, [α1]r, (i.e. the complete I form of

[44] Cf. also the Rα4 configuration (pitch and rhythmic distributions) in the voice at 'Vayakumu' (bb.248-249), and the same hexachord in the flute cadenza sketch on AI/6(ii).
[45] Note that the contour of the RIα2 hexachord is transferred directly from the chart, AI/3.

the row with hexachords reversed) and β6, this time applying block topography in deriving the individual contrapuntal lines. Once again, similar iambic rhythmic patterns are in evidence, and the selection and ordering of the constituent hexachords reflects the influence of the AI/6 template and its derivations. This is noticeable, for instance, in the unmistakable correspondence between the opening rhythmic and pitch events of AI/23 and the first sketch for the flute cadenza on AI/6(ii). On AI/23 the first phrase (bb.240-41, preceding the introduction of the lower tessitura in b.242) is bounded at either end by C#, as in the setting of "Vayashov Avraham" in the template example, exploiting the common initial pitch-class of the Rα6 and Iβ6 hexachords. In this way, the coda is made to open and conclude with similarly spaced C#/D# pairings in the instrumental lines, although it is not possible to ascertain the exact chronology of these additions to the sketch[46]. By eliding the I: [α1]r and β6 forms (which share four pitch-classes), through a common F/E#, Stravinsky was able to create a struck C#/E# dyad at the end of b.241 which anticipates the beginning of the AI/22(ii) sketch (cf.b.244) and additionally generates a large amount of pitch-redundancy (involving G, F# and E) at the phrase junction, bb.241-2.

[46] Cf. b.240 (strings) with bb.253-254 (clarinets).

The Expansion of the Cannibalised Material

As a basis for the vocal recitative in bb.105-128, which follows the lengthy instrumental interlude (described as a 'prelude to the IId [*sic*] part' in the sketches on AI/13(i)), Stravinsky cannibalised the rejected notations sketched on the right-hand side of AI/5, inserting additional, closely related, material to accommodate the new text. As discussed above, the original material, drafted in Venice in early September 1962, was initially conceived for the text 'et Avraham vayomer elav: "Avraham"' in verse one, appearing in its definitive revised form in the score between bb.18 and 22. As can be seen from the appendix listing of particell material (Volume II, 23) and the dates in Table 10:2, the whole section incorporating the instrumental interlude and ensuing vocal recitative (i.e. bb.91-128) represents a much later stage in the composition of the work, having been added to the third page of the particell score (AI/30) from the rough sketches sometime on or immediately before January 28th 1963[47]. It would appear that the cannibalisation of the earlier material for this passage was at least partly motivated by obvious textual parallels between the two sections, particularly the extensive repetitions of the words 'vayomer' ('and he said') and 'Avraham'.

Sketchleaves AI/11 and 12 represent a continuous rough draft for the full texture of the music between bb.105 and 121 (except for the instrumental punctuation in the latter bar, which was drafted on AI/10 in conjunction with bb.122-24). Shorter satellite sketches are found on AI/10(i), AI/14(ii) and AI/13(i). The music outlined on AI/11 extends as far as

[47] Facsimile in Kunstmuseum, *Sein Nachlass*, 177.

b.111, with the second half of bb.109 through 111 appearing as a taped-on addition. Both sketchleaves are working drafts, displaying considerable evidence of earlier erased layers. AI/11, though largely unmetered, and still awaiting some rhythmic refinements, approaches the final score in most details and is the only extant preliminary sketch for this passage[48]. The instrumental lines on AI/12 frequently appear in higher registers than the score, an abrupt change of *tessitura* possibly suggested by the boy Isaac's first direct speech in the text[49]. The continuation of this passage is sketched on AI/10(i), with the instrumental gesture in b.121 subsequently derived by analogy with b.124. The master sketch AI/12 was assembled from preliminary sketches entered on AI/14(ii) and AI/13(i), the latter fragment (containing an early draft for the vocal part of bb.118-21) otherwise devoted to rudimentary notations for the instrumental interlude between bb.91 and 104. Stravinsky initially drafted the vocal line of bb.112 through 117 on AI/14(ii), then composed the instrumental lines, which appear as parenthetical 'bubble' inserts. This block was then transferred to AI/12 together with the setting of 'Avi vayomer' (bb.118-21) from AI/13(i), following the rastration break.

In cannibalising the 'rejected' AI/5 material on AI/11 and 12, Stravinsky retained details of contour, rhythmic outline and serial consecution, but expanded the passage by internal repetition and through the insertion of closely associated hexachords. This is most

[48] The pitches of the sketch (of unidentified serial provenance) in the first instrumental simultaneity in b.106 (and by analogy in bb.108 and 111) differ from the particell draft and final score, but are found in bb.103-4. The revision was evidently made in order to increase immediate pitch continuity with the end of the preceding instrumental interlude. In the ultimate version of b.106, the instrumental pitches, together with their registral, and most of their timbral, assignments all derive from the end of b.104. The early version is still present on a late draft of the preceding interlude, AI/14(i).

[49] In b.113 both lines are an octave higher than the final score; in b.115, the quaver triplets (later assigned to first bassoon) are likewise an octave higher; both parts in b. 117 are assigned as per the registers of the score, as is the sketch on AI/10(i).

immediately apparent on AI/12, where the setting of the repeated word 'vayomer' focuses on the 'chorus' entry at the end of the AI/5 draft, originally underlaid with the word 'Avraham'. As the unrotated Rα hexachord, this source now became a pivot for the derivation of several associated hexachords in the Rα and Pβ forms, which are inserted to expand the vocal line[50]. The distinctive five-against-six heterophony of the original AI/5 'chorus' entry is additionally transferred to the first instrumental punctuation, with analogous uncoordinated gestures continued in the succeeding interjections.

The preceding passage, on AI/11, opens with music and text corresponding to the first version of the 'rejected' draft (top of AI/5), although the direction of the Rα3 hexachord is reversed. The vocal line preserves the entire hexachordal succession and overall contour of the template, but includes two incidental insertions, required to accommodate the new text. The Rα[4]r hexachord of the template is directly preceded by its retrograde (though this largely applies the contour and interval profile of the template model), and the opening hexachords, together with their associated contours, are subsequently repeated to the words 'B'no vayikhak b'yado et ha'esh' (bb.108-109)[51]. The conclusion of the sketch (Rα: 5 and [6]r) remains particularly close to the template source on AI/5 in preserving all registral assignments of the model.

Stravinsky's first idea for the instrumental interlude was a template, appearing across the top of AI/13(i), directly beneath the heading 'prelude to the IId part', which employs a

[50] Rα is followed by the succeeding link in the hexachordal chain, R[β2]r. P[β]r (identical to Rα) is analogously followed by Pβ2.
[51] The pitch repetition was possibly prompted by the verbal repetition of the word 'vayikhak'.

rhythmically configured, linear permutation of P. Following several subsequent stages of drafts (on AI/13(ii), 13(iii) and 14(i)), this eventually emerged in the final score as the *cantus* line, shared between flute and cor anglais, commencing in b.97. The template sketch (AI/13(i)) shares important features with the seminal notations for the very opening of the work, which evolved from the initial concept on AI/4. It seems likely that the affiliation between the two notations was suggested by the similar function of both templates in initiating compositional work on purely instrumental passages which introduce principal divisions (first and second 'parts') of the piece. The permuted P form on AI/13(i) commences on the last pitch of the α hexachord (order position 6) and unfolds the remainder of the row through the β hexachord. The same order position then becomes the axis for a retrograde presentation of the complete α, resulting overall in a thirteen-pitch sequence. In both templates, therefore, a modified or extended forward presentation of the Pβ hexachord is followed by a simple retrograde presentation of α. Both sketches also reveal a similar approach to serial partitioning, with seven consecutive order positions (i.e. one complete hexachord together with the succeeding pitch of the concomitant hexachord) being unfolded in each case. In the AI/4 'concept' this takes the form of the first order position of the β hexachord together with [α]r, (i.e. 7, 6, 5, 4, 3, 2, 1), with the AI/13(i) template unfolding its mirror image, 6, 7, 8, 9, 10, 11, 12 (i.e. the final pitch of α plus the entire β). Additional intervallic and rhythmic correspondences with the AI/4 model supplement this reciprocity of serial treatment. Most obvious in this respect is the rhythmic/intervallic motif that opens AI/4 and concludes AI/13(i), together with the specific intervallic profiles associated with order positions P: 6, 5; 6, 7; and 10, 11, 12 (see Example 10:3).

The Composition of bb. 46-72

The two remaining sketches employing Cyrillic phonetics, AI/8(i) and AI/24, are directly related, in that the latter incorporates the former fragmentary sketch. Both sketches form part of a surprisingly circumscribed group of materials that employs extended RI-derived material. AI/8(i) is a brief notation for the vocal part at bb.70-72. Working from page one of his handwritten copy of the libretto, Stravinsky appears to have begun by composing the phrase "Haelohim", as this appears at the top of the sketch fragment, preceded by the bass clef. Possibly originating as a revised alternative to the isolated notation for "V(e)Haelohim" on AI/6(i) (which, as discussed above, was subsequently reworked by incorporation into the vocal line on AI/5 as God's address to Abraham), this employs the final five pitches of RIβ6, although the sketch identifies this only by the number "6". Beneath this, Stravinsky set the immediately preceding words of the text, "Asher amar lo", to [RIβ5]r (using slightly different word underlay to the final score), ending with the missing note of the RIβ6 hexachord (as Stravinsky's extended line from the "6" of the upper sketch identifies), thus implying his intention to extend the line backwards from an already established end-point by employing a β-hexachord chain.

Stravinsky drafted the passage between bb.51 and 72 on sketchleaf AI/24, which comprises two separate fragments pasted to a background page. Bars 51 through 55 are shown with the full texture of the instrumental lines, although visible incomplete erasures indicate that the composer was initially uncertain of the positioning, relative to the vocal line, of pitch-

repetitions within the accompaniment's single statement of RIβ2. The original text of the 2/8 bar (eventually b.54) proposed a repetition of the C#/G pairing (order-positions 5 and 6 of the hexachord), but in order to expand the statement to occupy the entire length of the vocal line's circuit of RI:[α1]r/α1, Stravinsky instead repeated the C/C# in this bar (order-positions 4 and 5), and moved the original reading forward to the following bar. The composer had previously made a rough draft of the wind chord in b.51 (a verticalisation of the last four order positions of RIβ), together with the vocal line (only) as far as b.55, on the lower fragment of sketchleaf AI/8. This draft completes the retrograde presentation of the primary RI about halfway through the text, necessitating an expansion of the music by the simple expedient of spiralling back through the α form, the inserted setting of "baboker" constituting a still later internal extension.

The appearance on the upper section of this fragment (AI/8(ii)) of the instrumental interlude between bb.47 and 49 suggests that this material must also have been in place before Stravinsky drafted the remaining vocal music on AI/24(i) through to b.68. A notable feature of AI/8 is the high incidence of RI forms (nine hexachords), the only exceptions being one appearance each of Pβ3 and Iα6. The majority of the RI hexachords being α-forms, C# occurs prominently within the material. Iα6 and Pβ3, conceivably layered in at a later stage than the other notations, share certain features with the remaining hexachords. Iα6 concludes with C# and Pβ3 appears to have been selected from the charts on the basis of its two concluding pitches (which adumbrate the chord in b.51). It is tempting to see the pitch and rhythmic figurations (5-against-6) in b.49 as deriving obliquely from God's "chorus" entry on AI/5.

By the time Stravinsky began work on AI/24, therefore, he had in place bb.46-55 (transferred from AI/8(ii), with refinements in rhythm and pitch, such as the adjustment to the register of the D at "Avraham" in b.53) and the vocal line for bb.70-72. The remainder of AI/24(i) is concerned with drafting the vocal line (only) for the intermediate music, while the lower fragment, AI/24(ii), which may predate it, focuses principally on the establishment of the accompanying chords at b.69 foll. Taking its cue from the seminal sketch AI/8(i), the music between bb.56 and 72 is generated from a complete spiral of both RI hexachords beginning with [RIα6]r and ending with the RIβ6, though the vectors of constituent hexachords within this scheme are characteristically intuitive. Once more, the primacy of the constructive method is reflected in the amount of word-repetition necessary in disposing the text within the frame provided by the music. Timings on the particell suggest that Stravinsky transcribed the interlude in bb.47-50 onto the first page of the short-score draft (probably in order to finish it and proceed to a fresh page on his piano music rack), before the completion and addition of bb.51-72, which were added to the beginning of page two of the draft, and separately timed at sixty-eight seconds (q.v. appendix table).

The sketch for "V'Haelohim" on AI/8(i) later became the nucleus of the short block beginning at "Elohim" in b.129, a procedure undoubtedly suggested by the explicit textual parallel between the two passages. Stravinsky sketched this latter passage (as far as b.135) in two stages on AI/10(ii) and (iii) – again using RI-derived hexachords – and added it to the particell draft (third page) on 29th January 1963 (see the large rastration break following

b.135), a day after he had entered and timed the preceding block (see Sacher facsimile). In the initial sketch, AI/10(ii), he outlined the beginning of the vocal part at b.129 with the transferred RIβ6 hexachord, once again commencing with its second order position, A. The excluded first order position, D#, was added to the end of the hexachord, preceding a rastration break. The composer continued by eliding the D# with the first pitch of RIβ2, but his uncertainty is revealed by yet another interruption in the rastration following the second note. He then decided to conclude with this hexachord instead, underlaying the appropriate text in the vocal part ('Haseh', several words further on in the text), and inserted [RIβ4]r, in the later sketch (AI/10(iii)), to join the segments. The ordering of the RIβ6 hexachord was rectified, albeit by duplicating its D# (thereby simultaneously preserving the form of the rotated RIβ6), by prolonging the same pitch (trumpet, b.128) from the Rα3 hexachord on the top of AI/10(ii) through the *sprechgesang* 'Vayomer Avraham'[52]. The lower instrumental voice, RIα6, also contains a boundary D# (b.134), but the canonic upper voice is derived directly from the vocal line, as Stravinsky's scored-in lines in both sketch and particell indicate, and it does not appear in the row charts.

[52] The designation RIα6, for the beginning of the vocal line on AI/10(iii), is evidently a mistake for the β hexachord, seemingly encouraged by the use of RIα6 in the lower instrumental voice.

Methods of Constructing Verticals

The *ponticello* tremolando chords, occurring from b.69, have obvious affinities with those (beginning in b.87) that punctuate the flute cadenza, sketched on AI/6(ii), and those directly preceding the coda (b.229 foll.). The pitch-class content and general intervallic disposition of all these sets of verticals was systematically manufactured prior to the establishment of the respective location of the chords within the musical texture. Verticals occurring prominently from bb.69, 87 and 173 foll. are all R-derived. Those at b.229 foll. are Pβ-derived, but their oblique metrical placement closely associates them to the preceding passages, especially b.87 and b.173 foll.

Sketchleaf AI/24(iii), which includes sketches for the verticals at b.69 foll., demonstrates the extent to which Stravinsky experimented with the disposition and ordering of his chosen collection of verticals, which in this case derive from the Rβ rotation matrix. An earlier, partially erased, sketch on the right-hand side of the fragment appears to have been intended to align directly with the upper draft of the vocal part. Three verticals remain distinguishable, attacked simultaneously with the last three pitches of the voice. The first of these is identified (beneath) by the composer as "4 Vert" (i.e. Rβ IV). The second, the designation of which is illegible, appears to be vertical Rβ V, though its spacing and registral disposition differ from the final version. All five notes of the vertical are present, but the exact disposition is difficult to determine due the obfuscation of clefs and accidentals. Nevertheless, it appears that the vertical was configured to occupy the same

registral space as the final vertical (immediately following), with C# as the highest pitch and A# as the bass of the chord (on the middle stave – the lowest of the three staves may be intended as treble-clef). This desire to create a degree of obvious pitch retention towards the cadence may explain the surprising location of a conflation of verticals I (the unison) and II, instead of the expected VI, at the conclusion of the sketch.

The resulting chord, which is constituted almost exactly as per the final version (it merely lacks the octave-doubled C#), was moved to the beginning of the passage in the following draft, which Stravinsky completed as a palimpsest, partially obscuring the previous text. Here, the composer followed the correct forward ordering of the verticals from I to VI, although there remain differences with the final score in matters concerning pitch doubling (I, IV, V) and the exact disposition of internal pitches (VI)[53]. It would appear that he added the vocal line beneath as a guide to their disposition only *after* the verticals had been drafted, and before the correction of the spacing and attack-point of vertical III. This interpretation is implied by its placement, untexted, beneath the sketch, the equal spacing of the verticals, the condensed nature of the vocal part (omitting the unaccompanied b.70), together with the lines demonstrating its location *vis-à-vis* the master sketch across the top of the fragment. Thus it appears that Stravinsky's primary concern in initial sketches for the verticals lay in determining their internal relationships, rather than their precise relationship to the pre-existing vocal *cantus*.

[53] Horizontal lines found between the staves of verticals [I+II] and the revised version of III are *tremolando* signs and not ledger lines.

Sketches on the lower half of AI/6(ii), for the string verticals that punctuate the flute cadenza, reveal a similar constructive approach. Directly beneath the initial sketches for what later became the flute cadenza (bb.89 and 90), Stravinsky drafted the chords inside five boxes which have been subjected to numerous erasures. The five chords are identifiable as those punctuating the voice and flute lines from b.87, but the exact disposition of each chord differs considerably from the final score. Once again, the ultimate constituent pitches are present, though the doubled A in chord 3 does not appear subsequently in the particell or score, this being the only one to which a revision (beneath – identical in registral disposition to the final score, but still incorporating the A) has been made, despite the provision of short rastrated staves beneath several of the boxes. Outer pitches and general disposition are as indicated, but the final version occupies a greater registral space and generally re-disposes inner notes. The chords are identified as all deriving from "αβ R all six notes" but the actual method by which the pitches are extracted from the hexachordal array is revealed only by a close study of the notations within each box, a task complicated by the visibility of duplicate material from previous layers.

Each of the six boxes is numbered with a figure indicating the R hexachordal vertical employed, with the final box conflating verticals 1 and 2 as indicated. The appearance of both C# and B (simply duplicating pitches from II) beneath the vertical-designation "1" confirms that both the α and β fields are in simultaneous use, as the composer's caption implies. Within each box, indications for "α" (to the right) and "β" (to the left) appear above Arabic numerals designating the pitches of each constituent vertical, in descending order of the chart, from 1 to 6. Although the most recent layer of the sketch is not always

consistent in aligning these numbers beneath their respective parent hexachords, and despite duplication from previous layers, it is possible to ascertain that each chord derives from a combination of the first four notes (1-4) of each α vertical with the last four of its associated β (3-6). Because of inherent pitch duplications within and between constituent verticals, this method results in chords ranging in density from four to six pitch-classes. Although it appears unlikely that the composer could have accurately predicted the consequences of employing this procedure of manufacturing chordal sequences, (thus implying that his choice may have been motivated simply by achieving a required pitch density), template-like correspondences do appear to exercise significant influence here. The 'compound' chords 4 and 6 are identical in content to 'simple'[54] R verticals IV and IX respectively (except that chord 6 lacks the E of vertical IX). Similarly, chords 5 and [2 + 1] share a maximum number of pitch-classes (only one different pitch-class in each case) with verticals V and [VII +VIII] respectively. This creates pitch associations with the passages of straightforwardly-derived R verticals occurring at b.69 foll. and b.173 foll. (Example 10:4).

Stravinsky began to indicate the disposition of these complex vertical-derived chords, using their respective Arabic numerals, on the rough sketch for the flute cadenza at the top of the same fragment (AI/6(ii)). This indicates that he had originally intended to deploy chords in the succession '4, 3, [2+1]' to punctuate the cadenza in the middle of b.90, separating the appearance of the R:[β2]r and α6 hexachords. Chords 3 and 4 were clearly regarded as an indivisible entity by this stage, as witnessed by the tied mutual middle-D in the original

[54] I.e. formed by the customary procedure of reading down the columns of the rotation matrix.

sketch, confirming that the composer's initial concern was with the internal pitch/interval relationship and voice-leading characteristics of his verticals, and not their eventual location within the passage. Chord 4 was later divorced from its original context, as Stravinsky's cancellation of its assigned numeral in the cadenza sketch implies, and relocated backwards to the analogous hexachordal juncture between R:[β1]R and α3. Chords 5 and 6 were employed to punctuate music sketched elsewhere, namely the vocal line occurring in the completed score at bb.87-88, immediately preceding the flute cadenza. This vocal passage was sketched on fragment AI/6(iii), which the composer pasted directly beneath. This employs, and designates, the RI-chain α1, β1 (i.e. the original RI form), α2, β2, but the unremarked absence of the initial C# of RIα intimates that the sketch continues from another (presumably RI-based) source, and that it does not form part of the same sketch-group as AI/6 (i) and (ii).

This source is to be found on sketchleaf AI/7(iii) – the lower right-hand fragment of this page. This similar single-line draft for the immediately preceding vocal passage (from bb.80 to 83) also employs RIα2 with a continuation consisting of RI[α3]r (not indicated on the sketch), which thus supplies the 'missing' C#. The sketch on the upper fragment of this page is for the full texture of the passage from bb.73 to 81, and thus incorporates some of the material on the smaller sketch. An erased variant at the end of AI/7(i) (three Fs at the end of b.80 instead of the repeated D#/F of AI/7(iii)) suggests that Stravinsky initially drafted bb.80-81 here as a continuation of the music beginning in b.73 ('Bayom

hashlishi . . .') before extending the passage on A/7(iii) and AI/6(iii)[55]. It would therefore appear that at least the vocal part of AI/7(i) had been completed before bb.80 through 88 were composed and dovetailed with the 'compound' verticals outlined on AI/6(ii). Accompaniment figures in bb.84-86 do not appear in the loose sketch material and were evidently composed directly onto the particell draft following the assembly of this passage (bb.73-90), which was then timed as one unit lasting a total duration of seventy seconds (particell p.2 (AI/29) – see appendix, Volume II, 23).

The sequence of R-derived verticals occurring between bb.173 and 177 was also apparently sketched directly onto the particell, as only a draft of the vocal line for this passage survives among the loose-leaf sketches. This draft forms part of an early version of the vocal line between bb.147 and 180, sketched across four similar, paginated fragments on AI/16 and AI/17. Erasures, particularly those visible on AI/16(ii), demonstrate that one or more attempts precede the final layer presented here, while AI/17(ii) offers different pitch repetitions and rhythms from the final version. Detailed instrumental parts are added on fragment AI/16(i), but the others, despite barred staves prepared for instrumental notations on AI/16(ii) and AI/17(ii), indicate only the vocal part. Stravinsky therefore added the remaining instrumental lines directly into the particell, including the canons beginning at

[55] Sketchleaf AI/7(i) is undated, but its rhythmic schemes relate to those found on a fragment, hitherto unidentified, in the *Sammlung Robert Craft*, dated 'Jan[uary] 16th 1963' in Craft's hand (C110). The extensive cancellations on AI/7(i) demonstrate that the composer experienced considerable difficulties with the elaboration of the rhythmic canon between the vocal and instrumental lines (the beginning of the latter making a clear reference to the work's opening instrumental gesture). This appears to have been occasioned by the insertion (perhaps mistakenly) of an additional rest, not present in the *dux*, in the instrumental *comes* at the beginning of the fourth bar. The correction of this anomaly, on the lower instrumental stave (beginning at the end of the third bar) resulted in the entire rhythmic scheme being displaced backwards one semiquaver from this point, thus requiring extremely complex notation across the barring of the vocal line, partly worked out beneath the end of the first system. C110 is an affiliated sketch for the placement of the syncopated triplet semiquavers in the solo violin, b.75.

b.163, for which he provided guiding rhythmic schemes similar to those used to construct the canon sketched on AI/7(i)[56]. Spies remarks on a potential textual trigger for the return, in b.175, of these R-β verticals from b.69 foll., but his assertion that they return in retrograde is only partially correct[57]. The ordering is, in fact, 65423, with vertical I possibly present, though elided with the vocal part. Furthermore, a comparison of spacing and pitch doubling with the vertical sequence on sketchleaf AI/24(iii) suggests that the chords may not have been derived directly from the earlier sketch, but freshly formulated from the row charts. The reordering of the final two verticals in the later chain must surely concern the desired direction of the semitone voice-leading (wedging outwards) in the lower parts, beneath the shared D#/Eb upper voice[58].

Sketches for the final chain of verticals used in the work, beginning in b.229, derive from the Pβ hexachord, and are found on the upper fragment of AI/22. Once again, these chords were sketched separately from the vocal line that they would eventually punctuate in the final version, and were later layered directly into the particell draft. The vocal *cantus* for this passage was sketched on AI/21(ii) in a considerably more condensed format than the final version, together with a cue for the final vertical of the sequence. The sketch indicates a characteristic offbeat placement for this vertical, although its attack point differs from the final score. Nevertheless, on graphological evidence, Stravinsky initially worked out the sequence of verticals across the top two staves of AI/22(i). Here he outlined the pitch content and spacing of the five constituent verticals (the 'unison' vertical I is omitted)

[56] A 'canon *duplex a 3*, by diminution and inversion between tuba and flute, and only rhythmic between baritone and flute'. Spies, 'Notes on Abraham', 20, note 20.
[57] Ibid., 193.
[58] The orthography in b.177 differs in the full and vocal scores.

in a form close to the final version, but with fewer doublings. A notable feature of the registral assignments in this early draft is the explicit parallel motion throughout the lower stave, and in the upper voices in verticals III through V. Originally drafted in light pencil, the composer later wrote over this sketch in red, indicating exact dispositions for the brass instruments (beneath), with flutes and clarinets being assigned to the original pitches. Additional doublings, sanctioned by the chart, were introduced into the brass chords, as well as occasional pitches that were presumably transferred from the original layer of the upper sketch (the tuba C# in the final chord, for instance, does not feature in the flute/clarinet music).

The penultimate chord, which repeats vertical V using a different instrumental disposition, appears to have been a later insertion, to judge by greater congestion between the chords towards the right-hand side of the sketch. These two versions of vertical V appear either side of the baritone's unaccompanied *melisma* on the word "shamata" in bb.234-237, and it would thus seem that Stravinsky's intention in re-voicing the chord was to create additional momentum following this vocal extension. The insertion must therefore postdate the elaboration of the *melisma*, in two stages, on AI/21. Stravinsky indicated his intention to extend the initial, quite condensed, sketch for the vocal line on AI/21(ii) – for which he had already made rhythmic notations on the Berlin typescript[59] – by adding a sequence of beamed semiquavers over the relevant passage. He further expanded this idea in a sketch made to the right of, and at a right angle to, the other notations on AI/21(i). This notation is considerably closer to, but still more condensed than, the final score. The word

[59] This notation, three semiquavers followed by a quaver, with the underlay 'sha-ma-(a)-ta', corresponds closely to the first setting on AI/21(ii).

repetition in bb.235-236, as opposed to the melismatic expansion of a single vowel, was only consolidated in the particell draft, where it appears inserted above the stave. The sketch that occupies most of AI/21(i), and is therefore presumably earlier, is an expansion and consolidation of a rough draft (bottom of AI/20(iii)) for the vocal line ending at b.228. On AI/21(i) Stravinsky adjusted some of the rhythms and incorporated pitch-repetitions suggested by the insertion ('asher') at the bottom of the earlier sketch. It would thus appear that the composer was once again working backwards from the already positioned final vertical towards the completed passage before b.229. His primary motive for the chordal repetitions (indicated in the particell as 2, 3, 4-4, 5-5, 5)[60] thus lay in expanding his instrumental material to cover the ground created by these subsequent vocal insertions.

New Template Constructions: the Application of Diagonal Invariants in bb.182-196

Following his completion of the first four pages of the particell draft, through to b.181, dated 12th February [1963][61], Stravinsky sought new methods of manufacturing vocal pitch sequences for the beginning of the next section. His experiments are to be found on two separate fragments, AI/19(iii) and AI/18(ii), exceptionally bearing the consecutive dates 15th and 16th February 1963 respectively. The dates reveal the significance with which the composer viewed these notations, as well as assisting a reconstruction of the chronological sequence of composition. Clearly, Stravinsky regarded the composition of the work to

[60] Particell draft p.6, AI/33.
[61] See the end of the particell draft p.4, AI/31.

b.181 as essentially complete in draft by 12th February, and the notations made several days later are ostensibly an independent, fresh beginning to the subsequent music. Stravinsky pasted these dated fragments into separate pages of his ring-bound notebook, surrounding them with related sketches for material to be found in the completed score between bb.182 and 201.

The earlier of the two dated sketches, AI/19(iii) reveals the composer continuing sequentially in the composition, with incipient notations for the next phrase of the vocal line between bb.184 and 187. Stravinsky began by notating the material straight through on the top and bottom staves, as confirmed by the indicated serial orders and text which continue across the interruption, short staves in the centre of the fragment representing later expansions and clarifications of the material. The compound sets of figures written above or below each pitch are serial co-ordinates which disclose that the pitches were derived through a new serial methodology of reading diagonally up or down the hexachordal matrix. Upper figures denote horizontal co-ordinates (hexachordal rotations from one to six), while the lower figures assign the vertical order positions within each rotation. Thus the sequence sketched on AI/19(iii) is unfolded by a diagonal reading of Pα from bottom left to top right, followed by the same diagonal of Pβ in the opposite direction, its final pitch, A, being elided with a statement of the corresponding vector of Iβ (top right to bottom left), and concluding with the opposing diagonal and direction (lower right to top left) of Iα, again with an elided mutual pitch (C#). As will be seen, Stravinsky's selection of these particular diagonals from the total available field was not indiscriminate, as

primary row configurations, familiar from earlier sketches, are found embedded within this new context[62].

A number of the pitches in the sketch appear as noteheads, without precisely indicated rhythmic definition, and the consistency of spacing on the page suggests that all pitches may have been initially written out in this manner. Stravinsky's next step was an attempt to underlay the first half of verse thirteen[63]. It is possible that the idea of creating a four-by-six pitch-square may have been initially suggested by the twenty-four syllables of Hebrew text for this passage (ignoring the short *V'* and *B'* phonemes). However, the two elisions of the diagonal square noted above meant that Stravinsky was required to accommodate the syllable count within twenty-two resultant pitches. Order positions 6 (B) of Pα and 2 (D#) of Pβ, the only directly repeated pitches within the sequence, are serially redundant pitches which may have been intended to compensate for this shortfall, restoring twenty-four attacks. Nevertheless, the composer appears to have had problems in determining the correct syllable count for the underlay, initially setting "V'hi" to the pitches C and A# (the C then changed to an acciaccatura an octave lower), but eventually moving the word back a stage in the pitch chain (middle stave), and indicating the underlay "a'yil" for the A#/A (thus the A# is shared by two syllables). Similarly, though the word "Avraham" could have been accommodated syllabically within the first diagonal, the composer shared the D between words and extended the final syllable as shown by his

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[62] Indeed Straus incorrectly identifies the opening vocal line in b.184 as containing a misreading of the chart (F instead of G for the initial pitch), because he understands the pitches here as deriving from the virtually identical [Rβ2]r, and is unaware of this diagonal application of the charts. See Straus, 'Stravinsky's Serial "Mistakes"', 266.

[63] Cf. the sketches for the *Elegy for JFK* in the pocket sketchbook, C115, discussed in Chapter 11.

slurring. The final disposition of the pitches here is shown on the left middle stave. The remainder of the text is set syllabically. Sketchleaf AI/18(ii), dated a day later, represents a more fully notated version of this sketch, with the vocal line already very close to the ultimate version, but including an early attempt at the instrumental accompaniment which is quite different from the final score[64].

Stravinsky indicated subsequent lower-octave displacement of several note-groups in the original sketch (AI/19(iii)) by adding octave signs beneath the pitches concerned. In the case of the concluding group, this transformation occurred in several stages, as can be seen by the later extension to the octave sign and by the register of the C (not included under the octave sign) in relation to the final version (end of b.186, enharmonically notated as B#). Here one can observe, in an explicit manner, how techniques associated with improvisation or empirical investigation at the keyboard could be applied in progressively transforming basic models (such the 'flute solo' template towards the beginning of *Movements*) into new structures with disparate surface relationships.

A similar treatment of diagonals and text underlay is to be found on the visually complementary companion sketch-fragment AI/19(ii), which outlines the remainder of the vocal part for this verse (bb.188-194). Once again, the composer devised the noteheads on the top stave first, this time employing R-diagonals. The Rα diagonal (reading bottom left to top right) is followed by its mirror Rβ diagonal (top left to bottom right), yielding a

[64] Note that on AI/18(ii) the C in the voice, towards the end of b.186 (B# in the published score), observes the registral assignment of AI/19(iii). The rhythmic and gestural configurations of the instrumental line (particularly its demisemiquaver notation, pitch oscillations and intervallic features) recall those of the flute cadenza as it was originally sketched on AI/6(ii).

redundant 12-pitch sequence. The outer words were set syllabically, with pitch-sharing in the centre of the sketch indicated, as before, by overlapping word underlay beneath. The subsequent stages of elaboration include the addition of further short staves beneath, outlining extended two-pitch alternations (differing only slightly from the final score), and the octave transposition of three pitches (two upwards, one downwards). As before, few rhythmic configurations are defined. The lower sketches on this fragment, an abandoned attempt at bb.200-201, followed by a blank stave provided for the text in bb.201-3, demonstrate that the composer had initially intended to proceed with the vocal part before layering in the instrumentation for the subsection between bb.182 and 196. In the event, no further sketches survive for the passage between bb.197 and 206, suggesting that it may have been inserted directly into the particell following the completion of surrounding blocks.

One consequence of the composer's selection and combination of these six vectors, from a potential field of thirty-two[65], is the generation of a high degree of pitch- and interval-redundant features. Redundancy is especially noticeable within the P diagonals, where the α and β hexachords share four pitches, including similar orderings, with R α and β hexachords sharing three pitches. More significant still, and in all probability ultimately responsible for the composer's decision to employ such unconventional methods of pitch manufacture, are the direct relationships pertaining between selected diagonals and primary row forms (see Example 10:5). Thus both the Pβ and Rα diagonals = the Iβ hexachord, while the Iβ diagonal = the Pβ hexachord in both content and ordering. Each pair of

[65] I.e. sixteen hexachordal diagonals, each of which may be read in two directions.

diagonals (P, R, and I) thus contains one hexachord which is identical to a primary hexachord, linking back to those explored on the earliest notations for the work, such as the "August 2" (AI/4) and C115 sketches. (This connection is especially apparent in the contour and registral disposition of Pβ on AI/19(iii)). Of the three remaining diagonal hexachords, only one, the Pα diagonal, is a permutation of either hexachord of the original row. Although RI diagonals generate similar interval patterns, they do not produce primary hexachords, possibly explaining Stravinsky's failure to experiment with them in these sketches. As in the *Movements* sketches, Stravinsky employs template techniques here in generating new pitch-constructions that relate closely to fundamental source materials of the work.

Summary

The first 'concept' template for *Abraham and Isaac* (dated 2 August 1962) consists, like that of *A Sermon, a Narrative and a Prayer*, of a rhythmicised contour, independent of any specific pitch dimension. The final row and its inversion were formulated independently, adjacent to this 'concept', on AI/4. A notable feature of the probable next stage, which is isolated from these notations by its location in the C115 pocket sketchbook, is the permutation of the row and the introduction of specific timbral indications for viola and bassoon. Back on AI/4 Stravinsky generated a draft of the opening bars by associating the

permuted P form with the rhythmic and contour elements of the August 2 'concept', thus emphasising that the series had evolved independently of the 'concept'.

The remaining sketches on the page are, in all probability, rather later in date than those on the upper portion, possibly dating from Stravinsky's visit to Venice in September 1962, when the particell draft was initiated. The musical content and serial treatment of these notations relate them to a group of (probably) contemporary notations on AI/5 and AI/6. Both these sketches are of particular interest for the role they play in the generation of material elaborated much later in the compositional process. The former includes an early attempt at the vocal part in bb.18-22, which was later superseded by a different chain of rotations (which nevertheless preserve pitch features of the earlier model, through the exploitation of serial invariants). The original configurations were, however, retained as a template basis for a later section of the score. AI/6 consists of several concise seminal notations, including a sketch for the first vocal entry, roughly contemporary with the C115 notations, and a template explicitly designated for the end of the work (curiously combining vocal underlay with alto clef notation suggesting viola writing). Both template sources were later greatly extended, through serial substitution methods, in the passages concerned.

Later sketches for *Abraham* reveal new approaches to the realisation of template models. Unusual technical procedures such as the diagonal use of the serial matrix and ancillary mechanisms for the manufacture of serial 'verticals' (e.g. by combining pitches from analogous columns of both the α and β rotations) are not as arbitrary as they initially

appear. Chains of verticals occurring at several points throughout the work, though employing different derivational methods, share similar configurations. The diagonals selected by Stravinsky from the available total create pitch and intervallic sequences that replicate prominent features of the primary row forms, thus facilitating the introduction of configurations derived from the earlier templates.

CHAPTER 11

Melodic Template Morphology in the Shorter Vocal Works: *Elegy for JFK*, *Introitus* and *The Owl and the Pussycat.*

1. Elegy for JFK (1964)

The Evolution of the Series in the Pocket Sketchbook, C115

Using Stravinsky's recorded statements in *Themes and Conclusions* concerning his compositional approach to this short work[1], together with dates provided in Robert Craft's *Chronicle of a Friendship*, it is possibly to reconstruct in considerable detail much of the early genesis of the piece. From these sources it may be ascertained that preliminary discussions between Stravinsky and Auden concerning the piece took place on January 21st 1964[2] and that the composer received Auden's poem (JFK473 typescript) on 3rd March[3]. The pocket sketchbook notations, which include the two-note oscillating figure mentioned in the *Themes and Conclusions* interview, appear to have been made during an air flight to Cleveland on 8th March[4]. The rather hasty and untidy sketches in the C115 pocket

[1] Stravinsky, *Themes and Conclusions*, 60-62.
[2] Craft, *Chronicle of a Friendship*, 257.
[3] Ibid., note to 257.
[4] *Themes and Conclusions*, 61. The exact date is provided by the itinerary in *Chronicle*, 256.

sketchbook (see Chapter 9) provide an unusually candid glimpse of the type of incipient exploratory work that the composer might normally have carried out at the keyboard.

On page two of the C115 sketchbook, following the oscillating bass-register figure associated with the words 'the Heavens are silent', the composer entered ten additional pitches to complete a twelve-tone series[5]. These pitches, which are employed in a preliminary setting (differing considerably from the final version) of the immediately preceding text, 'Why then . . . did he die?' are notated in the treble register, suggesting that the composer was still working with more extended vocal resources in mind than that of the final score[6]. The distribution of the text above and below the stave – evidently layered in after the series had been established – indicates that Stravinsky intended the eleven syllables of text here to be accommodated within the group of ten pitches through repetition of the pitch-class E, which is employed for both the words 'cry' and 'did'. Although this stanza is to be found towards the middle of the completed piece, in Auden's typescript draft of the poem (JFK473), from which the composer worked, it appears as the opening stanza, thus partly explaining the compositional chronology.

The lower portion of the sketch extends directly from this row and includes similar attempts at word underlay for the final verse of JFK473 (eventually becoming the opening

[5] The immediate duplication of the pitch-class F, at a higher octave, would appear to be either an alternative reading or an incomplete erasure.
[6] Stravinsky originally had a choral piece in mind (*Themes and Conclusions*, 60, *Chronicle* 257), but Craft's statement in *Chronicle* (ibid.) that the composer decided on a solo voice 'as soon as the *Elegy for JFK* [poem] arrived, March 3rd 1964' appears to be contradicted by the registral layout of the sketch.

and concluding vocal lines of the completed piece)[7]. The most significant advances in compositional detail here concern alterations to the note-order within the original series. As may be seen from the cancellations on the sketch, Stravinsky originally transcribed the full twelve-note series as evolved in the upper drafts, apparently elaborating a literal inversion directly beneath[8]. He then achieved the intervallic configuration of the final series by a straightforward exchange of order positions 4 and 8 (i.e. F and E). This gives rise to the final series of the work, albeit a tone lower than in the ultimate score (where only untransposed primary forms are employed)[9]. A definitive chart of these forms (at their final pitch levels, and including the RI form, which was not employed in the composition) was drawn up on the facing page of the sketchbook, and was evidently used as the reference point for later stages of composition, as no other row chart is extant among the working materials. As only primary forms are used in the composition, the eventual employment of the row a tone higher than in the original sketch has no effect on internal pitch relationships. This alteration would therefore seem to be associated with the intended *tessitura* of the vocal line, and thus appears to indicate the point at which the composer decided on a solo baritone voice.

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[7] '. . . he devised a poem of adjustable length, by means of a movable final verse repeatable anywhere as a refrain'. (*Themes and Conclusions*, ibid.). The composer's ensuing remark that he 'composed the music for this floating stanza first' does not, given the distinction drawn in *Conversations*, 15, between compositional and pre-compositional activity, contradict the chronology of preliminary explorations for the row.

[8] The initial bass F# was probably a later addition, as the line drawn from the treble F# to the second order position of I demonstrates. The fourth order position of I was originally the G three ledger lines above the bass stave. The ninth order position, F, may also have been in the 'correct' higher register, as a further erasure is visible at this point. Possibly these high registers were altered simply to accommodate the text overlay here.

[9] Compare these procedures with those involved in the evolution of the definitive prime row of *Threni*, discussed in David H. Smyth, 'Stravinsky as Serialist: The Sketches for *Threni*'.

The simple exchange in the row of two pitch-classes naturally modifies the properties of the provisional series, and in so doing reveals something of the composer's cognition of 'relationships from which I was able to derive the instrumental lines'[10]. The P of the provisional row possesses obvious invariant properties with its I form at both extremities and also in the centre, where the pitch-classes A and D# occupy order positions 6 and 7 in both rows (q.v. sketchbook p.2). The exchange of order positions 4 and 8 increases the field of invariant pitches in the centre of the P and I forms to four (occupying order positions 6-9) and also generates a hexachordally combinatorial series[11]. Though the ramifications of this latter feature are not exploited in the extremely circumscribed row combinations used in the piece, the former invariance is (as the composer intimates in the preceding quotation) a major factor in the control of pitch redundancy between the vocal and instrumental lines, and thus of the rate of pitch circulation in general. The presence in the C115 sketchbook notations of the instrumental gesture of b.7, together with the absence of a separate complete draft of the vocal part within the main sketch collection (such as is to be found for *Introitus* (see below))[12], would seem to contradict the composer's suggestion that the instrumental lines were subsequent additions in the manner of Schoenberg's Op.47 *Phantasy*[13].

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[10] *Themes and Conclusions*, 61. However, the composer states that these relationships were discovered only after he had composed the vocal part through, a remark manifestly contradicted by the sketchbook notations.
[11] The series is combinatorial with an I form at one level of transposition, in this case I5.
[12] In addition to the preliminary sketches in C115, the work was drafted *in toto* (instrumental and vocal lines) on JFK475 (a) and (b) and 476 (a) and (b). JFK487 (a) and (b) represent subsequent alterations intended for the mezzo-soprano version. The elisions occurring in the vocal and instrumental parts in bb.7 and 8 seem to confirm that the instrumental gesture of b.7 was drafted simultaneously with the voice.
[13] *Themes and Conclusions*, 61.

Table 11:1, showing the scheme of row combinations used in the piece, reveals that each series presented in the vocal part is paired with an instrumental row generating the invariant groupings discussed above. The omission of RI, though listed in the sketchbook chart, is explained by the absence of these invariant relationships, resulting from its different hexachordal levels.

Bar Nos.	1-8	9-13	13-17	17/18-21	22-23	24-28	29-35	35(end)
Voice	I	R	P	I	--	I	I	--
Instruments	R	I	R	P	IR	IR	R	R

Table 11:1. Scheme of serial combinations for *Elegy for JFK*.

Towards the opening of the work, the I/R combination is presented twice in succession with the instrumental and vocal assignments of the rows reversed[14]. On the first occasion (bb.1-8), all component pitches in both row forms are sounded, creating a high degree of redundancy between the instrumental and vocal divisions, especially noticeable in the pitch repetitions (C, F, B) occurring between the instrumental and vocal parts from b.4 to the

[14] This is also the case with the instrumental/vocal row combinations at the beginning of *Introitus* – cf. bb.3-8 and 10-15 in that piece, where a P/R combination is immediately followed by its antithesis, R/P.

beginning of b.6. This effect is endorsed by the internal repetition of series pitches in both divisions, apparently prompted by the textual reference to 'lamentation'. In the C115 sketchbook, the words 'lamentation and praise', extracted from the I form of the row at the foot of page two, employ different order positions from the final score, though they are associated with the same keening, oscillating figure (projecting interval-class 2), which initiated the experiments for the provisional row ('the Heavens are silent').

In the second appearance of the I/R combination (bb.9-13), the invariant groupings are treated in a different manner. Here the composer responds to the more abrupt and urgent phrases of the text not only by changes in articulation (including the introduction of rests in both voice and instruments), texture and row topography (punctuating chords in the clarinets formed, for the first time, from verticalised row adjacencies), but also by the systematic use of serial elisions made possible by the invariant properties of the row, thereby ensuring a more rapid traversal of the pitch field (Example 11:1).

From b.9 the vocal line unfolds the R form, beginning with order position 3 (1 and 2 having already been stated in the immediately preceding bars). This statement is complete, but the accompaniment, based on I, elides its order positions 6, 7 and 10 with the voice's row, thus minimising redundancies and generating a faster rate of pitch circulation, in contrast with the hesitant progress of the opening section. Vocal and instrumental pitches in b.13 elide to initiate a statement of P/R. The voice, unfolding order positions 2 and 3 (the second G# in b.13 representing 1) in conjunction with the climactic high *tessitura* of b.14, strikingly reintroduces the keening figure of b.4 at the text 'the Heavens are silent'

(Stravinsky's initial idea for the piece)[15]. Beneath this, clarinet II echoes the vocal R statement in bb.9 and 10 (including its register and rhythmic characteristics, in diminution), a reference made particularly audible by the sparse texture and the static nature of the voice part at this point. The ensuing *sforzando* chord for all three clarinets, which initiates the first brief instrumental interlude of the piece, again elides the invariant pitches in the centre of the P and R forms (order positions 4, 5 and 6 of P and 7, 8, 9 of R). This elision facilitates the immediate return in b.16 to the pitch combination at the beginning of b.15 (E in the voice, F in clarinet II), initiating a condensed palindromic allusion to bb.13-14 in bb.16-17. This passage was sketched on the lower fragment of JFK475, where the composer can be observed introducing refinements into these retrospective allusions. The clarinet chord in b.15 (designated as deriving from 'O [i.e. P] and R') is re-spaced in a second draft to condense the baritone's pitches at 'why thus, we cry' (aligned directly above).

Thus the adjustments made to the provisional row in the sketchbook drafts, generating additional invariant pockets within the row matrix, are largely concerned with creating flexibility in matters of pacing and controlling the chromatic pitch circulation of the work.

The exploratory drafts in the C115 sketchbook give little indication of the contours and rhythmic guises eventually assigned to the row forms, and the visible layers of sketches in the main collection (JFK 475, 476) generally approach the final version. Nevertheless, the

[15] The E, the highest pitch in the vocal line, is anticipated by the voice in b.12 and recalled in b.19. It is also echoed immediately by the first clarinet in b.16. The mezzo-soprano version, by transferring the voice downwards an octave in b.14, obfuscates much of the original voice-leading at this point.

recurrence within the completed piece of a limited scheme of contour patterns, including those mentioned in relation to bb.9-17 above, but more especially located in the vocal line throughout the piece, suggests that the composer was consciously working with template-based techniques. The use of carefully-circumscribed selections of row forms, recurring contours and combinations (for example the exchanges of rows between instrumental and vocal parts found in bb.1-8, 9-13), together with palindromic procedures, features prominently in the remaining shorter vocal pieces *Introitus* and *The Owl and the Pussycat*.

2. *Introitus*: Template Methodology and Melodic Drafting Techniques

Introitus was composed in January and February 1965, immediately following the death of T.S. Eliot on 4th January that year[16], as can be seen from the dated sketches as summarised in the appendix tables[17]. These tables outline the complete working materials for the piece, housed in both the *Nachlass* and *Robert Craft* collections, here separated for convenience into early sketches and more advanced/extended materials such as the particell draft and ozalid photocopies of the *Reinschrift* full score, some containing subsequent revisions incorporated into the published version.

[16] The date of Eliot's death is given on a title page within the sketch collection (I/542). The world premiere, together with that of the *Huxley Variations*, took place in Chicago on 17th April 1965 under Craft's direction (*Themes and Conclusions*, 66).
[17] Volume II, 27-8.

The actual preparatory sketch material for the piece consists of a set of row charts (I/541), together with ten sides, some comprising two or more fragments pasted onto a background sheet. The charts, which have been published and subsequently discussed[18], reveal the only systematic exploitation in Stravinsky's serial work of tetrachordal rotation techniques, a practice possibly associated with the predominant chordal density envisaged for the work. The concomitant rotations of the four basic row forms are employed only in the largely vertically-conceived instrumental parts. As will be seen below, these rotations were elaborated a considerable stage into the compositional process, following the delineation of the vocal parts, which are formulated exclusively from linearly unfolded primary row forms.

A surprisingly large proportion of the sketch material – four complete sheets (I/543, 544 545 and 553) – consists exclusively of monophonic sketches for extended passages of the vocal line. To these sketches may be added the upper fragment of I/549 which furnishes the outline of the vocal duet in bb.42 through 49. These materials demonstrate that the composer's approach to composition in this piece involved the construction of a framework by setting the entire text through in condensed outline before any attempt was made at the instrumental music[19].

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[18] The charts appear in colour facsimile in *SPD*, Plate 21, also Kunstmuseum, *Nachlass*, 178. See also Joseph N. Straus's 'Two Mistakes in Stravinsky's *Introitus*' and 'Stravinsky's Serial Mistakes', 242-51, and Claudio Spies's 'Some Notes on Stravinsky's Requiem Settings'. The latter article, though it elaborates a putative chart of hexachordal rotations based on the work's four primary forms, makes no explicit reference to the tetrachordal rotations actually employed here.

[19] As discussed above, the composer suggested that a similar approach was also employed in the composition of the *Elegy for JFK*: 'I wrote the vocal part first and only then discovered the relationships [i.e. invariant row segments] from which I was able to derive the instrumental lines.' (*Themes and Conclusions,* 61). Curiously, Stravinsky proceeds to defend this method by reference to the well-documented compositional methodology of Schoenberg's Op.47 *Phantasy*. See also footnote 24.

In the earliest sketches, for instance in the melodic outline setting the complete text on I/553[20], Stravinsky followed the liturgically prescribed formula for the plainchant introit, which consists of a central psalm tone (*Exaudi . . . veniet*) enclosed on either side by the response *Requiem aeternam.* He transcribed the text, in its standard form (with *eis* instead of the published score's more personalised *ei*) here and on I/543 and I/545, as well as on the title page I/542[21]. The lack of text repetition, together with the rhythmically undifferentiated visual appearance of the noteheads in these early sketches[22], suggests the strong influence of the plainchant model[23].

Of the five vocal sketches referred to above, I/543 and I/545 are clearly the earliest, with the remaining three acting as extensions and elaborations. On I/543 the introit text, proceeding as far as b.39 of the published score ('Jerusalem'), is set syllabically, and without rhythmic definition, to a succession of the four primary row forms P, R, I and RI. The forty-seven syllables of the text are accommodated precisely by this chain as a result of the elision of consecutive order positions R(12) and I(1). Several factors suggest that the sketch, drafted in faint pencil on yellow manuscript paper, may serve an exploratory purpose predating the elaboration of the row charts.

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[20] See the facsimile in Kunstmuseum, *Nachlass*, 179, on lower half of page.
[21] All other relevant sketches employ the singular form of the word and thus conform to the published score.
[22] The word *Domine* at the top of I/553 is underlaid with a rhythmic pattern of triplet crotchets followed by a minim. This configuration, which corresponds to that of the final score (b.8), appears to be the first attempt to elaborate rhythmic structures in these early sketches.
[23] Cf. the *Liber Usualis*, (Solesmes edition) Desclée & Co. 1952, p.1807. The *Missa pro Defunctis* is, of course, found in numerous other plainchant sources. Craft, 'Selected Source Materials' 349, reveals that Stravinsky possessed several books of plainchant.

The R form of the row, which precisely matches the contour of its appearance in the charts, is registrally an exact retrograde of the preceding P form, while a similarly precise relationship obtains in the case of the ensuing I form, which is once again an exact inversion of the P configuration. Only the RI form is less precise in this regard, with order positions 3 and 8 both appearing an octave higher than those of a literal transformation. The sketch therefore probably represents the composer's earliest, and most straightforward, investigation of primary serial relationships, resembling the rudimentary methods of serial extension observed in the earliest pocket sketchbook experiments for *Abraham and Isaac* and *Elegy for JFK*[24]. It would thus appear that even at this preliminary stage Stravinsky was engaging in flexible template-based procedures. The initial assignment of registral positions, subject to modification in subsequent sketches, was supplied not from the charts, or following keyboard experiments, but from structures indigenous to the sketch itself, perhaps suggesting that initial composition took place away from the piano. Though primitive and condensed in comparison with the final score, the resulting pitch sequence was engaged as a template in the construction of the final vocal line, many features of which, including much of the contour/intervallic configuration and general word underlay, are already inferable from this sketch.

[24] Recent research by Anne C. Shreffler, on Webern's earliest (unpublished) attempts at twelve-tone composition, has demonstrated that the composer had at this time a similar conception of the row as a concrete unitary design to be transformed literally and *in toto*. (He also tended to sketch the vocal lines of his pieces through before adding accompanying instrumental parts). Unlike Stravinsky's *modus operandi* however, Webern's more advanced drafts incorporate these transformations literally, and were not intended to act as templates for further manipulation, but as recognisable musical entities in themselves. Webern's difficulties in reconciling background technique and compositional intent soon forced him to abandon these early projects, and it was not until he developed a less vocally-biased, more abstract perspective of serial manipulations that progress in this area became possible. See Shreffler, 'Mein Weg geht jetzt vorüber'.

Sketchleaf I/553 is a neater draft of the vocal parts outlined on I/543 and I/545, now assigned alternately to tenor and bass chorus using appropriate clefs, as in the published score[25]. This notational idiosyncrasy, along with some alteration to the registral distributions, confirms it as being later than the above pair of sketches. The P and R configurations are transcribed unaltered from I/543 (except for their overall lower octave position), but the I and RI statements are registrally revised, with order positions 4, 5 and 8 of I and 7, 8, 10 and 11 of RI occurring in different octaves from the original sketch. The latter half of the draft completes the introit text with the conclusion of the central psalm tone (*Exaudi orationem*) and the liturgically prescribed repetition of the *Requiem aeternam* response. This differs considerably from the ultimate version, where the *Exaudi* text occurs only as a brief *parlando* interlude in bb.40-41[26]. This section, which is perhaps more closely associated with the plainchant model by its utilisation of neumatic-style pitch repetition, was sketched on I/545 and employs the two row forms RI and, rather eccentrically, [RI]I. The latter simply signifies an inversion of the RI, and initially appears to be a serial tautology, as it is, of course, equivalent to the untransposed R form. In employing these particular row forms, however, the composer intended to derive the second half of the vocal line by using rows from the first half as template models.

Stravinsky outlined this inversional relationship on the upper fragment of I/545, a sketchleaf which, like I/543, consists of faint pencil sketches on yellow manuscript paper,

[25] The vocal assignments differ from the final score, where the I and RI forms are both sung by the basses. A near-final version of the rhythmic and metrical structure of these bars, together with its definitive contour (closer to the initial sketches on I/543 than its interim form on I/553), is drafted across three strips of yellow manuscript attached to I/544.

[26] This same text fragment was later set as the opening choral movement of *Requiem Canticles*.

this time divided across two separate fragments pasted to a background page. Sketches on the lower fragment extend directly from both these series, by introducing *melismata* and, for the first time, the idea of alternating tenor and bass responses. Once again the inversion is literal, although the contour of the RI model does not correspond to the row chart, and also differs somewhat from that outlined on I/543 (order positions 3 and 8 are octave transferred). In fact, the registral assignments of this contour were unequivocally derived from the I form on I/543 via the invariable transpositional relationship pertaining between the RI and IR forms (here RI = IR[T2]). In other words, the contour is generated (in retrograde) on the basis of the I form simply by transposing this configuration two semitones higher. This relationship may help to explain the composer's anomalous appellation 'IR' for what is ostensibly the untransposed RI, on the upper sketch of fragment (ii).

This first, incomplete, attempt at the *Exaudi* music (only order positions 1 through 10 are represented) was cancelled by the composer. This derives its contour not from the upper fragment of I/545, but from the directly preceding RI statement in the tenors on I/553, the contour of which is identical. It would seem that Stravinsky began the second half of the vocal line by underlaying the new text to the existing contour, before realising that the same intervallic succession, together with some similar contours, would be provided by the retrogression of I (i.e. IR) from I/543, as discussed above. This IR configuration, in its untransposed state, is entered, using the same method of word underlay, beneath the cancelled sketch on I/545, where the similarities of the opening intervallic gesture becomes

apparent. The composer then evidently made this the basis of the RI contour on fragment (i), and thus, by derivation, of [RI]I.

The [RI]I form, assigned to tenors, is elaborated towards the end of the page, and the significance of this idiosyncratic and apparently redundant serial transformation is revealed by Stravinsky's virtually complete retention of its original contour (fragment (i)) in both drafts on fragment (ii), and eventually into the published score itself (tenors, bb.42-49, where only the F# in order position 3 is octave transferred from the original row contour). As the transformation replicates the ordering of R, the only logical explanation for the composer's application of this form is as a contour-generating template.

The second RI form on I/553, setting the *Exaudi* text, was retained in the piece, although in a different manner than that envisaged in these early sketches. The composer may have had second thoughts concerning the direct juxtaposition of the two RI forms (*et tibi . . . Exaudi*), or the revision may have been influenced by his later decision to combine the tenor and bass voices in the *Requiem aeternam* response towards the conclusion of the work. In any case, the RI and [RI]I forms are unfolded simultaneously in the revised version, which was first sketched in this form on the upper fragment of I/549, though still without indication of an instrumental accompaniment[27]. Though accommodating new text and supplying a suitable contrapuntal voice to the existing [RI]I contour necessitated a

[27] The harp and piano chords in bb.46-7 were a later insertion, and were sketched on a separate fragment pasted beneath the vocal draft on I/549. Stravinsky first entered this continuous vocal passage into the particell (top of I/556) before erasing the ending to insert the two additional bars.

departure from the format of the initial sketches, elements of the original contour of RI (I/545, fragment (i)) can still be discerned in order positions 5 through 11.

The Serial Construction of the Instrumental Parts

The dated sketchleaf I/547, a working draft for the complete texture of bb.3 through 10, shows that by 22nd January Stravinsky was engaged in elaborating instrumental parts to the existing male-voice *cantus*. This sketchpage, numbered as "2", begins with the opening of the *cantus*, breaking off with the harp and piano chords in bb.9-10. The corresponding opening instrumental gesture is sketched in full score on a separate page numbered "1", although presumably this was a later addition. Stravinsky had previously outlined these refrain chords on two separate fragments taped to a background page (I/548). Those of the opening appear on the upper fragment, with two drafts of bb.9-10 occupying the lower. The remaining two appearances of this gesture (bb.32-3 and 46-7), for which no preparatory sketches are to be found, were presumably sketched directly onto the particell draft.

Annotations on the sketches and particell draft demonstrate that the contrasting instrumental textures and gestures of the work were generated using serially consistent methodologies throughout the piece. The accompaniment to the vocal chant, limited in timbre to strings doubling timpani *coperti*, and the brief *bicinium* texture for the solo

strings, acting as an interlude preceding the entry of the basses in b.24, consist (with one exception to be described below) of straightforward linear presentations of primary row forms, with consistent verticalisation of adjacent order positions[28]. The punctuating group of three harp-and-piano chords appearing in bb.1-2, 9-10, 32-33 and 46-47, with its tolling, bell-like character[29], is obtained, for the most part, from α, β and χ diagonals derived from the P, I and RI forms. The chords associated with the *parlando* choral effect in bb.16-17 and 40-41, employing the full ensemble minus timpani, are more varied in construction, the first passage principally employing α, β and χ diagonals from I, with the latter more straightforwardly verticalising the constituent hexachords of P to create two six-factor chords. The only remaining distinct texture, the brief instrumental coda beginning in b.50, unfolds – in correct numerical order – the twelve tetrachordal verticals of the I form.

The deviation mentioned above occurs in bb.48-49, immediately preceding this coda, where the instrumental texture unfolds, once again in prescribed linear succession, the twelve constituent pitches of I-rotation 4. Unlike the primary row forms previously associated with this texture, this rotation does not produce an aggregate, containing as it does multiple pitch duplications (two each of the pitch classes C, G, F# and E). This divergence in row selection, with its evident redundancy, may have been prompted by the high degree of pitch repetition introduced into the vocal lines towards the conclusion of the work (cf. b.45 foll.).

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[28] The viola pitch in b.21 should therefore correctly read A# and not G#. The latter, serially prescribed pitch appears in both the first sketch for the passage (sketchleaf I/551, dated 'Feb 4th/65') and in the particell score (I/555).

[29] In the last three appearances, the upper voice is essentially static, with the middle chord acting as a 'upper auxiliary' to the first and third chords. This is also the case with the bass of the chords in bb.32-33 (published version).

Although the overall provenance of these textures is readily identifiable from the sketch material and particell draft, there are frequent anomalies to be found in the details of the realisation. The serial provenance of the opening chords, and the difficulties involved in equating them with the indicated sources in the composer's charts, have been discussed by Joseph N. Straus[30], and such observations are applicable on a much more extended scale throughout the work, as Straus indicates. As he observes, there are a number of probable reasons for the violations of prescribed serial patterning at the opening, which would appear to include elementary errors of transcription between the charts and sketch material, as well as unconscious errors in the construction of the charts themselves. The complex questions of compositional intent raised by Straus also apply to similar vertical- or diagonal-based rotational material later in the work, for instance the concluding chain of I-verticals beginning in b.50[31]. The nine chords presented here are derived (as implied by the composer's annotation on I/550) from the twelve verticals generated by the rotations of the three I tetrachords, with the opening 'unisons' of each tetrachord for the most part absorbed into adjacent chords (Example 11:2). Thus, the absence of the initial G# in the α tetrachord ('vertical I') may be explicated as an elision with the same pitch at the conclusion of the tenor part in b.49. The E of vertical IV is apparently displaced into chord III and tied over, with the unison C of vertical V similarly displaced into chord IV. Chord IV also appears to contain a transcription error whereby the serially prescribed F# is

[30] Joseph N. Straus 'Two Mistakes in Stravinsky's *Introitus*', recently elaborated more extensively in 'Stravinsky's Serial "Mistakes"'.

[31] This account largely agrees with Straus's in 'Stravinsky's Serial "Mistakes"' although there are some discrepancies. Straus states, for example, that these chords derive from 'all of the verticals that consist of more than a single note', (op. cit., 246, i.e. he ignores the 'unison' verticals), yet fails to account for the C in chord IV.

replaced by an A# (probably caused by a confusion of clefs). The third unison (vertical IX) simply appears to have been ignored.

These displacements and elisions, which once again suggest Stravinsky's primary interest in using the charts to create approximate models for whole blocks of material (as in *Movements* V and its preceding interlude), do not resolve all issues of non-conformity with the stated source however. Verticals III, VI, VIII and XI all reveal missing or erroneous pitch-classes similar to those noted by Straus in the opening bars. Vertical III omits the prescribed G, replacing it with an unauthorised octave doubling of the B. This, and the other unauthorised pitches in VI and XI, appear to be caused by misinterpretation of the governing clef, in a manner similar to that observed by Straus in the third chord of the work's opening configuration, where the row chart's χ hexachord treble C is replaced with a bass register E occupying the same stave position. Such an interpretation is verified by the presence of all three dubious pitches in the bass register of I/550, together with unambiguous instrumental assignments[32]. The A natural (replacing the A# of the row chart) in vertical VIII is another matter, as the 'correct' pitch, prescribed by the charts, is present in both the I/550 sketch and the particell draft. This raises questions as to whether the subsequent alteration was intentional, or merely an error made during transcription into the full score.

[32] The sketch, marked 'ending', clearly indicates the instrumental distributions as per the published score, with the exception of the suggested tam-tam strokes (which if retained would have completed the instrumental complement), and also includes additional technical indications for the viola double stops ('II pos[ition]' for the first four chords, followed by 'I pos[ition]').

Perhaps more interesting from the point of view of template methodology, though equally difficult to resolve in serial terms, is the composer's approach to the construction of the tolling harp-and-piano chords that occur four times in the course of the work. As described above, these chords derive from diagonal formulations associated with the constituent tetrachords of P, I and RI, with the row and tetrachord sources clearly indicated above these passages throughout the particell draft (I/554-556). In only one instance, however (bb.46-47) is the selection consistently approved by the relevant chart. Here, the pitch content of the chords systematically follows the main bottom-left to top-right diagonals of the three I tetrachords in the chart order α, β, χ. An earlier appearance of these same I diagonals in bb.16-18, this time associated with the choral *parlando* effect, reverses the order in which the tetrachords appear[33] and also alters the construction of the indicated α tetrachord (i.e. the final chord). The first two chords are identical in pitch content to their respective partners in bb.46-47, but the third chord cannot be logically derived from the α tetrachord, with only the second vertical (as opposed to diagonal) of this tetrachord resulting in a close approximation to the notated pitches (although using D# instead of D).

Similarly *ad hoc* principles govern the construction of the third chord of the groups in bb.2 and 10. Here, the selected pitches in both cases are encircled on the relevant charts (P and RI), and follow no logical patterning other than the choice of pitches from different numerical positions within each horizontal rotation[34]. The two remaining chords of each group are straightforwardly derived from the same α and β diagonals (also indicated by

[33] The particell (I/555) clearly indicates I: χ, β and α as the source for the three chords.
[34] The E in the chord in b.2 is an apparent misreading of the chart's treble-clef C (q.v. Straus, op. cit.).

circles in the charts)[35]. The chords in bb.32-33, which the composer extensively rewrote in an ozalid copy of the *Reinschrift* full score[36], are more complex in origin, as suggested by their greater density, but follow a remarkably similar approach to pitch selection and distribution, as confirmed by the composer's particell superscription 'O verticals [*sic*] α β χ'. The method of pitch selection may also offer some sort of key to the extensive revision of these chords, a most unusual procedure for Stravinsky at this very late stage of the work's evolution.

In the original version, the chords are consistently denser than in the revision (8:9:7 and 7:6:6 factors respectively). Nevertheless, clear correspondences are to be found between the two versions, particularly with regard to the configuration of the upper voices (Example 11:3). Between the piano and harp systems in the ozalid score (I/563) the composer added noteheads outlining the intended new chords (on a single bass stave), then proceeded to cancel and re-write the original parts in accordance with the pitch content and intervallic spacing of the added outline. The serial provenance of the original version is highly problematic, despite the composer's detailed serial specifications in the particell draft. The provenance of the revision, however, while not entirely sanctioned by the charts, is much less enigmatic.

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[35] The lowest-voice G in the second chord in b.1 is an apparent misreading of the chart's E. The first sketch on I/548(ii), for the chords in bb.9-10 (where the solecism in the third chord is already present), provides an enumeration of the pitch sources according to the numbering on the relevant RI chart, supplying a horizontal co-ordinate along the chosen diagonal. This is accurate for the first two chords, but in the third chord the numbering, with its apparent duplicate '3', is puzzling, and also demonstrates that the composer approached the reading of this tetrachord in the opposing direction (bottom right to upper left).

[36] This unusually late revision is discussed, though without reference to its serial basis, in some detail in Spies, 'Some Notes on Stravinsky's Requiem Settings', 227-228. In addition to p.2 of the particell (I/555), the original chords appear on I/573, a page constituting one of two identical ozalid copies of the full score in the *Sammlung Robert Craft*. The revision was entered between the staves of the other copy, on I/563.

In the first version of bb.32-33, apparently entered directly into the particell draft (no independent preliminary sketches are extant), the harp pitches mostly conform to the indicated provenance, the first chord being formulated from the main bottom-left to top-right diagonal of the Pα tetrachord and the third employing the circled pitches of the χ (with the middle chord partially corresponding to the β diagonal). The source of the remaining pitches in the piano (some of which act as doublings) is less certain. The most likely explanation, in view of the unequivocal source indicated by the particell, is that the composer made further errors of transcription between chart and sketch, perhaps unwittingly juxtaposing pitches from different tetrachords or row forms[37].

The late revision of the passage suggests that the composer subsequently became dissatisfied with the serial rationale behind the construction. (Its direct transcription into the *Reinschrift* full score would seem to indicate the composer's satisfaction with the aural result of the original passage). In this revision, all factors of chords I and II are straightforwardly and accurately derived from a combination of both diagonals of the P α and β tetrachords respectively (although resultant pitch duplications are not systematically pursued), but once again the third chord, derived from the χ tetrachord, follows a more random selection procedure. The four lowest factors of this chord (doubled by the harp) are identical to the randomly selected pitches circled by the composer in the χ tetrachord (previously used as the basis of both the chord in b.2 and the harp component of the

[37] The nine-factor second chord (though several of these pitches are doublings) is particularly difficult to account for.

superseded version), but the D# and F# at the top of the chord are difficult to reconcile with any systematic use of the chart materials[38]. Nevertheless the revision corresponds closely to the serial provenance attributed to the first version in the particell draft. It would thus appear that this revision is designed to amend the earlier version to conform to the serial pattern inherent in the other chord sequences.

The evidence of the sketches thus reveals a highly unorthodox and flexible approach to the construction of chordal groups from the chart configurations. Within this flexibility, however, a regular pattern emerges in the treatment of the material, whereby the first two chords in each group are straightforwardly derived from the tetrachordal diagonals, with the third devised in a more random fashion. This strongly suggests that a basic compositional premise or implicit template had been formulated to guide the derivation of these chords. It seems probable that the emancipation of the factors comprising the third chord from the mandate of the charts was linked to specific compositional aims, perhaps concerning the creation of correspondences between chords 1 and 3 (q.v. bb.9-10, 32-33 (revision) and 46-47). Nevertheless, the uncharacteristically late revision of the chord group in bb.32-33, the original version of which had presumably been aurally approved by the composer following keyboard experimentation, points to an ongoing preoccupation with the prevalent selection procedure for these chords, which is restored in the revision.

[38] They may have been selected from the second vertical or the χ tetrachord of the unrotated P. Their presence is evidently a legacy from the earlier version of the chord.

3. Melodic Templates and Contour Hierarchies in *The Owl and the Pussycat*

This section briefly considers how melodic contour templates for this short piece were elaborated from a small number of key sketches outlined at an early stage of the piece's evolution. The texture of the piece is entirely linear, with the piano providing a single octave-doubled line in counterpoint to the voice throughout. The setting tends towards a strophic design with three verses, each initiated by the piano following a general pause (2:1, 4:3, 6:3)[39], and concluding with a 'refrain' that, in contrast to the syllabic treatment of the remainder of each verse, makes considerable use of text repetition. With few exceptions, the contours employed in the piece are not freely composed, but are directly based on melodic templates, elicited at an incipient stage of the compositional process through the application of strict serial operations. As observed with regard to previous template procedures, extracted models may themselves be used to form second- or third-generation templates.

Sketch materials for the piece fall clearly into three main categories: (i) preliminary sketches involving the manipulation of twelve-note rows with extracted fragmentary melodic configurations, and incorporating some specific word overlay (3pp.: OP2(a), 3(c), 6(a)) – these sketchleaves are the source of the principal melodic contours used in the piece: (ii) extended drafts of sections of the vocal part only (6pp.: OP2(b), 3(a), 3(b), 4(a), 6(b) and 7(a)–(f)): and (iii) drafts for the full texture, including accompaniment (4pp.:

[39] Due to the elimination of barlines in the published score, citations for the work refer to page and system numbers respectively. Surprisingly, the particell draft (though none of the preliminary sketches) is barred throughout. See Craft (ed.) *Dearest Bubushkin*, 221 for a monochrome facsimile of the final page of this particell draft.

OP4(b), 5(a), 5(b) and 5(c)). The sketch material in the *Sammlung Robert Craft* comprises notations for all sections of the piece with the exception of portions of verse three[40].

OP2(a), 3(c) and 6(a) appear to be the earliest notations for the piece. On OP2(a) five row forms – the four primary forms together with an additional [RI]r – appear together with two extracted shorter melodic fragments employing identical configurations, though with different word underlay (drawn from different verses). The P form of the row appears in faint pencil, but fully formulated, at the bottom of the page, together with indication of order positions and some overlaid text ('O let us be [married] . . . but what shall we do for a ring') indicating note repetitions, in the manner of the preliminary C115 explorations for the *Elegy for JFK*. This contour, which thus seems to have been associated with text from its inception, acts as a concrete melodic configuration, rather than simply an abstract serial formula, and functions as the genesis for much of the later melodic design of the piece. Its high registral location would seem to mark this out as a first notation for the series, the remaining note rows and extracted notations all falling comfortably within the middle-voice range of the completed piece. The extracted word settings here (appearing respectively in the score at 7:4/8:1 and 5:2), preserve the contour of the parent row. Above this P form, in more confidently entered, though heavily erased, notations, the composer extracted the R, RI, [RI]r and I forms of this series. The early presence of [RI]r suggests that the composer may have initially intended to explore similar contour-mapping techniques to those found in *Introitus*, and both the R and I forms are literal

[40] There are no extant sketches for the opening vocal line of this verse until 'they dined on mince' (middle of 7:3). The extant sketches for the accompaniment relate exclusively to verse 1, and suggest that the remainder may have been sketched directly into the five-page particell score.

transformations, or first-generation derivatives, of the P contour (cf. Example 11:4).

The same P 'source' contour (now located within the vocal *tessitura* of the published score), again accompanied by its literal I transformation, appears once more on OP6(a), together with rhythmicised designs for the opening verse (as far as the end of p.3:3). The hand-rastration and difference in paper type of this sketchleaf suggest that the notations may post-date those of OP2(a) and OP3(c), both sketched on yellow music paper[41]. Though the lower I setting, associated with the text 'The Owl looked up to the stars above . . .' is still some distance from the rhythmic design of the final score, it includes a minor alteration to its contour (order position 1 being transferred down an octave) which is retained in the final passage. This adjusted contour (henceforth I_2) becomes important in later sketches, indicating that the composer referenced this 'second generation' contour, rather than the 'literal' (first-generation) I, as a secondary template source (q.v. Table 11:2).

This 'adjusted' contour, I_2, was transferred directly to the middle section of OP3(c), an early attempt at the parallel passage within the third verse ('So they took it away . . .'). The contour is retained into the completed piece (7:2/3), though it is now associated with the subsequent portion of text. Its retrograde, IR, immediately following in the sketch (misleadingly designated as 'O Inv'), looks ahead to the very end of the piece ('and hand in hand . . .', 8:1), and is again literal with the exception of a single octave-transferred D#. As

[41] Excepting the *Hotel Pierre* notepaper (OP6(b)), only two different paper types are found within the sketch material for this piece. Though circumstantial evidence, their alternation appears to suggest different sessions of compositional activity, for instance within the drafting of the first and second verses (OP5(a)-(c)/4(b) and 3(b)/7).

Contour designation	Characteristic	Principal OP sketch source
P	Source contour	2(a)/6(a)
P_2	Literal inversion of I_2	None: appears in score (piano) in 6:3 and 7:4 (see Table 11:3)
I	Literal inversion of 'source' P	2(a)/6(a) top
I_2	New register introduced for D (o.p. 1)	6(a) bottom/ 3(c) middle
$[I_2]r$	Retrograde of I_2	6(b) - rejected
R	Literal retrograde of 'source' P	2(a)
R_2	Introduces new register for D# (o. p. 3)	3(c)
IR* (= $[I_2]r$)	Retrograde of I_2 with new register introduced for D# (o.p. 9) – cf. R_2	3(c)
[IR*]r	Literal retrograde of above (i.e. third-generation)	6(b)
RI*	Only one registral difference with both R_2 and $[I_2]T6$ contours.	3(c)
[RI]r	Literal derivation from 'source' P, identical in contour to literal I (pitches are identical at T6).	2(a)

Table 11:2: principal contour sources for *The Owl and the Pussycat*, devised mainly on sketchleaves OP 2(a), 6(a) and 3(c).

An asterisk denotes a third-generation source, i.e. an adjusted derivative of a second-generation (adjusted P-derivative) source.

this slightly adapted [I_2]r is the only IR contour employed in the piece, the simplified designation IR* will serve to signify what is, in effect, a third-generation abstraction from the P source[42]. This contour was similarly retained in the piece, the final D, omitted in the sketch occurring at the lower octave position indicated by the I_2 source (8:4).

New contours are associated with the R and RI forms notated on the top of 3(c). That of the [RI]r was not employed in the piece (although the [RI]r form itself is used once in the accompaniment) and does not appear in subsequent preparatory sketches. This neglect was probably due to the fact that the literal [RI]r contour, deriving directly from the P model, is in this instance identical to that of the literal I contour, thus making this particular contour-mapping procedure, as found in *Introitus*, redundant[43]. Once again, a single alteration is made to the literal R contour (the octave position of its third order position, D#) and the RI form is educed directly from this, (unlike its earlier contour on OP2(a)), with only its final order position deviating from the contour proposed by the adjusted R). The auxiliary R_2, RI* (i.e. 'third-generation', deriving from I_2/R_2) and I_2 contours on OP3(c) are closely interrelated, as [RI*]r replicates the I_2 contour (at the transpositional level of [RI]r, i.e. T6) with a single deviation, namely the octave position of its tenth order position, C# (Example 11:5).

Sketchleaves OP 2(b) and 3(a), on which the composer drafted the vocal line of the entire first stanza (as far as the end of 4:2) in a form very close to the final score, combine many of these preceding fragments, retaining their original contours. Thus the 'source' P

[42] I.e. an adjusted derivative of an already adjusted ('second generation') P-related source. See Table 11:2.
[43] [RI]r = I6, with identical contours (see Ex.11:4).

contour, from 2(a), is followed by the 'adjusted' I_2 from 6(a) (or 3(c) – traversing the two sketchleaves), the IR* contour from 3(c)[44], the 'adjusted' I_2 once again, and finally [IR*]r, again from 3(c)[45]. Preliminary attempts at the end of this passage on 6(b) reveal that Stravinsky originally set the words 'O lovely Pussy, O Pussy my love' by employing, as a template, the literal retrograde of the 'second-generation' I_2 form on 3(c), as demonstrated by the different octave positioning of the D#, before replacing it (in the sketch immediately beneath) with [IR*]r, the contour of which remains identical in every other respect[46]. An important factor in the selection of contours within the piece is the similarity between the I, I_2, [IR*]r and [RI]r rows. Of these, the first three reveal only minor differences in contour, while, as mentioned above, the last replicates the I contour at T6, though it was not used in this form in the piece (Example 11:6).

The remaining sketches for the voice and piano lines all employ the same basic melodic configurations. Table 11:2 describes the principal contour sources, as found in the early sketch material for the work as discussed above, whilst Table 11:3 outlines the distribution of row forms/contours as employed in the piano and vocal lines within each verse of the published piece. Row forms in italics in Table 11:3 signify contours which do not correspond strictly with those of Table 11:2. As can be clearly seen from Table 11:3, each of the three verses opens with a P form unfolded in both voice and accompaniment. In verse 1, as in verse 2, the source P contour has been cited even though the published score

[44] Note that this replicates the I/IR succession on OP3(c), which though associated with non-consecutive text fragments, is clearly regarded as a single template for the later draft, as indicated by the sharing of the B natural between the two constituent row forms.
[45] This is a literal retrograde of the third-generation IR* contour on OP3(c).
[46] Sketched on *Hotel Pierre* notepaper, this notation was probably made during Stravinsky's stay in New York between September 18th and the first week of October 1966 (*Chronicles*, 285, 311). According to the title page of the published score, the first performance of the piece took place on 31st October.

Verse I					
Location	Start	3:2	3:4	3:4 (end)	4:1 (end)
Voice	P	I_2	IR*	I_2	[IR*]r
Piano	P/ *I_2*	[I_2]r	P	---------	R_2

Verse 2					
Location	4:3	5:2 (after rest)	5:4 (after rest)	6:1 (after rest)	6:2 (middle)
Voice	P	I_2	[I_2]r	*I*	I (literal)
Piano	P	*R_2*	*[RI]r*	[I_2]r	----------

Verse 3							
Location	6:3 (middle)	7:1 (end)	7:2 (middle)	7:4	8:1 (end)	8:2 (end)	8:3 (middle)
Voice	P_2	IR*	I_2	P (D elided)	IR*		IR*
Piano	P_2	*R*	----------	P_2	----------	R_2	----------

Table 11:3: Contours employed within the three verses of *The Owl and the Pussycat*. Row forms in italics correspond only partially to the suggested contour source.

begins with an extraneous low D, because sketchleaf OP5(a), which employs a different registral arrangement, clearly indicates this as its origin. In verse 3 (end of 6:3) an otherwise straightforward unfolding of the 'source' P contour begins with another octave-transferred D, suggesting derivation backwards from I_2 (this P_2 contour is identical to I of I_2). The absence of sketches for this passage (i.e. the beginning of verse three through to 'lives on the hill') is curious, and suggests the possibility of a missing or displaced draft, especially as the sketch of the ensuing passage (OP4(a)) incorporates the final pitch of the putative preceding row. Although the succession of row forms in each verse, following the double exposition of P, is quite varied, the predominant use of RI and I based serial forms ensures that similar material is heard within each verse.

Of the twenty-nine complete serial forms unfolded between voice and piano in the course of the piece, only five contours, (excluding the initial P) deviate from the basic configurations outlined in Table 11:2. Of these, four are located in the piano accompaniment, with only one – the I form in verse 2 – in the voice. All five of these forms are nevertheless partially related to the template contours, with the probable source suggested in italics in Table 11:3. In the case of the I_2 and R_2 series in the accompaniment (at comparable points within verses 1 and 2 respectively), the hands pursue independent contours which conceal the source between them. This is surely the explanation for Stravinsky's rather cryptic statement that 'the piano octaves form a syncopated canonic voice as well as a double mirror, the vocal movement being reflected between both the upper and lower notes'[47]. The final six pitches of the [RI]r form in verse 2 conform to the I

[47] *Themes and Conclusions*, 99.

contour, though, of course, at T6, with the R in verse 3 deviating from the literal R contour for only one pitch (C). The single voice deviation, in verse 2 ('with a ring at the end of his nose'), can only be explicated as a 'free' variant of I or I_2, with alterations (three pitches in total) at the extremities of the row.

OP3(b) and the six fragments of OP7 all relate to verse two. Although many of the fragments do not resolve issues of rhythmic configuration, word underlay and pitch repetition as per the final score, it should be noted that the contours employed remain at all times identical to those of the source group in Table 11:2, with the single exception of the previously mentioned I-contour at 6:1.

OP4(a) is a sketch for the passage beginning with the text 'they dined on mince' (end of 7:3) through to the end of 8:3. Close to the final version of the score, this presents the P_2 and two successive literal IR* contours (the latter incomplete), which derive, with adjusted underlay, directly from 3(c)[48].

OP5(b) and 5(c) contain successive drafts for the piano accompaniment of a single passage located within verse 1. On OP5(b) the composer accompanies the vocal setting of 'They took some honey . . .' etc. (at 2:3 in the score) with a roughly-drafted (literal) R contour in single notes (not octaves). On OP5(c) this has been replaced with I or I_2 (the distinguishing

[48] In this sketch, the first B, setting the word 'they', is the concluding pitch of a putative preceding row form, in the final score the 'adjusted' contour I_2 from OP6(a)/3(c). The appropriation of the IR* contour directly from OP3(c) explains the omission of the initial order-position B in the second statement here: the OP3(c) IR* model begins on its second order-position as a result of the elision of its first order-position B with the preceding I_2.

opening contour is not included), as per the final score. This demonstrates that the form of the piano octaves here was a later, colouristic, addition, and also that the template contours themselves were regarded to some extent as independent, interchangeable entities in terms of the ongoing compositional process. OP3(a) gives further evidence of this, as the faint noteheads between the lower staves indicate that the composer considered using the *literal* IR contour[49], presumably deriving from OP2(a) and otherwise ignored in the piece, as part of the construction of the vocal line at this point, perhaps in place of the [IR*]r at the bottom of the sketch.

Summary

All three works considered in the present chapter employ approaches to pitch organisation that differ considerably from those of Stravinsky's larger-scale late music. *Elegy for JFK* and *The Owl and the Pussycat* limit their compositional material exclusively to primary row forms, whilst *Introitus* is the only work to employ extended techniques of tetrachordal rotation-transposition, though once again its vocal lines unfold only primary forms. The sketch materials for these comparatively modest works reveal, however, that template-based procedures were not exclusive to works exploiting extended pitch matrices. In all three pieces, sketching of the vocal lines apparently preceded the development of the concomitant instrumental parts, and thus template mechanisms were primarily contrived as

[49] The noteheads unfold the final five pitches of this form.

a means of guiding and manipulating melodic profile and contour within the compositional process.

Preliminary sketches for the *Elegy for JFK* are located on page two of the C115 pocket sketchbook, and consist of a provisional series, evolved in several stages, together with early attempts at text underlay. Documentary evidence suggests that this sketchbook material was composed away from the piano. Subsequent minor adjustments to the ordering of the row, entered beneath, result in a transposed version of the final row, which appears in its ultimate configuration (together with its other primary derivatives) on the facing page (p.3) of the sketchbook. This page thus acted as the principal row chart for the composition. The adjustments result in increased pockets of invariance between primary row forms, a feature which was exploited as a principal method of controlling the pacing of pitch-class circulation in the completed composition, thus challenging Stravinsky's later recollection that he 'discovered the relationships from which I was able to derive the instrumental lines'[50] only after sketching the entire vocal part.

Nevertheless, sketch material for *Introitus* unquestionably shows that Stravinsky completed an outline of the vocal lines before elaborating the chart of tetrachordal rotations from which he subsequently extracted his instrumental parts. In composing the vocal lines, the composer experimented once more with contour templates, in which the melodic or intervallic profile of one row became a model for a different row form. This explains the presence in the sketches of such seemingly superfluous configurations as [RI]I, which is

[50] *Themes and Conclusions*, 61.

clearly exploited for its contour and intervallic sequence rather then for its specific pitch succession, evidently identical to R.

In its treatment of tetrachordal rotation techniques, *Introitus* follows the example of *Abraham and Isaac* in employing matrix diagonals as a basis for the manufacture of 'verticals' in the instrumental parts. The surprisingly large number of deviations from the chart-prescribed pitch configurations are perhaps not as arbitrary as they first appear, although clerical errors are unquestionably involved in several instances. In a very late revision of the chord structures in bb.32-33, for instance, Stravinsky's apparent objective was to rectify the serially problematic provenance of the original version. However, the serial construction of the final version is still not fully sanctioned by the charts, and may result from a conflict between template model and subsequent real-time realisation, rather than a further misinterpretation of the charts.

The *Owl and Pussycat* is entirely linear in conception, with the subsequently-devised piano accompaniment for the most part reflecting the intervallic structure of the vocal line. Stravinsky's earliest sketches exploit literal serial transformations of the row (in which intervallic structures are retained intact) in generating melodic contours. These intervallic configurations subsequently appear in slightly adjusted variants, which are then employed as template models in their own right, thus establishing a consistent hierarchy of contour and intervallic relationships throughout the sketch material for the piece.

CHAPTER 12

Requiem Canticles (1965-66)

The Evolution and Interrelationship of the Early Notations.

Stravinsky began compositional work on *Requiem Canticles* with sketches for its central instrumental interlude (bb.136-202) in March 1965, immediately following the completion of *Introitus*[1]. Robert Craft has provided a detailed chronology of the compositional process, with reference to specific sketch materials, in Appendix G of *Stravinsky: Selected Correspondence*, Volume II, which, as will be seen, cannot be regarded as a wholly reliable account. Craft's references to the relative positioning of various notations within the material indicate that he was dealing with the composer's intact sketchbook. This consisted of a loose-leaf, ring-bound notebook into which were pasted, or otherwise incorporated, preliminary sketches for several contemporary works, including – in addition to the *Requiem Canticles* materials – those for *Variations* and *The Owl and the Pussycat*[2]. The loose-leaf nature of the book, together with the fact that the sketches were almost

[1] See *SPD*, 476, and Craft (ed.), *Selected Correspondence*, Vol.II, 467. Craft's probable source for this information is sketchleaf RC18, transcribed and discussed in his text, which is dated 'March '65', though in Craft's handwriting.

[2] Facsimiles showing pages from the original book (including a number drawn from the *Requiem Canticles* material) are reproduced in Arnold Newman's photographic collection *Bravo Stravinsky*. It should be noted that the positioning of sketches on the background notebook pages in these photographs does not always concur with the Paul Sacher Stiftung's ongoing reconstructions, which are largely based on matching sketches to adhesive tape marks, etc., on surviving background sheets. Much of the sketch material (also in the *Sammlung Robert Craft*) for *Variations* and *The Owl and the Pussycat* is pasted to identical notebook pages.

certainly entered subsequent to composition, weakens the value of the sketchbook arrangement in any assessment of the compositional chronology[3].

The *Requiem Canticles* material in the Paul Sacher Stiftung's *Sammlung Robert Craft* is distributed between three folders. The first two of these comprise rough sketch and particell draft material respectively. The third contains an ozalid draft of the full score fair copy (containing several corrections in Robert Craft's hand), a copyist's vocal score (again with corrections)[4] together with Craft's conducting copy of the full score, with corrections, additions and conducting marks. In addition, eight small envelopes are preserved, with their former contents identified in Craft's hand: (i) Lacrimosa, (ii) Rex Tremendis [*sic*], (iii) Interlude and serial charts, (iv) Dies Irae/Tuba Mirus [*sic*], (v) Exaudi, (vi) Prelude, (vii) Libera Me and (viii) Postlude. This indicates that the material had been extracted from the composer's ring-bound notebook prior to its arrival in the Sacher Stiftung. Further descriptions of these materials are provided in the appendix listing[5].

Two key sources within these materials are the probable first notations on p.5 of the C115 pocket sketchbook[6] (a source of which Craft was apparently unaware) and a large particell page (Kata.105:7) on which the composer attempted to draw together various early fragmentary sketches for the movement into a provisional continuity draft. This page,

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[3] RC22 is evidently an index, providing page references for the sketchbook, in the composer's hand.
[4] Errors in this copy account for the various anomalies between the published score and Craft's recording of the work, which (according to the information supplied in the accompanying booklet to the Sony collected edition CD release) was made under the composer's supervision on 11 October 1966, three days after the world premiere of the piece had been given at Princeton. (The latter date is supplied in the published full score).
[5] See Volume II, 30 foll.
[6] See Chapter 9.

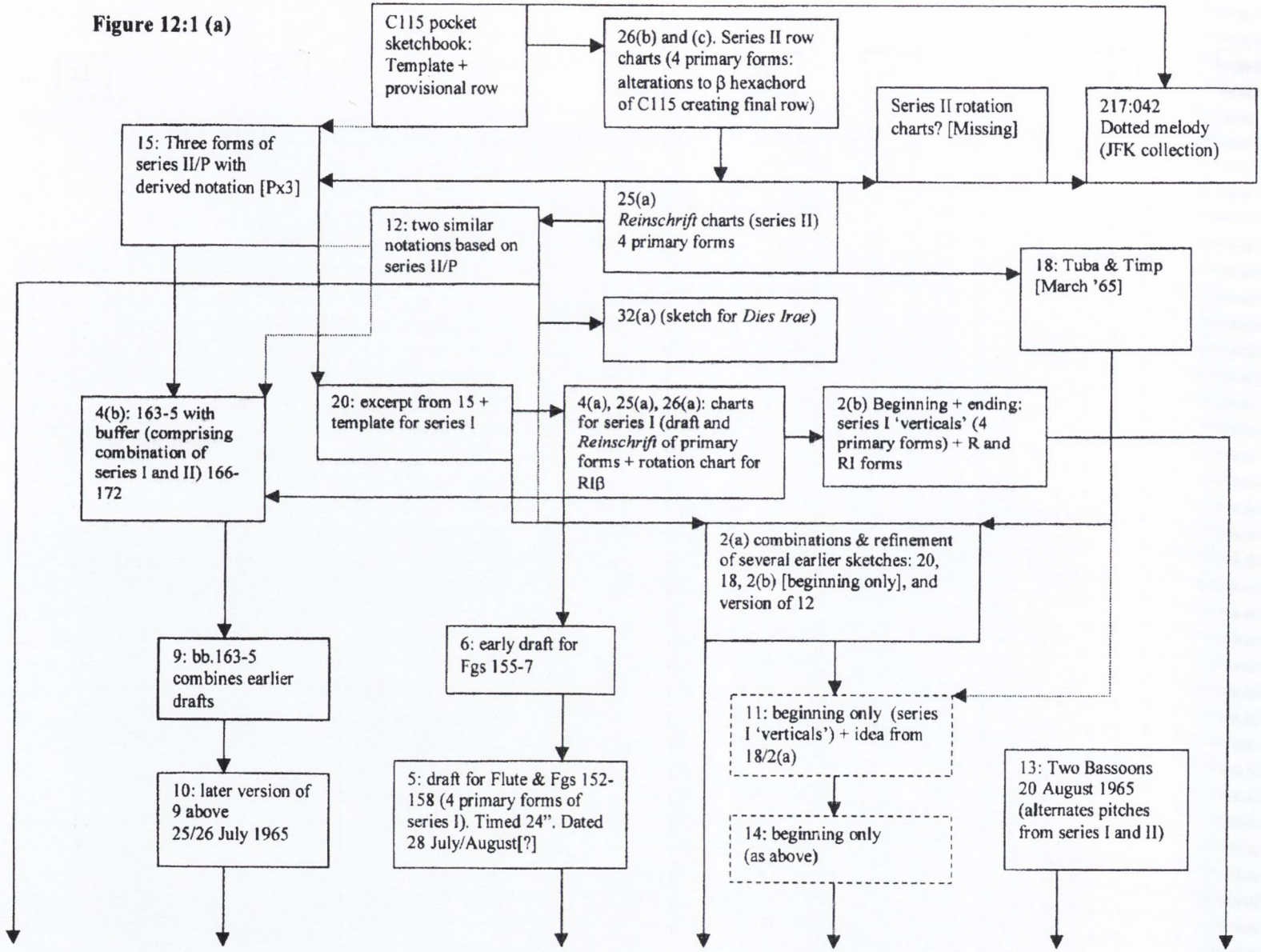
though dealing with comparatively extended blocks of material, is still untidy in appearance and contains numerous revisions. A principal feature of this draft, which distinguishes it from earlier particells, such as those for *Movements* and *Abraham and Isaac*, is its role in establishing the continuity of events. On the upper part of the draft, in particular, the sequence of sketches, sometimes combining earlier fragments transcribed from preparatory sketches, is open to variable interpretations. The draft thus acted as an intermediate working particell for the movement. This chapter will attempt to trace how material was developed and extended from the C115 'concept' notation, together with a number of supplementary early templates, towards the final version of the score, via this intermediate particell. For ease of reference, a graphic representation of the putative interrelationship and evolution of sketches towards this draft is shown in Figure 12:1.

In addition to this intermediate draft, Kata 105 also contains a later full particell of the movement (105:4/5/6) with an earlier *Reinschrift* of the opening (omitting the repeat in bb.138-9) found on the verso of Kata 105:5. Figure 12:2 details the principal features to be found on these sketchleaves. For comparison and reference purposes, Figure 12:3 outlines the ultimate deployments of the two distinct dodecaphonic series employed within the movement.

The subsequent stage of work, following the C115 template, evidently took place on RC 26(b) and (c), on which the row extracted from the C115 template (henceforth series II)[7] achieved its final form. All four primary forms of the series were written out on separate

[7] Though apparently first to be drafted (see below, main text), this was Stravinsky's own designation on the subsequent charts drawn up for the two series (RC 25(a) and (b)).

Figure 12:1 (a)


C115 pocket sketchbook: Template + provisional row
26(b) and (c). Series II row charts (4 primary forms: alterations to β hexachord of C115 creating final row)
Series II rotation charts? [Missing]
217:042 Dotted melody (JFK collection)
15: Three forms of series II/P with derived notation [Px3]
12: two similar notations based on series II/P
25(a) *Reinschrift* charts (series II) 4 primary forms
18: Tuba & Timp [March '65]
32(a) (sketch for *Dies Irae*)
4(b): 163-5 with buffer (comprising combination of series I and II) 166-172
20: excerpt from 15 + template for series I
4(a), 25(a), 26(a): charts for series I (draft and *Reinschrift* of primary forms + rotation chart for RIβ
2(b) Beginning + ending: series I 'verticals' (4 primary forms) + R and RI forms
2(a) combinations & refinement of several earlier sketches: 20, 18, 2(b) [beginning only], and version of 12
9: bb.163-5 combines earlier drafts
6: early draft for Fgs 155-7
11: beginning only (series I 'verticals') + idea from 18/2(a)
13: Two Bassoons 20 August 1965 (alternates pitches from series I and II)
10: later version of 9 above 25/26 July 1965
5: draft for Flute & Fgs 152-158 (4 primary forms of series I). Timed 24". Dated 28 July/August[?]
14: beginning only (as above)

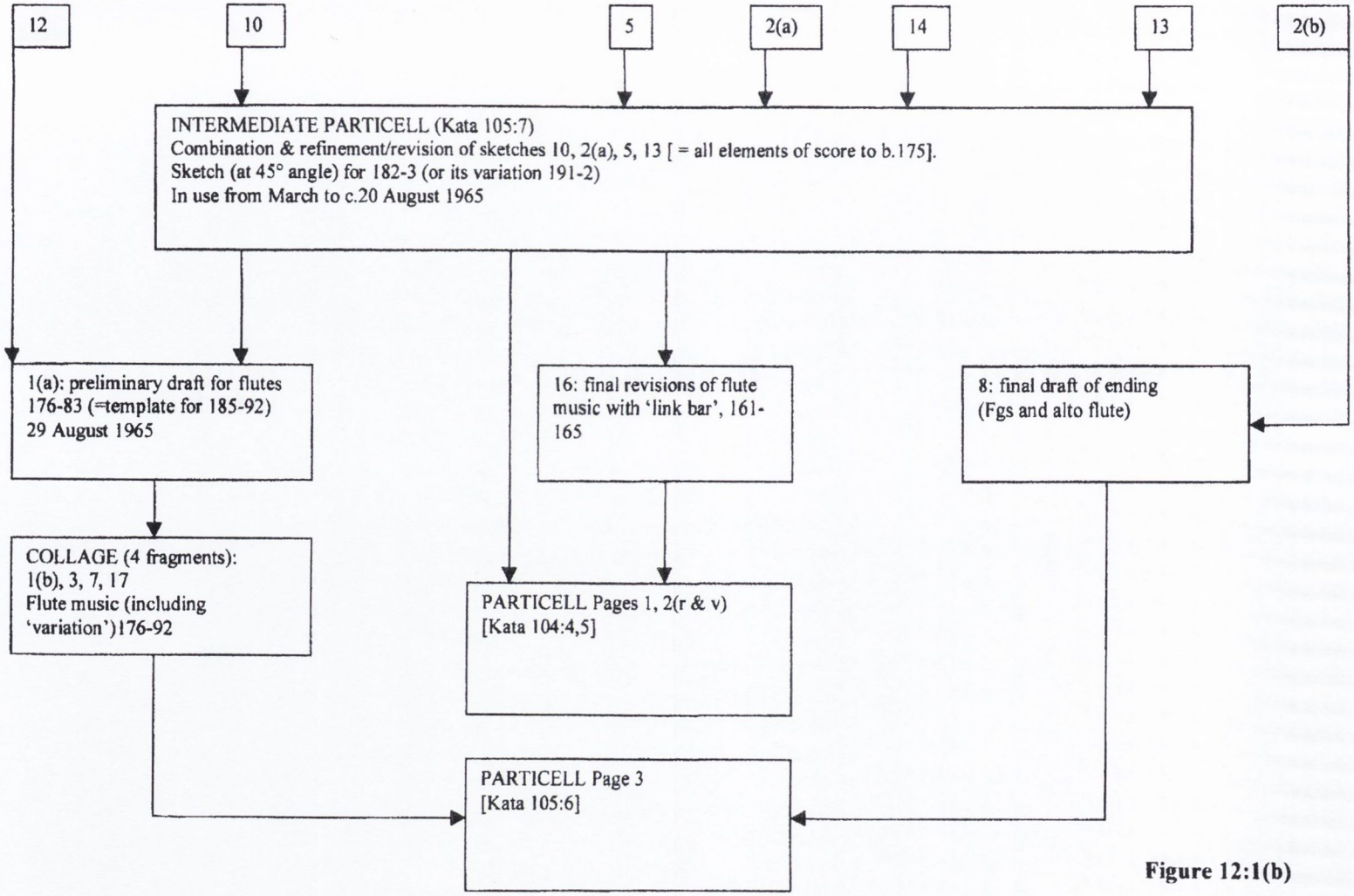

12
10
5
2(a)
14
13
2(b)
INTERMEDIATE PARTICELL (Kata 105:7)
Combination & refinement/revision of sketches 10, 2(a), 5, 13 [= all elements of score to b.175].
Sketch (at 45° angle) for 182-3 (or its variation 191-2)
In use from March to c.20 August 1965
1(a): preliminary draft for flutes 176-83 (=template for 185-92) 29 August 1965
16: final revisions of flute music with 'link bar', 161-165
8: final draft of ending (Fgs and alto flute)
COLLAGE (4 fragments): 1(b), 3, 7, 17 Flute music (including 'variation')176-92
PARTICELL Pages 1, 2(r & v) [Kata 104:4,5]
PARTICELL Page 3 [Kata 105:6]

Figure 12:1(b)

Page 1 [Kata 105:4]

'INTERLUDE'

[division]

bb.136-147
Repeat bb.138-139 not written out (repeat marks)
31" with rastration break following b.146

Page 2 [Kata 105:5] bb.148-75
31" at b.156 (prob. Refers to b.158 where rastration break occurs)
Rastration break after b.160
Erasures, bb.161-165
31" at b.165 (probably refers to b.156)
b.171: break in rastration

[Verso] bb.136-146
Reinschrift particell with instrumental indications (e.g. '3 tromb (sic), 4 cor, 4 timp' 'flute music' etc) together with entry of Fg. in last bar (=b.146)

Page 3 [Kata 105:6] bb.176-196.
Heading: INTERLUDE [crotchet]=104
31" at b.180 (prob. refers to bb.176-184)
b.185 marked 'variation of same' in green pencil
Break in rastration at b.93
bb.194-196 abbreviated as 'A:B:A' [division]

b.197-end (Fg. and Flute music)
Timed 12" Total 2'45"
Break in rastration end of b.200

Figure 12.2: Schematic outline of final particell of Interlude Kata 105:4, 5, 6. [3pp. plus verso of page 2].

bb.138-43	bb.144-146	bb.147-151
'Refrain' chords [x4] + flute music Series I/12 verticals (four forms of row unfolded simultaneously)	Refrain chords [x3] (excerpted from preceding block)	Fg. solo/timp Series II/RI:1-12

bb.152-158	bb.159-60	bb.161-2	bb.163-5	bb.166-172
Alto flute/Fgs Series I/P, R, I, RI	Refrain chords [x2] (as before)	Series II/P	Series II/P	Series II/R Series I/Inv
		FLUTE MUSIC		

bb.173-175	bb.177-183	b.184	bb.185-192	b.193
Series I/P	Series II/P-chain α1, β1-6	(Silent)	Variation of 177-83 (same derivation)	(Silent)
FLUTE MUSIC (contd.)				

bb.194-196	bb.197-199	bb.200-201
Refrain chords [x3] As before (=144-46)	[Alto flute/Fgs] Series I/R	[2 Fgs] Series I/RI

Figure 12.3: ***Requiem Canticles*****, Interlude:** outline of serial scheme from indications in the sketches

strips of paper, which were subsequently taped together in pairs and attached to a background page. A number of direct associations with the C115 template and its extracted row form are discernible. The composer achieved the final form of the series by the simple expedient of shifting one order position (the C#) to the beginning of the β hexachord, the α hexachord and the order of the pitches within the β hexachord remaining otherwise unaltered (cf. the sketchbook experiments for the *Elegy for JFK* row, Chapter 9). This alteration in row ordering remains compatible with the C115 template, as the verticalised adjacencies in the pocket notebook 'concept' may be extracted from either series. A close inspection of the row forms on RC 26(b) and (c) reveals clear evidence that Stravinsky made these alterations subsequent to elaborating derivatives for the original C115 version of the series. It would appear that he began by outlining a literal inversion of the C115 row (cf. the first hexachord of I on 26(b)), later entering an alternative P contour above it, before making the alteration to the β hexachords. Evidence of these changes may be seen in the form of incomplete erasures in the P form, and especially in R, where an earlier layer reveals that the fourth order position was originally the C# implied by the C115 series. RC25(b) represents a subsequent fair copy of this draft chart.

A number of early fragments for the piece were clearly made directly following the finalisation of the row charts for series II. Sketchleaf RC18, Craft's Ex.5[8] (dated in blue ink in his hand), is ostensibly a linear presentation of the RI form, deriving directly from the chart, as indicated by the composer's rubric 'II RI'. It represents an early form of the music between bb.147-51 of the published score. Craft's hypothesis *in Selected*

[8] Craft, *Selected Correspondence* II, 470.

Correspondence of a complex internal chronology for the sketch is contestable on the grounds that the colour-coding (grey and red pencil) simply distinguishes the intended instrumental distributions (red for 'tube', grey for 'timp')[9], and that the composer would presumably have experimented with the registral distribution of the complete row form at the keyboard in advance of entering the notation. The serial anomalies which Craft outlines (the fifth order position should be B, the last A) may with some certainty be explained as transcription errors, caused once again by confusion of the governing clef, in the manner of those found in *Introitus*[10]. This is confirmed by visible erasures (not represented in Craft's transcription) showing that Stravinsky corrected order positions 7 and 8 from E/G (i.e. reading the chart as bass clef) to the serially legitimate treble clef reading C/E. The other errors mentioned by Craft are rectified on subsequent appearances of the music on the composite sketchleaf RC2(a) (the A only) and the intermediate particell, Kata 105:7 (both pitches).

The appearance of these timbres and low tessitura – evident funerary archetypes which were retained as late as the intermediate particell – links the sketch indirectly to both the C115 template and to the chronologically adjacent *Introitus*, the text of which forms, of course, the very opening of the traditional Requiem Mass[11]. RC19r furnishes evidence that the music on RC18 may have developed out of the muffled funeral drums of *Introitus*.

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[9] These words appear in the corresponding pencil colours.

[10] Curiously, in view of the frequency of this type of error in the later works, the composer appears to have been reluctant to supply regular clef indications in his charts.

[11] It is interesting to note that the single text shared between the two works, the introit verse *Exaudi orationem meam*, which provides the text for the first choral movement in *Requiem Canticles*, was initially outlined using the IR form of the series in *Introitus* (sketchleaf I/545), but is set using unpitched *parlando* effects in the final score of that work. The *Exaudi* was apparently the first vocal movement Stravinsky completed: the particell (Kata 104:44) is dated '10 XI 65'. (This is the last sketch in the fourth division of the Kata 104 folder).

Here the composer wrote, in pencil, 'muted or damped by placing a cloth on the center of the drumhead'. The underlined word 'coperti' (as found in the published score of *Introitus*) appears directly beneath, in Craft's hand and in red ink, together with the provisional title *Sinfonia da Requiem* (also in Craft's hand)[12].

Several brief, rhythmicised configurations based on series II are to be found among the sketch materials for the interlude. RC12 offers two very similar forms of II P, with a simple rotation involving the displacement of the first order position to the end of the row. Both configurations employ equal note values throughout, and are closely contour-related (the contours of the first four and last five pitches of both are identical). The commencement of the row with order position 2 allows a direct reference to the upper-voice opening of the C115 'concept' template (presenting non-adjacent order positions as a result of the verticalisations). The intervallic configuration and emphasis of this sketch were retained into RC 4(b), where the material becomes the basis for the flute music in b.163 foll. (cf. the uppermost sketch of the intermediate draft). The sketch later acted as a further template for b.176 foll. (cf. RC1(a), drafted following the completion of the intermediate particell) and for the *Dies irae* (see below).

Another sketch made in the wake of the charts, and erroneously included with the material for *Elegy for JFK*, is JFK472. This presents a consistently dotted rhythmic figuration which unfolds the second rotation of series II R. The rotation charts from which this must have been selected appear not to be extant within the *Requiem Canticles* collection in

[12] Cf. *Themes and Conclusions*, 98.

Basel[13]. This combination of α and β hexachords does not form an aggregate, and the first pitch (A#) of a putative 'αR' continuation is indicated, denoting (as the only logical possibility) an intention to deploy the present α2 rotation in retrograde. The opening of the sketch, with its semiquaver rest, rhythmic configuration and conjunct motion, is unmistakably evolved from the C115 template, with the dotted figure extended throughout the sketch. The configuration does not appear to have had any further direct application within the sketch material[14], although the violin solo, which opens the Prelude ([Pβ6]r), uses a transposition of its first hexachord (with otherwise very different gestures and distribution).

RC15, a single sketchleaf transcribed by Craft as his Exx.1 and 2, explores several further musical possibilities for the series II P form[15]. The upper part of the sketch, which consists entirely of pencil notations, aligns three different P contours, the first barred entirely in three-crotchet groups, the second in four, and the third alternating triple and duple divisions. The single draft in the lower notation (Craft's Ex.2) introduces a harmonic dimension, and consists of three successive block-partitioned statements of P, thus indicating a clear correlation between the upper and lower portions of the sketch.

Extended segments of all three P contours on the upper portion replicate those of several other early sketches, discussed above, employing series II P. Although it not possible to be

[13] Nor are these putative rotation charts among those mentioned by Craft in the *Selected Correspondence* chronology cited above.
[14] This is perhaps connected with its separation from the main body of sketches, although it is difficult to find a logical reason for its inclusion with the much earlier materials for the *Elegy for JFK*.
[15] Craft, *Selected Correspondence*, II, 468-469. Craft erroneously describes this sketch as comprising 'first notations' for the interlude, which he suggests 'antedate the series'.

certain of the exact chronology of these notations, and thus to identify the precise ancestry of the contours, it is apparent that contours relating to the draft charts for series II, RC26(b) and (c), together with the two notations on RC12, are distributed between the three P contours on RC15. Thus the P contour of RC26(b)/25(b) is distributed between contours 2 and 3 on RC15. The upper contour is identical to the R form of the series on RC26(c) (this differs in the fair copy RC25(b)), with the single exception of the register assigned to the E, (found instead in contour 2). Order positions 2-7 of contour 3 identify with the intervallic configuration assigned to the corresponding pitches in the upper sketch of RC12, while the last four of contour 1 (together with its initial F) relate to the end of the same sketch. Similar correspondences with the lower notation on RC12 are to be found in contour 1 (the first seven and final five pitches (as before)). Thus, whatever the exact chronological sequence, template methods were clearly being employed to generate diversified notations retaining similar intervallic profiles.

In addition to their direct relationship to RC26(b)/(c) and RC12, these contours appear to have provided the composer with a basis for keyboard improvisation in evolving the lower sketch on RC15, an early draft for bb.161-65 of the published score. The pianistic origins of this notation are apparent in the layout of the material on the staves. Although the more extended pitch range and block topography of P's partitioning necessarily limits the influence of the upper notations, direct intervallic correspondences are particularly evident at the junction of statement 1 and 2 (cf. the corresponding contours).

The most obvious reference, however, is to the C115 template, which clearly furnishes almost the entire pitch and rhythmic configuration of the middle statement. The upper voices directly replicate the pitch content and general rhythmic structure (with an *ictus* on the second chord) of the template, with the original bass only slightly rhythmically adjusted (the A is struck, as in the template, with chord 2)[16]. The spacing of the last chord of the template (F#/G/E) is also preserved, though octave transferred, together with its characteristic offbeat identity. The third statement of P seems to extend from this component of the template, using similarly widely spaced, high tessitura chords followed by a staccato bass note.

A later, slightly adjusted version of this central P statement is found on RC20[17], in conjunction with an incipient melodic-harmonic notation from which series I appears to have been evolved, in a manner analogous to that observed in the C115 template[18]. RC20 consists of two sheets pasted together, of different paper types and sizes. The C115 derivative appears on the larger right-hand sheet, in pencil, together with the beginning of the series II notation (first four pitches only), in blue ink, both row forms identified by red-pencil Roman numerals. An arrow directs attention to a more extended draft to its right, again largely in blue ink, though with occasional pencil elements. This is entered on a smaller page taped on at right angles to the larger sheet, and exhibits considerable evidence

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[16] Craft's transcription (op. cit.) is accurate, though not entirely diplomatic. His bracketed suggestion for the low F at the beginning of the second P statement (a curious omission in the sketch) is admissible in view of the degree of template influence here, and its subsequent appearance in later versions of this passage (cf. RC20 and the intermediate particell).

[17] The notation is calligraphically neat, with added phrase markings, including some erased layers.

[18] These are the sources for Craft's Exx.3 and 4. It should be noted, however, that his transcription of the latter (the incomplete series I) is supplemented by details (including pitch material) from its later appearance on RC2(a).

of reworking. Only the first ten pitches of the series are present, the last A (sharp or natural)[19], as well as the beam connecting the final four quavers, being later pencil additions. Stravinsky's preservation of these 'concept' sketches for both series on a single page suggests that he regarded them from the start as primary sources, and also, in view of their consecutive appearance on the left-hand fragment, that he intended to juxtapose them within the movement. In fact, the two passages directly represented by these 'concepts', bb.163-65 and bb.173-75, were later separated by an inserted link combining both series as separate contrapuntal strands (q.v. the upper sketch of RC 4(b))[20]. RC9 and its subsequent amplification on RC10 (the latter dated 'July 25-26 [19]65') represent attempts to refine the detail and continuity of these three components.

Stravinsky completed the series I 'concept' sketch on RC2(a), retaining the registral and rhythmic configuration of its first nine pitches from RC20, whilst expanding it to a full dodecaphonic statement. Series I row charts are elaborated on RC 4(a), 25(a) and 26(a)[21]. On RC2(a), the completed 'concept' appears on an isolated stave in the centre of the draft, surrounded by a composite of familiar material found in the earlier sketches discussed above. The associated series II 'concept' from RC20[22] (via RC15) is located directly to its right, with another P statement directly beneath this, combining elements of the central

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[19] The accidental is uncertain. A-natural is the pitch ultimately located in this order position. If, however, the reading is accepted as an A#, then this factor was eventually displaced to the end of the row (retaining the same register) on RC2(a).

[20] The Series II R layer, entered in red pencil on RC4(b) – eventually the first flute line between b.166 and b.172 – is strongly influenced by the RC26(b) P contour, and by elements of contours 1 and 2 on RC15. The statement is elided, as the sketch illustrates, with the end of the P statement in b.165.

[21] The alignment of the row forms on RC25(a) – a *Reinschrift* of RC4(a) which preserves it registers and contours – is, of course essential to the derivation of the 'I verticals' at the opening of the movement. RC26(a) elaborates hexachordal rotations for the RIβ form, which are not employed in the interlude, and may therefore be of later origin.

[22] Note the identical registral positions of the final G in both sketches (RC20 and RC2(a)).

statement on RC15 (lower draft) with the drafts on RC12. A modified version of the tuba/timpani music from RC18 is entered at the bottom of the page.

The only additional sketch on the page is an early draft for the opening bars (bb.136-143), entered across the top of the sheet. (This begins with the 5/16 bar of repeated chords and continues onto the upper stave). Stravinsky had already made preliminary notations for this on the top of RC2(b), in conjunction with consecutive presentations of series I: R and RI forms (beneath), using frequently verticalised adjacent dyadic pairings, which supply the basic material for the alto flute and bassoon music that acts as a coda to the movement (bb.197-202)[23]. This sketch reveals that the opening music is formed from a simultaneous unfolding of the twelve factors of the series I: P, R, I and RI forms (which the composer entitles '[series] I verticals'), a similar procedure to that employed in the supplementary serial chart constructed for *Movements* V[24]. Chart RC25(a) is the evident source of this material. Chords ('verticals') 1/2 and 4/5 are combined, producing, in total, a ten-chord sequence. The first combination, the source of the repeated 'refrain' chord first heard at the opening of the movement[25], was required to accommodate the extraneous two-factor vertical 1. The three-factor vertical 4 shares two of its pitches with vertical 5. Vertical 6

[23] There may be an intentional reference to the C115 'concept' in the configuration that initiates this sketch.
[24] SNP/0, i.e. the *Movements* chart filed with the sketches for *A Sermon, a Narrative and a Prayer* (see Chapter 5).
[25] Although Stravinsky disclaimed any direct references in *Requiem Canticles* to his earlier music (*Themes and Conclusions*, 98-99), it can hardly have been coincidental that on its first performance the work was programmed alongside *Symphonies of Wind Instruments* (q.v. Taruskin, *Stravinsky and the Russian Traditions*, 1650). Cf. *Canticles* b.136, et al., with *Symphonies*, rehearsal cues 1, 4 etc. (1947 version). In addition, the music between rehearsal cues 6 and 9 of *Symphonies* (1947) was, in its 1920 version (rehearsal cues 4-6), scored for a flute quartet identical to that employed in the *Canticles* interlude. There are additional gestural similarities between these passages, as in, for example, the oscillating dyad in the third flute part (*Canticles*, b.168 foll, and *Symphonies*, 8 (5) foll.). Cf. also the abandoned sketch on RC13.

incorporates a serially unauthorised treble G which appears to anticipate the following vertical, whilst factors of vertical 8 (C, A#) are sustained while vertical 9 is sounded[26].

The spacing and rhythmic configuration of the 'refrain chord' pitches underwent several successive alterations. The version on the right-hand side of RC2(b), following the barline, shows some affinity with rhythmic features of the C115 template, with the number of repetitions increased on RC2(a). Although further versions of this opening gesture were tried on RC11 and RC14 (neither matching the final score), RC2(a) became the nucleus of the intermediate particell, Kata 105:7. An interesting feature of RC2(a) is its speculative musical continuity, differing from the final score, suggested by the alignment of individual sketch fragments on the page, a distribution partially duplicated by the intermediate draft.

Implications of the Intermediate Particell

The intermediate particell was ostensibly in use, in parallel with the loose sketch material, between March and late August 1965, for the most part observing a straightforward chronological progression from top to bottom down the page. Figure 12:4 outlines in summary the content of this draft, indicating the latest sketch from which each entry evolved, with the date of this associated preliminary sketch given where applicable. The earlier history of these preliminary sketches may be traced backwards in Figure 12:1. It

[26] The serial provenance of these chords is clarified in Taruskin, *Stravinsky and the Russian Traditions*, 1665-66 (including his Example E.22)

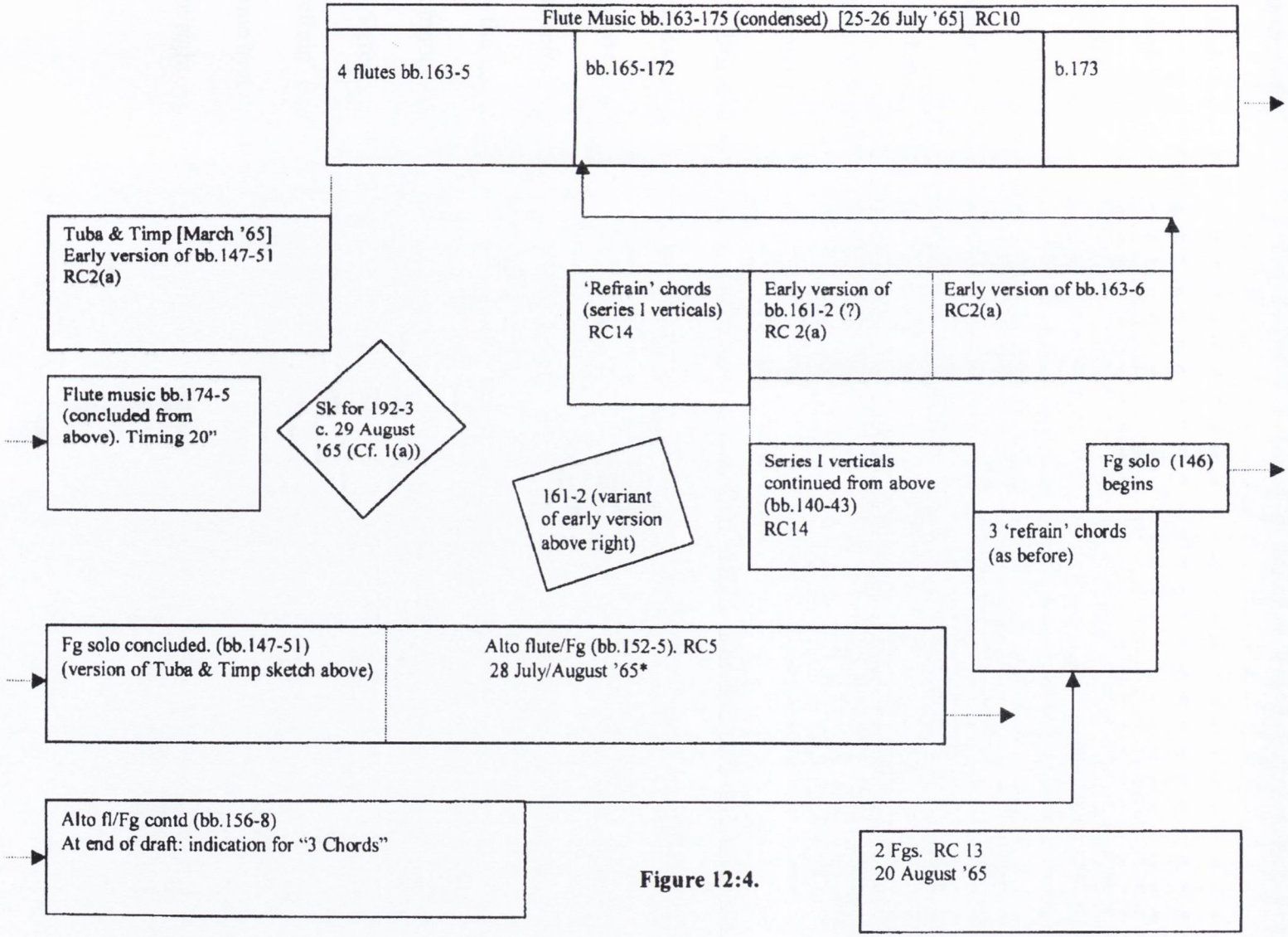

Flute Music bb.163-175 (condensed) [25-26 July '65] RC10
4 flutes bb.163-5
bb.165-172
b.173
Tuba & Timp [March '65]
Early version of bb.147-51
RC2(a)
'Refrain' chords
(series I verticals)
RC14
Early version of
bb.161-2 (?)
RC 2(a)
Early version of bb.163-6
RC2(a)
Flute music bb.174-5
(concluded from
above). Timing 20"
Sk for 192-3
c. 29 August
'65 (Cf. 1(a))
161-2 (variant
of early version
above right)
Series I verticals
continued from above
(bb.140-43)
RC14
Fg solo (146)
begins
3 'refrain' chords
(as before)
Fg solo concluded. (bb.147-51)
(version of Tuba & Timp sketch above)
Alto flute/Fg (bb.152-5). RC5
28 July/August '65*
Alto fl/Fg contd (bb.156-8)
At end of draft: indication for "3 Chords"
2 Fgs. RC 13
20 August '65

Figure 12:4.

would appear that the earliest additions to the draft were entered in a block proceeding from left to right towards the top. This material comprises the music for tuba and timpani *coperti* and (to the right and slightly below this) the 'refrain' chords with concomitant series I 'verticals', plus an early outline of what was to become the flute music between bb.161-66. The immediate source of this material is RC2(a), which is comprised entirely of this music (together with an additional draft of b.173 (the series I 'concept') deriving directly from RC20), assembled from earlier drafts of the concomitant fragments. With the exception of the further revisions made to the 'refrain' chords on RC11 and RC14, all the sketches were entered directly into the intermediate draft in forms very similar to the respective notations on RC2(a). The tuba/timpani music, among the earliest sketches outlined (on RC18 in March 1965), is bracketed off from the surrounding sketches on RC2(a), and is similarly isolated in the intermediate draft, suggesting that the composer was as yet uncertain of the final context of the music. The interaction of the instrumental strands here has been somewhat simplified in the intermediate draft. The dissociation of the refrain chords from the context of the remaining series I 'verticals' is already suggested by the notation on RC2(a), and in the draft Stravinsky similarly distributed the two components on different systems, though the serial designations appearing in orange, red and green pencil on both, confirm them as contemporary additions. In this way, the 'refrain' chords become a focal point initiating two sequences of music, the first (on the same system as the refrain chords) continuing with the series II-derived music notated on the right-hand systems of RC2(a), the second (aligned beneath) completing the chain of

series I 'verticals' initiated by the refrain[27]. The first continuation (later bb.161-162) hardly alters the 'concept' sketch from RC15/20. The repeat marks enclosing the refrain chords (retained into the later *Reinschrifts* on Kata 105:5, recto and verso) may thus be viewed not merely as a convenient abbreviation, but as means of indicating alternative textual readings (i.e. both with and without the repeat) which correspond to the repetitions in the published score at the respective points (bb.136-139 and 159-60).

RC11 represents an intermediate attempt at the 'refrain' chords and adjunct sequence of series I 'verticals'. The rhythmic configuration and registral disposition here demonstrate that the sketch followed on directly from RC2(a). The spacing of the refrain, constituted exclusively as a structure formed from superimposed fifths, merely octave transfers RC2(a), whilst the rhythmic structure, approaching the final score, evolves from the unpitched configuration added to the top right-hand corner of RC2(a). The lower portion of the sketch shows the composer discovering the final spacing of the refrain chord, surprisingly coupled with an excerpt of the tuba/timpani sketch. Although too fragmentary to facilitate significant conclusions, the sketch suggests that the composer was experimenting in an intuitive way with different musical sequences and contexts for the segments thus far composed.

A slightly later addition to the intermediate particell – a draft of bb.163-175 – appears across the very top of the draft, and derives directly from RC10, dated 25-26 July 1965.

[27] The angled notation directly below the refrain chords, in blue ink, is a version of the music directly following the refrain (bb.161-162), and was probably made between the intermediate draft and final particell. There may be intentional rhythmic associations with the draft of bb.142-143 directly to its right, which are emphasised in the final score.

Along with its earlier version, RC9, this source sketch similarly associates and amends a number of independent earlier fragments into a continuous span of music. Its appearance on the intermediate particell, with an overall duration calculated at twenty seconds, concludes beneath the tuba/timpani music, confirming that the middle of the page (also accommodating the series I 'verticals' and early version of bb.161-66) had already been filled. The extremities of the block incorporate versions of the early notations on RC12 and RC20 (right-hand side), duplicated on RC2(a), which derive from series II and series I respectively[28]. RC4(b), for the central section of the block, unfolds both series simultaneously (II R and I Inv), a combination evidently prompted by the necessity of linking the two series. The sketch includes a version of bb.163-165 (from RC2(a)), which, given its positioning, may have initially been intended to follow the central block.

The visual arrangement of the intermediate particell notations relating to these sketches suggests that the composer envisaged several possibilities for the context of this music. Its exact alignment with the end of the tuba/timpani block, below and to its left, suggests that direct continuity was intended between these sections, an interpretation seemingly confirmed by the inclusion of an otherwise redundant rest bar at the end of the latter. This also conforms to the alignment found on the source sketch, RC2(a). The composer's arrow from the lower sketch for the opening block (incorporating the 'refrain' chords) delineates, in a rather circuitous manner, the later sequence of the material as it appears in the final score, and suggests that the eventual continuity of the movement was arrived at only after considerable experimentation.

[28] The influence of the lower draft on RC12 is especially evident in the intermediate form of this passage as it appears here.

The lower half of the intermediate draft deals with music that occurs earlier in the completed score, following on from the chain of series I 'verticals' which opens the completed interlude. Stravinsky continued by adding a repetition of the 'refrain' to conclude the chain (this is preceded and followed by clear breaks in the rastration). This 'refrain' differs in rhythmic definition from the earlier model. The first 'refrain' consists of a two-bar unit with timpani reinforcement defining its extremities; the second, in contrast, is conceived as a three-bar unit, the timpani now coinciding with each internal repetition of the chord. Its placement on the intermediate particell meant that its later continuation (bb.147-58) had to be distributed across two systems. This latter begins with a revision and re-contextualisation of the tuba/timpani music aligned directly above[29], continuing, following a rastration break, with a span of music which was outlined in full on the preliminary sketchleaf RC5 (though apparently begun on RC6), dated 28 July or August[30]. RC5 additionally supplies an overall timing of 24 seconds for the block. This passage, eventually assigned to alto flute and two bassoons, is a self-contained statement of the four primary forms of series I, linearly presented with occasional verticalised adjacencies. Following this passage on the intermediate particell, the composer indicated a repetition of the second 'refrain' by a connecting arrow and the encircled rubric '3 C[h]ords'.

It would seem that Stravinsky was uncertain about the direction the composition would take from this point. However, a compositional solution appears to have crystallised

[29] The contour and general rhythmic outline are retained, but the timpani strokes at the end of the passage (a distant echo of the refrain) are the only evidence of its original instrumental identity.
[30] The month, represented as a Roman numeral, is unclear, and could be VII or VIII. Either date is compatible with the overall chronology of the page, but the former reading is offered for the sketch by Craft in *Selected Correspondence*, ibid.

sometime in very late August, with the remainder of the interlude subsequently being completed in a remarkably short timespan. The composer may have been encouraged to this expeditious achievement of the movement by upcoming concerts in Germany, London and America that were to occupy him during the first half of October[31].

The verbal indication for the repetition of the '3 chords' is followed directly by a notation for two bassoons, first sketched on RC13, where it is dated 20 August 1965. This explores new serial territory, juxtaposing alternate order positions of series II, P and I forms (e.g P(1,2): I(3,4): P(5,6) I (7,8) etc.) to generate a new aggregate[32]. This secondary 'row' became the model for two drafts on RC13, which occasionally revise the prescribed order, as demonstrated by the arrows and coloured lines. As observed by Craft, the repetitions in the second bassoon line (the derivation of which is indicated by the red pencil lines) have evident affinities with the 'keening' flute music at the top of the intermediate draft (bb.168-72)[33]. Although Craft interprets this bassoon sketch as an early version of bb.161-162[34], the music was, by virtue of its placement in the score, evidently intended as a continuation of the preceding duet, following the interruption of the second refrain's repetition. In any case, bb.161-162 were already in place, albeit in an early version, directly following the first refrain.

Exceptionally, the music for two bassoons outlined on RC13, and added to the intermediate

[31] See Craft, *Chronicle* 261, *Selected Correspondence* II, 467.
[32] The strict alternation of order positions in pairs between the two rows is allowed lapse towards the end, in order to avoid pitch duplication.
[33] Cf. also the opening solo violin music of the Prelude, beginning in b.4.
[34] *Selected Correspondence* II, 469. The sketch is not transcribed, but its content is described in considerable detail.

draft, was not incorporated into the finished movement. By 29 August, by which date he had completed a draft of the additional flute music between bb.176 and 183 (RC1(a) – revealing clear associations with the early versions of bb.163-75, found on RC10 and across the top of the intermediate particell), the composer had decided on a different strategy for proceeding with the draft. In the final score, the refrain chords that follow the first bassoon duet in b.159 are not those of the second refrain (which instead return in b.194) but a third variant, combining characteristics of both. Thus the flute music at the top of the intermediate draft was finally contextualised by creating a fortuitous 'short-circuit' from the end of the first bassoon duet (bottom left-hand side of the draft) to the first refrain in the centre of the draft, and thus to its direct continuation as indicated. The refrain was later hybridised by the simple expedient of moving the timpani chord to coincide with the repetition of the instrumental chord-group, thereby superimposing second-refrain characteristics on a first-refrain phrase length. In the context of the final score this sounds like an abridged second refrain (bb.159-160). There are notable pitch correspondences between the continuation (eventually b.161 foll.) and the opening of the abandoned two-bassoon draft, which may have suggested the elision of the material.

Stages Succeeding the Intermediate Draft

Following this solution of the continuity problems manifested in the intermediate draft, the remainder of the movement seems to have crystallised rapidly. The composer was in a position to draft the first two pages of the final particell (Kata 105:4, 5), with only a

minimal amount of sketching, following the intermediate particell. The third page of the final particell (Kata 105:6) includes music which, with the exception of the refrain in bb.194-96, does not feature on the intermediate draft – Figure 12:2. The music between bb.161 and 165 achieved its final version on RC16 (two drafts) via the revision of bb.161-62 in the angled sketch directly beneath the 'refrain' chords in the centre of the intermediate draft. The uncommon use of blue ink in this latter, together with the slant of the sketch, indicates that the notation was a later insertion, probably made after the composer had moved or detached the draft from his piano music-rack. It represents a version of the music directly following the first refrain (from RC15/20), and contains rhythmic associations with the draft of bb.142-43 directly to its right, a connection emphasised in the ultimate version (cf. bb.142-3 with 161-2).

The other angled sketch on the intermediate draft, occupying the space directly to its left (and with comparable rhythmic associations), is also an obvious late insertion, relating to the flute music (bb.176-83) on RC1(a). It concerns the final two links in a chain of series II Pβ rotations that form the basis for the passage, the first occurrence of this technique in the sketches for the work thus far. Although RC1(a) is a late sketch within the chronological evolution of the interlude, as the date (29 August 1965)[35] makes evident, the composer returned to early templates as models for intervallic patterning. As the annotations here demonstrate (the red and green pencil markings are identical to those employed on its intermediate-draft counterpart), the music opens with a statement of series II P, its α hexachord clearly patterned, like the intermediate-draft version of bb.163-165 (cf. RC 9,

[35] Craft (ibid.) offers this date as that of the completion of the movement.

10), after the early template, RC12 (lower sketch). Similarly, the disposition of the Pβ hexachord alludes directly to the trichord at the end of the seminal C115 'concept' template (F#,G,E). The remainder of the passage systematically derives from the Pβ rotations, explaining the predominance of emphasised C#s in the lower voice (possibly another legacy of the C115 template).

The composer incorporated and elaborated this passage on a collage of four smaller fragments, RC 1(b), 3, 7 and 17, which were taped to a larger background page[36]. This presents two versions of the passage. The first, on fragment RC1(b), presents a modified version of RC1(a), offering occasional alternative readings[37]. This music appears between bb.176 and 183 in the published score, and provides a source template for the three remaining 'collage' fragments, which, as the unique draft for bb.185-93, present a variation on this music, with a minimal degree of modification in evidence. Stravinsky added the complete passage to the third page of the particell draft (Kata 105:6), once again bearing the designation 'Interlude', which besides offering a timing of 31" for bb.176-84, specifies (in green pencil) b.185 foll. as a 'variation of same' (i.e. of bb.176-84). The angled insertion on the Kata 105:7 working particell would appear to be chronologically intermediate between the source and its twin, thus representing a stage on the way to the published version of bb.192-3. Following the lengthy and difficult gestation of the early parts of the movement, the 'short-circuiting' of this intermediate draft, together with the

[36] Although the fragments are now separate in the Stiftung's *Sammlung Robert Craft,* the colour facsimile in *SPD* shows the collage as it was originally constituted. The accompanying caption dates the sketch as August 1965, though no source is cited for this information.

[37] As an example, see the upper parts near the opening. The alternative reading (higher octave), which at first appears to be octave doubling, together with the accompanying rubric 'or', continues off the fragment onto the background sheet. One may surmise, therefore, that the composer originally transcribed a version close to RC1(a), making the registral adjustments after the fragments had been assembled.

unprecedented use of extended template methodology in generating bb.176 through 192, suggests that the compositional process was being deliberately expedited in a similar manner to the fifth movement and interlude insertions in *Movements*.

The movement was concluded using a repetition of the second refrain from the intermediate draft (identical to bb.144-146), together with the final alto flute/bassoon music, sketched at an early stage in conjunction with the opening chain of series I 'verticals' (including the 'refrain' chord) on RC2(b). This two-voiced skeleton was elaborated rhythmically and registrally into the final version, on sketchleaf RC8, prior to its addition to the particell draft.

Interlude Templates as Source Sketches for Later Movements: *Lacrimosa*, Prelude, *Libera Me* and *Dies Irae*.

Several of the key sketches discussed above, which are demonstrably associated with the evolution of the interlude, reappear in various guises as template models for material found in later movements of the work. Intermittent dates given within the sketches for these movements clearly place them all chronologically later than the interlude[38]. Each of the remaining movements is based on only one or other of the two rows, with the exception of

[38] Most of the dated particell and sketch materials for the work are used by Craft to supply the chronology in *Selected Correspondence* II, 467-468 (though the provenance is not always identified). However, this chronology offers some additional information for which no sources can be traced within the present sketch collection: see notes 36, 40 and 52 to the present chapter.

the instrumental postlude, which, like the interlude, combines forms from both[39]. Table 12:1 presents details of the rows employed in each movement, in the general chronological order of composition according to the dates supplied in the sketch material.

Movement title	Series used	Movement title	Series used
1. Interlude	I & II	6. Rex Tremendae	I
2. Exaudi	I	7. Lacrimosa	I
3. Prelude	II	8. Libera Me	II
4. Dies Irae	II	9. Postlude	I & II
5. Tuba Mirum	II		

Table 12:1: chronological order of movements with indications of series deployed.

Clear influences from the C115 'concept' template (the source of series II) are to be found in the opening string Prelude, which was apparently begun in mid-November 1965[40]. This is most evident in the *tessitura*, intervallic spacing and registral disposition of the pitches that begin the movement, and to which it returns towards its conclusion, in b.47. As in the template source, these constructions are formed by the verticalisation of adjacencies in the P form of series II. The semiquaver accompaniment of the Prelude extends this conception by first unfolding P as far as b.19, and eliding its final G to a retrograde statement (beginning in bb.14-15) that continues to the end of the movement[41]. Distributions with a

[39] Spies, 'Some Notes on Stravinsky's Requiem Settings', 238-239, correctly identifies the overall row source of the constituent movements with the exception of the Postlude, for which no suggestion is offered.
[40] Craft *Selected Correspondence* II, 467. The source of this information is uncertain, as none of the extant sketches for this movement are dated.
[41] This retrogression is latent in the template source. See Chapter 9.

possible source in the third chord of the C115 template model are to be found in bb.9-10, and also underpinning the central span of the movement from bb.21-33. Elements of chord two may be detected between bb.35 and 46.

Above this *ripieno* ostinato accompaniment, a group of solo strings unfold lines derived from lower-level rotations of the P form. A further voice is overlaid on each successive appearance of the *concertante*, up to a total of four voices in b.39. The particell draft, headed 'Praeludium', consists of five small leaves (one itself a composite of two smaller pages), which were evidently intended to read continuously, and together provide the full text of the movement[42]. It appears that no additional preparatory sketches were made. RC28(a), a draft for the densest *concertante* texture within the movement (bb.39-46), was possibly the first part to have been composed, as it is the only sketch to identify the serial sources of these solo string lines[43]. Although the absence of the rotation charts from which the material must have been drawn frustrates any speculation regarding the source of the contours, it is clear that the Pα hexachord in the second solo violin references the contour of the row charts 26(b)/25(b). Early sketches for the *Libera Me*, which Craft dates to early May 1966[44], display similar influences. RC39(b), which was probably made in New York

[42] The pages are RC27(a), (b) and (c), the latter a composite page, together with RC28(a) and (b). The first and last of these are reproduced in facsimile in *A Stravinsky Scrapbook*, Plate 269, p.133.

[43] According to the sketch, these are: Vln I: Pα1/α6; Vln II: P[β6]r/[α6]r; Vla: Pβ5; Vc & Db: Iα6/β6. Although the relevant rotation charts for Series II, which the composer must have employed, are not included with the remaining sketch material (and Craft does not mention them in his enumeration of row charts in *Selected Correspondence* II, 469), the identical mistake in the content of the professed Pα6 and [Pα6]r forms demonstrates that Stravinsky must have been referencing a partially defective chart. This is interesting in view of Spies's claim to have transcribed directly from the composer's charts in 'Some Notes on Stravinsky's Requiem Settings', 233, where instead the correct form of this hexachord is given (ibid., 235), and Spies later identifies the discrepancy as a 'transposition that does not appear in the chart' (ibid., 244). Straus also affirms that Spies copied these charts, on September 20, 1966 (Straus, 'Stravinsky's Serial "Mistakes"', 238).

[44] *Selected Correspondence* II, 468.

between 8 and 13 May 1966[45], following the completion of the *Lacrimosa*, is located directly beneath the complete verbal text of the movement. Here a *falsobordone* chant-like phrase for tenors and basses[46], an early attempt at the opening, is constructed from the P form of series II, in a registral arrangement that owes much to the three row distributions on the top of RC15. The intervallic and registral distributions of the upper contour (1) on RC15 are consistently employed as far as the C#, thereafter those of the lowest contour (3)[47].

However, the section of the score that most clearly crystallises the gestures encapsulated in the C115 template, despite being entirely based on series I, is the *Lacrimosa*, which was composed rapidly in April 1966[48]. As is well known, the movement unfolds, using a generally systematic progression, recurring layers of rotational and vertical chains directly linked to the various constituent timbres and registers[49]. Its rapid gestation, no doubt facilitated by the technical *modus operandi*, is reflected in the small amount of extant sketch material. This consists of six smaller leaves that were originally pasted onto three pages of the composer's sketchbook, viz. RC36(a)/(b), RC37 and RC38(a)/(b)/(c), together

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[45] The sketch is entered on *Hotel Pierre* notepaper; see the itinerary given in *Chronicle*, 285. Stravinsky was also in New York between 12 and 19 April, the probable date of the *Lacrimosa* sketches (see note 48 below).
[46] This *falsobordone* remains a striking feature through to the final score. Taruskin, in *Stravinsky and the Russian Traditions*, 1650, sees this as 'a direct throwback to Stravinsky's 1932 setting of the Orthodox creed', but the model is surely Verdi's setting of the text, a feature heavily underlined by the final rhythmicised 'Libera me' in the *coro parlando*.
[47] In *Selected Correspondence* II (470-71), Craft describes the content of sketches for the *Libera Me* which do not appear to be included in the Paul Sacher Stiftung's folders of *Requiem Canticles* material. RC22, Stravinsky's sketchbook index of the *Canticles* material, lists six pages ('p.32-37 incl') of sketches for the *Libera Me*, again suggesting the possible existence of additional material.
[48] The second page of the particell draft for the movement (Kata 105:13, reproduced in *SPD*, Plate 24) is dated '27-IV-66'. The rough sketch RC38(b), like RC38(c) written on notepaper from the *Hotel Pierre*, New York, is simply dated 'April'. The *Rex Tremendae*, composition of which immediately preceded the *Lacrimosa*, had been completed by 6 April 1966 (date on its final particell page, Kata 105:11).
[49] Spies, ibid., 245-246.

with a two-leaf particell draft of the movement[50]. These sketches reveal that Stravinsky worked out much of the vocal line, a chain of RI rotations commencing with [β6]r (sketchleaf RC36(a)), together with the trombone responses, employing the six rotations from the Iα chain (RC38(a) and (b)), independently, before establishing the distribution and continuity of the various elements within the context of the movement. The remaining layers, as identified on the particell draft, consist of the 'wailing' flute chords/string harmonics (a chain of RIβ verticals) and the double bass/harp combination (slowly unfolding an Rα rotational chain beginning with [Rα1]r. The C115 'concept' template foreshadows the characteristic gestures associated with these layers, such as the low *tessitura* dotted-rhythm tendencies of the trombone responses, the tessitura and distinctive spacing of the high flute chords, and the offbeat low string *pizzicati* which punctuate the initial vocal phrases (bb.232, 242). The concluding bars of the movement (bb.264-5) clearly allude directly to the pitch and intervallic configuration of the 'concept'.

Interesting connections are also traceable between the early interlude sketches and the *Dies Irae*, which was composed in December 1965/January 1966 according to Craft's chronology in appendix G of the *Selected Correspondence* Vol. II. Six brief preparatory sketches for the movement are extant, in addition to a single large particell draft, which also contains the opening trumpet duet of the *Tuba Mirum*[51]. Neither the sketches nor the particell are dated, but Craft indicates that RC32(c) was the first notation for the

[50] The Paul Sacher Stiftung has reconstructed the arrangement of these sketches. For details of the particell facsimile in *SPD*, see note 48 above.

[51] The sketches, which include a complete page of text, are RC31(a)/(b)/(c) and RC32(a)/(b)/(c), along with the particell draft Kata 105:2. The trumpet fanfares in the *Tuba Mirum* are yet another direct allusion to the parallel passage in the Verdi *Requiem* (cf. rehearsal cue 13 foll. in the latter).

movement, with RC32(a), inserted into the particell in blue pencil, the last[52]. Both these notations, which accompany choral *parlando* effects, together with the repeated phrase of pitched music assigned to the chorus (setting the opening phrase of the Requiem sequence), are directly evolved from interlude sketches. Notations for bb.91 through 93 on sketchleaf RC32(c) evidently derive once again from the seminal series II contours at the top of RC15 (cf. contours 1 and 2, in retrograde), while the insertion (RC32(a)) directly incorporates the lower form of series II P on RC12. The chordal setting of the opening words 'Dies irae, dies illa', is an audibly analogous gesture to the interlude's 'refrain' chords (especially the echo in bb.83-84)[53]. Both chord sequences are manufactured from series II using a comparable method of superimposing different serial forms (the four primary forms of the row in the interlude, adjacent Iα rotations at the beginning of the *Dies Irae*, as revealed on RC31(b)). Stravinsky derived the rhythmic configuration of the 'Dies irae' chords from the discarded intermediate version of the interlude 'refrain' on the left-hand side of RC2(a), the use of this template necessitating text repetition, and thereby probably suggesting the echo effect which is such a striking feature of the movement. The eventual scoring of this passage, employing trumpets, trombones and muted horns (the pitches of the latter still assigned to a harmonium in the particell), provides another link with the interlude refrain as it appears, with scoring for horns and trombones, on the intermediate particell Kata 105:7 and the particell draft Kata 105:5.

[52] Craft (*Selected Correspondence* II, 468) supplies the date January 24 for this insertion, though without citing a source. (The particell, Kata 105:2, is not dated).
[53] This connection is perceived by White in *Stravinsky: The Composer and His Works*, 540.

Summary

The first 'concept' sketch for *Requiem Canticles* was entered on page 5 of the C115 pocket sketchbook. This consists essentially of a musically-configured aggregate, together with an ordered series formulated from it, which closely resembles 'series II' as employed throughout the subsequent sketches for the work.

Stravinsky established the final form of 'series II' on RC26(b)/(c), where underlying layers reveal the presence of the sketchbook series and its derivatives. The slight adjustments subsequently made to the row ordering remain compatible with the 'concept' and recall the earlier sketchbook experiments for the *Elegy for JFK* series.

A group of identifiably early sketches for the central instrumental interlude, now based on the final form of 'series II', reveal the continuing influence of the 'concept' configuration, and generate additional, related configurations which are subsequently treated as templates in their own right. 'Series I' was introduced at a slightly later stage of composition, and was similarly evolved from a rudimentary serial configuration (RC20).

An unusual feature of the collection is the presence of a single-page 'intermediate' particell draft, drawing together notations from the preliminary sketches into a provisional sequence that allows for a certain flexibility in its interpretation. Dates entered on the preparatory sketches, and on the intermediate draft itself, allow a reconstruction of the movement's approximate overall chronology. This reveals that the composer's view of the function and

block continuity of his material altered considerably in the course of sketching. The envisaged early sequence of events was drastically revised and recontextualised when the composer took the decision – apparently some way into the compositional process – to assemble the movement around a recurring 'refrain' which would link the various separate fragments already sketched. This led to the 'short-circuiting' of his original plan to extend the bassoon duet (bb.155-58) following the third appearance of the 'refrain'.

Following this decision, the composer completed the movement rapidly, adding a brief passage (continuing the music for four flutes) based on a chain of Pβ rotations (bb.176-183), which retrospectively references the C115 'concept' via earlier template models for the movement (RC12/15). This passage was then employed in its entirety as a template source from which the directly ensuing music (bb.185 through 192) was cloned. (This resembles the technique used in generating the interludes and late insertions in *Movements*).

Notations for later movements, including sketches for the Prelude, *Dies Irae*, *Lacrimosa* and *Libera Me*, reveal further explicit influences from both the C115 'concept' template and from related early notations for the interlude. These template influences remain independent of the specific series upon which each individual movement is based.

CHAPTER 13

Etudes, Inventions and a Sonata: Sketches for an Abandoned Work (1966)

Background

Surviving sketches for an unfinished work begun towards the end of 1966, which are preserved in the *Sammlung Robert Craft* at the Paul Sacher Stiftung, display significant parallels with compositional procedures observed in *Requiem Canticles*. The incomplete condition of the piece facilitates a reconstruction of the initial compositional process, exposing procedures and relationships that may have become concealed or obfuscated had the piece been brought to completion.

Despite, or perhaps because of, their fragmentary state, these working materials have received considerable attention[1]. Four of the sketchleaves – a significant proportion of the small collection – have been reproduced in monochrome facsimile in *Stravinsky in Pictures and Documents*, with occasional supplementary references to the work to be found in both Stravinsky's and Craft's published writings[2]. In addition, Arnold Newman's photographic

[1] A discussion of some of these materials, using transcriptions, is to be found in Wuorinen and Kresky, 'On the Significance of Stravinsky's Last Works'.

[2] *Chronicle* 343, *Selected Correspondence* II, 469, *Themes and Conclusions* 115. In addition, *Chronicle*, 303-4' reprints Craft's original captions to, and description of, Newman's photographic sequence. References for the *SPD* facsimiles are provided below, and also in the accompanying table of sketches (see appendix, Volume II, 37-9).

collection *Bravo Stravinsky* includes a famous sequence that apparently captures the composer in the act of drafting an early notation for the work.

In 1974 Robert Craft invited the composer Charles Wuorinen to utilise the surviving sketch material as the basis for a memorial piece of his own, entitled *A Reliquary for Igor Stravinsky*[3]. This orchestral piece in general makes free use of the material, framed by identical five-minute movements entitled *Reliquary*, acting as introduction and coda. As implied by its title, this section incorporates the sketch fragments without significant embellishment, including some which appear crude enough to indicate that they would undoubtedly have been considerably altered and/or elaborated at a later stage of composition[4]. As little in the way of orchestration and, especially, extended continuity can be inferred from the composer's sketches, one must conclude that these are largely of Wuorinen's design. The surface aural impression of the *Reliquary* sections is generally convincingly 'Stravinskian', apart from the frequent extended block repetitions, which are uncharacteristic of the Russian composer's later music. Although this may be regarded as a consequence of the meagre quantity of original material with which Wuorinen was obliged to work, in at least one instance it also appears to derive from a misunderstanding of the compositional processes involved in some of the sketch sequences, as will be seen.

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[3] See Peter Lieberson's booklet notes accompanying the London Sinfonietta's recording of the work on the *Deutsche Grammophon* label (1995). The cover of this booklet reproduces the Newman composing sequence (see Note 2).

[4] The *Reliquary* sections also include additional material, which is presumably either entirely original or freely extrapolated from the Stravinsky sketches.

The extant material in the *Sammlung Robert Craft* is preserved in two folders, C72(a) and C72(b)[5]. The latter contains nine sheets, some with notations entered on both recto and verso, producing in total thirteen sides of sketches, including five row charts. C72(a) contains three leaves, which include more extended drafts. These sketches demonstrate that the composer's original conception of the work altered as composition progressed. In an interview with *Harper's* magazine, reprinted in *Themes and Conclusions*, the composer reveals that he is 'composing, or thinking about continuing to compose, a set of pieces, provisionally entitled *Etudes, Inventions and a Sonata*', although no instrumental medium is specified[6]. The majority of the drafts in folder C72(b) include indications of timbre and instrumentation[7]. However those on the transparency C72(a)i, are unequivocally designated 'for a Sonata', with some fingerings and additional indications for distribution of hands to be found on the upper and lower drafts, respectively, of C72(a)iii. Though no instrumental specifications are provided, the work appears to have been intended for solo piano[8]. It seems likely that this uncertainty as to the appropriate medium was linked to the difficulties that resulted in the work being abandoned.

[5] These folder designations are those of the Paul Sacher Stiftung, based on the item numbering in the provisional Craft catalogue.
[6] *Themes and Conclusions*, 113-15. Although the reprinted interview is undated, the specific accompanying references to Stravinsky's recent illnesses suggest that it took place in late 1967 (cf. *Chronicles* 325-341).
[7] Instrumental suggestions appear on all drafts contained in C72(b), with the exception of i, ii, fragments 1 and 2 of vi and fragment 2 of xii, all rudimentary notations.
[8] See *Chronicle* 343, entry for January 25, 1968. Curiously, Craft nowhere indicates that the 'piano opus' referred to here, and the 1966/67 orchestral work (mentioned in the other references in footnote 2) are the 'same' piece. The title 'Sonata' certainly insinuates a single-instrument work.

Compositional Implications of the Extant Materials

As regards the chronology of the present material, the Newman photographic sequence suggests that the piece was begun on 13 December 1966 (see below). Although Craft dates the 'orchestral' version of the work to 1966/67[9], and alludes to the (seemingly recent) abandonment of its later incarnation as a 'piano opus' as late as the *Chronicles* diary entry for 25 January 1968, C72(a) i and iii, which concatenate a considerable quantity of the more fragmentary sketches, are both unequivocally dated 1966. As the work had evidently evolved into a piano piece by this stage (fingerings together with an indication for 'L[eft] H[and]' are found on C72(a)iii, and no suggestions for instrumentation appear on any of the C72(a) drafts), the only other extended independent sketch indicating instrumentation, C72(b)ix, must therefore be earlier. This leaves only a handful of very brief rudimentary sketches (viz. C72(b)ii, fragments 1 and 2 of vi, and fragment 2 of xii) which may have been made specifically for projected later portions of the sonata during 1967[10].

Examination of the sketches reveals that two extended non-consecutive, passages, hereafter designated [A] and [B], had been worked up to an essentially final form before the piece was abandoned, with shorter semi-detailed drafts for two further brief passages outlined on C72(b) ii and ix. The few remaining sketches are much more fragmentary, often consisting simply of isolated rhythmicised rows or short fragments thereof.

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[9] See for instance the captions to the sketch facsimiles in *SPD*, 484-485.

[10] Stravinsky's health was poor during much of this period, to which he alludes in *Themes and Conclusions* 115, in conjunction with a brief discussion on the present piece: 'It is impossible to hatch any new music for the moment . . . and absolutely impossible to do so at the piano, the gout having robbed me of my dexterity'. See *Chronicles*, 325-339, for further biographical details relating to this period.

Detailed working drafts for [A] and [B] occupy most of C72(a)iii, with both passages later duplicated onto transparency on C72(a)i, with very little substantive alteration[11]. The heading "Two sketches for a Sonata" on the latter, and the date 1966, found on both drafts, are in the composer's hand[12]. The appearance of an ink transparency at this early stage of composition is unusual, and implies the intention to manufacture ozalid copies, possibly as a flexible means of contextualising the passages following the drafting of further blocks. If this was the composer's intention, this seemingly new procedure may have arisen from recent experiences in establishing the continuity of the *Requiem Canticles* interlude material (see Chapter 12), which represents a similar stage in the compositional process of that work[13].

As a corollary of the evolved nature of these drafts, a large proportion of the earlier sketch material is directly concerned with the evolution and refinement of these two passages, in particular [B], drafts for which are found on four sketches in folder C72(b). Only one separate sketch (C72(b)i) is extant for the [A] music (comprising the last 14 quaver beats) suggesting that the remaining music was entered directly on the top of C72(a)iii. This music is the only actual draft on C72(b)i, which is otherwise concerned with abstract

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[11] The composer appears to have been referring (somewhat cryptically) to [A] and [B] when he is quoted by Craft as saying 'I had no sooner forbidden myself to use octaves in one piece [*sic*: evidently [A]] than I saw what richness I could extract from them, and I used them in the next piece [evidently [B]] all the time.' In the interview with *Harper's* magazine (see note 6) the composer cites 'only two sections [of the projected *Etudes, Inventions and a Sonata*], both ante-ulcer [i.e. before 21st August, 1967: see *Chronicles*, 325] [that] are completed'. These references perhaps imply that [A] and [B] were envisaged as components of separate movements or sections of the completed composition.

[12] This heading is identical with that found on the brief fragment C72(a)ii, which comprises the first 12 quaver beats of [A]. It would appear to be an abandoned *Reinschrift* of the [A] and [B] drafts on C72(a)iii which was superseded by the transparency C72(a)i.

[13] In other words, the ozalid copies may have been intended for use in the later construction of a mobile 'interim particell' for the new work, allowing a greater capacity for the reordering of material than the 'fixed' *Requiem Canticles* example.

permutational extensions to the R and RI forms of the series (cf. the C72(b)iv row charts). C72(b)i can thus be chronologically placed with some certainty between the original 'concept' sketch 72(b)iii – shown in the Newman sequence – and the elaboration of the five principal row charts. This would indicate that the conclusion of the [A] music was one of the earliest sketches to have been developed for the piece (see below).

The C72(b)iii 'concept' sketch, in a manner analogous to the C115 *Requiem Canticles* template, consists of a single aggregate (with two implied voice-parts) unfolded by violas and cellos, with an extracted series pasted on a separate fragment above. A rastration break following the ninth pitch indicates the final three pitches to be subsequent additions, made in order to expand the original notation into a complete twelve-note statement, although the hexachordally combinatorial nature of the series suggests that the composer was working towards a predetermined ideal[14]. Craft's description of the circumstances surrounding the compositional process of this 'concept' sketch is informative:

> During the morning of 13 December 1966, Stravinsky . . . expressed the "need to put an idea in order". About thirty-five minutes later he had completed a sketch, which, however, did not extend from that "idea". . . . At table, to show what he meant by "putting in order," the composer placed three wine glasses in parade formation, then interchanged the first and third, saying, "It is all a question of knowing that the notes must be this way and no other."
>
> Stravinsky has identified the sketch as "part of a string passage in the middle section of a symphonic piece," and the presence of instrumental indications (violas and cellos) in this initial stage argues that the springs of his invention are concrete. Nor does the scissoring out of a twelve-note series – which is the beginning of a formulating, not of an abstracting process – contradict the claim. The

[14] This compositional hiatus is confirmed by the Newman sequence.

> composer's next step was to chart his fields of choice by drawing derivative serial forms. These he attached to the side of his piano writing-board, like dressmakers' patterns, pinning the sketch itself to the center, whence it became the incremental center of the composition. From this point, too, he worked exclusively at the piano, not having touched the instrument that morning but composing, as he said, in his inner ear[15].

This description would seem to confirm C72(b)iii as representing the earliest notation for the work (despite the intriguing suggestion that there was an underlying antecedent idea), with the elaboration of the row charts ensuing directly afterwards. The instrumental detail and intended location ascribed to the passage makes it clear that the composer would have in some way incorporated the 'concept' directly into the piece had it been completed. Stravinsky's demonstration of how he permuted note order probably alludes to his construction of combinatorial hexachords as well as to decisions about how he would internally order the row extrapolated from the 'concept' sketch aggregate[16]. Unlike the C115 *Requiem Canticles* 'concept', which can be generated from numerous differently ordered rows, the partitioning of the C72(b)iii 'concept' admits only very limited interpretation, concerning the positioning of the Ab/D dyad, and possibly the subsequent Eb.

The ensuing sketch, almost certainly C72(b)i[17], charts 'fields of choice' for the R and RI forms of the series and includes, lower down the page, an encircled draft for the end of the [A] music. The sketchpage undoubtedly preceded the other row charts: it is hastily untidy

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[15] *Chronicle*, 303.
[16] Note also the invariant groupings occurring at order positions 3-5 and 9,10 of R and RI, and 3,4 and 8-10 of P.
[17] See facsimile in *SPD*, upper half of 484.

in appearance, and frequently inaccurate in detail, showing that its purpose was principally investigative.

The R and RI forms appear several times on the page. The earliest drafts, aligning both forms, occur towards the top right-hand side of the page. Stravinsky would have entered the R form first (obtained from the 'concept' series but with a different contour) [18], subsequently deriving the RI from this. The middle right staves (located immediately over the numbered hexachords) are entered in ink, with another draft of both forms entered in pencil directly above. The contour of the RI form in this latter draft (top right) generates an almost literal inversion of R, with only the final three order positions octave transferred *en bloc* (i.e. with intervallic quantities preserved). This RI contour and its parent R form were then transferred across, in a much more confident hand (using black and red ink), to the left hand side of the sheet[19]. As in earlier works, Stravinsky clearly regarded these contours as potential templates: the same R and RIα contours reappear on the upper right-hand side and lower left-hand paste of C72(a)iii, and although R is hardly employed in the surviving sketch material (making a brief appearance on C72(b)ix), the RI contour clearly forms a template basis for fragment 2 of C72(b)xii[20]. In fact, the extant notations for the work are almost entirely centred on the serial group of RI, [RI]r and IR. This is significant, in that the first two are identical in terms of pitch sequence, whilst the third is transpositionally

[18] An influence from the C72(b)iii 'concept' remains evident, however, at the extremities of the R contour (cf. the extracted P form, entered as noteheads, on C72(b)iii). The Cyrillic script beside the R form at the top right-hand side of the page (which transiterates as 'garnillya') means 'forge' or 'crucible', as in the 'centre' or 'container' of something. This could simply indicate the row's primary status in relation to the subsequently derived rotations, but the word's implication of an almost primordial source may indicate an intention to deploy the contour as a template model (see below, main text).

[19] Closely associated contours form the source of the rotation charts on C72(b)iv.

[20] The contour and rhythmic structure at the conclusion of this sketch are, however, related to C72(b)xii fragment 1, pasted directly above it.

equivalent to RI, suggesting that the composer may have been planning to deploy contour templates in the manner of those observed earlier in the sketches for *Introitus* and *The Owl and the Pussycat* (see Chapter 11).

The reappearance of the C72(b)i R contour template on C72(a)iii (twice), now with additional rhythmic details (lower left), suggests that the composer had intended to continue, following the completion of [A] and [B], by deploying mainly R-based material. The second paste on C72(a)iii (lower right) deploys Rβ rotations 3 and 6, using a wide *tessitura* and overlapping registral arrangement (but as yet indicating no rhythmic dimension) that demonstrates an incipient musical configuration in gestation[21].

Another approach to contour manipulation is found on C72(b)vii, which lists all six primary row forms employed in the sketches. Beginning with the contour of P, transferred directly from the 'concept' sketch, I, R and RI are all derived as literal transformations. (This suggests that in extracting P from the 'concept' sketch, Stravinsky was already generating a potential contour template, as the pitches of the series could have been more conveniently notated within a narrower registral band on 72(b)iii). The serial associates of RI ([RI]r and IR, at the bottom of the page) are, however, independent of this scheme and once again largely replicate the contour of the C72(b)i RI model – only the first two order positions of [RI]r and order positions 9 and 11 of IR are assigned different registers.

[21] The Rβ6 rotation here is largely incorrect: Stravinsky subsequently noticed this error and rectified the row chart (C72(b)iv), by pasting a strip, bearing the corrected version, over the original. How, or whether, he intended to adjust the associated sketch is not clear.

Serial Solecisms in [A]: Problems in the Realisation of the Template Model

The remaining charts on C72(b)i explore further hexachordal permutations related to the RI form. The six hexachords aligned below each other in the centre of the page are not rotations, but present hexachordal 'frames' extracted from the row. Hexachord 1, aligned directly to the right of the complete RI series, thus replicates its α hexachord, with successive 'frames' progressing one order position to the right, through both hexachords of the series (e.g. order positions 2-7, 3-8 etc.). It is not clear how the composer proposed to deploy this material in the piece, or indeed whether he intended to do so, although the superimposed arrangement of the hexachords perhaps suggests an intention to utilise associated verticals.

This contrasts with the rotation-transpositions of the RIα hexachord located between the early draft of R/RI and the encircled sketch for [A] on the lower right-hand side of the page. Here the rotations are not aligned to produce verticals, in the composer's customary manner, but appear to have been hastily and approximately worked out in order to appraise the potential of the series. Precisely how Stravinsky devised these permutations without having first notated 'simple' (i.e. untransposed) rotations is unclear, but the result has a curiously oblique relationship to the accurate version of the rotations in the row chart 72(b)iv (see Example 13:1). The relationships are as follows: 1 (on 72(b)i chart) = RIα1; 2 = [RIα2]r; 3 = [RIα3]r; 4 = RIα4, with incorrect first pitch (A instead of F) and wrong accidentals (flats instead of naturals, though placed against correct pitches) for order positions 4 and 5; 5 = [RIα5]r with order positions 4 and 5 exchanged; 6 = [RIα6] with

one reordering (viz. RIα6: 65[1]432). From this it can be seen that the first three rotations are accurate, although 2 and 3 appear in retrograde, but that pitch and order errors arise in the remainder. Some of these are apparent slips of the pen, whilst others seem to result from the composer's shortcut method of formulating the rotations[22]. Nevertheless, it is clear from both its location and content that the encircled draft for the end of [A] was formulated directly from these hastily-produced rotations, and only later did the composer draw up the accurate charts on C72(b)iv. As a result, a comparison of this passage as it appears on the present sketch with its later drafts on C72(a) iii and i reveals considerable anxiety in reconciling the pitch content of the earlier and later versions. This tension evidently resulted from the wish to remain faithful to elements of the C72(b)i template prototype whilst being serially accountable for all pitch configurations.

The C72(b)i template appears (though the legibility here is poor) to use three rotations, although only the bass register material is identified by the composer as deriving from rotation 5 (the fragmented stems and beaming here confirming its early status). Inexplicably however, only the first two order positions of this rotation appear to match either the accompanying or subsequently corrected charts. The treble register music however is more clearly evolved by combining rotations 6 and 4 of the accompanying charts in the given sequence (i.e. respectively forward and retrograde with respect to the final chart C72(b)iv) – see Example 13:2. The ordering error of rotation 6 has been corrected, though the serially authorized F (written third order position) is interpreted as a G (q.v. its ambiguous appearance in the facsimile). Rotation 4 is presented as in the

[22] As has been seen, the composer occasionally made mistakes even whilst using his conventional, more extended method of elaborating the rotations charts.

adjacent chart, with incorrect first order position (A) and erroneous accidentals attached to order positions 4 and 5 clearly identifying its source.

This template as a whole appears to owe something to the gestures of the C72(b)iii 'concept'. The opening contours of both are alike (though neither the pitches nor intervals are identical)[23], with contrapuntal activity occurring towards the centre of both sketches, concluding with an unaccompanied five-note angular motif in equal durations[24].

The passage's interim appearance on the top of C72(a)iii, evidently made following the elaboration of the accurate fair-copy charts, acts as the principal working draft for [A], refining details of the C72(b)i draft, as well as attempting to vindicate its pitch readings within the overall serial scheme[25]. The C72(b)i template is incorporated into the upper draft within a passage deploying all six RIα rotations (now identified); 1, 2 and 6 assigned to the treble register with the remaining two rotations, 3 and 5, occurring in the bass (see Example 13:3). The first evidence of anxiety is revealed by the composer's query concerning the F which begins the template-derived passage, with order-position 6 of RI[α2]r –the correct serial reading – encircled in red pencil. This suggests that the template reading (G) may have been preferable, but as there was no legitimate means of correcting it within the new serial framework, the composer transferred the adjusted reading to the *Reinschrift* transparency, C72(a)i. RI[α5]r has also been corrected, though

[23] On C72(b)i, G/Eb, as the composer has unequivocally clarified by the added verbal indication 'sol/mib'.
[24] The contours of this latter motif are associated, the first two notes having the same vector in both sketches, and the final trichords being RI related.
[25] Earlier layers of the draft are visible as incomplete erasures. The figures occurring towards the end of the draft appear to be piano fingerings and not serial indications.

the contour, rhythmic configuration and attack characteristics of the original lower parts have been largely retained[26].

The junction between RI: [α6]r and α4 necessitated some rearrangement occasioned by the application of the corrected charts. The F, representing the shared hexachordal order position, which was inadvertently excluded from both rotations on C72(b)i, and consequently the ensuing template draft of [A], was clearly superfluous to Stravinsky's later rendering of the template configuration, the rhythmic scheme of which is precisely duplicated on C72(a)iii. An erased layer indicates that he first attempted to relegate the pitch by having it struck, in the treble register, together with the A of [α6]r (order position 2). This was modified when he realised that it could simply be elided with the end of the bass register [α5]r hexachord[27].

There still remained the very end of the draft, where the template reading of Cb/Bb is a straightforward misreading which cannot be reconciled with the accurate rotation charts. Stravinsky seems to have recognised this problem by the time he came to draft the passage on C72(a)iii, where vacillations as to a solution are apparent. No accidental is associated with the B in the upper draft (though the immediately-preceding Cb implies a Bb) or with the C on the lower, where the flat originally placed before the B also appears to have been altered, somewhat unconvincingly, to a natural. On this occasion the composer

[26] A further, apparently deliberate, error has been introduced here, and there is a repetition of a row segment, i.e. 1234[error]5[= treble G], 45, 6. Order position 4, which according to the chart should read B, is given on its first appearance here, and on the C72(a)i *Reinschrift*, as a bass G, accounting for the close duplication, evidently influenced by the similar configuration in the template at this point. On repetition the pitch is serially correct (see Example 14:3).

[27] The later reading A (creating an octave doubling) on C72(a)i, appears to be a transcription error.

significantly chose to preserve the template reading on the C72(a)i *Reinschrift*, despite its serial irrationality.

These alterations, queries and efforts at reconciling serially authorised readings with the encircled C72(b)i template model suggest that Stravinsky was at pains to generate configurations that approached, as near as possible, his original conception, which one presumes had been aurally sanctioned, unlike the original 'concept' on C72(b)iii from which it seems ultimately to derive (see the above extract from *Chronicle*).

Continuity and Succession in Block [B]

Of particular interest from the point of view of continuity is the evolution of the [B] music, constituted of three individual segments, preliminary sketches for which are found on C72(b) vi, viii, xii and xiii[28]. The central segment [B2] was first sketched on C72(b)viii, which defines its source in a chain of IRβ verticals pursuing a retrograde presentation from 6 through the 'unison' vertical 1, Cb (cf. C72(b)xi). The indication for low pizzicato indicates that the piece was at this stage still conceived in instrumental terms, with the lower draft on the same page clarifying the end of the passage. A more developed version of this passage, rhythmically approaching the final drafts on C72(a)i and iii, whilst preserving registral aspects of C72(b)viii, appears on fragment 3 of 72(b)vi. This version,

[28] Facsimiles of C72(b) vi and xiii are found in *SPD*, lower half of 484 and upper half of 485 respectively.

and its later appearance on C72(b)xiii, show evident affinities with the contour and rhythmic configuration of the C72(b)iii 'concept'. Its continuation (the conclusion of the block, [B3]) is taped directly beneath (C72(b)vi, fragment 4), and derives from the concomitant α verticals of the same series in an analogous sequence (verticals 4 and 5 are exchanged). Both sketches, which share aurally apparent gestures such as the succession of three block chords preceding a syncopated octave on the harp, contain quite detailed indications of timbre for an instrumental group consisting of flutes, horns, harp and strings (the latter divided into solo and tutti groups). The facsimile in *Stravinsky in Pictures and Documents* shows that the sketch was originally intended to continue with inversion-based material (red box on lower right), which indicates that the upper fragment of sketchleaf C72(b)xii must have been attached here at some point. This sketch for [B1] unfolds an analogous chain of Iβ verticals, employing gestures similar to the [B2] music (cf. the opening configurations and low pizzicato indication both here and on C72(b)viii)[29]. This implied sequence of events [B2, B3, B1] is confirmed by the concatenation and amplification of this music on C72(b)xiii, where the chain of IR α and β verticals is preceded by an ostinato which extends the treble component of the IRβ6 vertical backwards in time, and is followed, on a fresh system, by the Iβ chain of [B1]. At some point between this sketch and the transfer of the [B] music to C72(a)iii, Stravinsky decided on a reordering of the constituent blocks, as a result of which he deleted the IRβ6 vertical that opens the original version of the passage. Thus Wuorinen's use in *Reliquary* of this superseded early variant of the [B] music, in addition to the ultimate version on C72(a) i

[29] The opening gestures of [B1] (C72(b)xii) and [B2] (C72(b)vi, fragment 3, C72(b)viii) are clearly derived from the contour and rhythmic configuration of the C72(b)iii 'concept'.

and iii, appears to represent a misunderstanding of the nature of these sketches, which are interim stages on the way to achieving the final draft on C72(a)i, rather then valid alternative readings. This flexibility, observed earlier in the sketches for the central interlude movement of *Requiem Canticles*, indicates that the continuity of the material could remain open until a surprisingly late stage in the composition of certain passages. Similarly, C72(a)i itself represents music of which the overall context, mutual relationship, or position with respect to the string music of the C72(b)iii 'concept' seemingly remained uncertain.

The two remaining sketches of any elaboration, C72(b) ii and ix, are both independent of [A] and [B] and clearly must postdate the completion of these passages. The latter[30] unfolds the complete P form in the timpani, using a steady quaver pulsation against rhythmically independent lines assigned to three trombones (permuting rhythmic groups of three, four and five), juxtaposing all six primary row forms listed on C72(b)vii. These lines show occasional evidence of having been influenced by the contour models provided in this chart[31].

The intended continuity of C72(b)ii, a hastier and less developed sketch than ix, entered on a loose yellow card, is not entirely clear. The three rhythmicised pitches identified as 'O5'[32] are heavily bracketed off in green felt-tip, and while they clearly relate to the intervallic and rhythmic gestures of C72(b)vi fragment 2 (and to some extent also fragment

[30] Facsimile in *SPD*, lower half of 485.
[31] Note that the opening intervallic structure of the two P forms here is identical with C72(b)vii, for instance.
[32] Inexplicably, these pitches do not, in fact, occur as adjacencies in P rotation 5.

1), they do not appear to form part of the main sequence of the sketch[33]. Beginning on the second stave, left-hand side, this is constructed from a chain of IRα rotations expressed entirely in regular semiquaver patterning. The chain commences with IRα1 (bracketed underneath – cf. C72(b)xi) and then elides with a partial statement of α2 (omitting the initial A and final Bb and introducing considerable internal repetition). A statement of α6 (again including some internal repetition) commences with the fifth semiquaver group, and continues onto the upper stave, as indicated by the composer's guiding arrow[34]. This layout suggests that the lower hexachordal patterns (deriving from IR: α3, [α6]r and α5), arranged directly beneath each other on the left hand side, had already been added to the sketch, and also that the composer was still uncertain of their order of deployment (the random vertical alignment here suggests that the patterns were not intended as constituents of a contrapuntal texture). The bracketed-off α3 hexachord relates to the pitch sequence towards the end of the continuity draft directly above, and the Ab/B/D configuration in this hexachord is reproduced by the incomplete α5 further down the page[35]. Similarly, the register of the Cb/Bb dyad is retained in both appearances of α6. Had the composer completed the sketch, it is not unreasonable to assume that these preliminary experiments may have been erased to make way for a fresh layer, in which they would have been contextualised into a continuous draft, thereby generating a palimpsest analogous to those frequently noted within earlier collections for completed works. The composer began

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[33] The upper fragment of C72(b)vi is directly related rhythmically to C72(b)xii, fragment 2, where the identical durational framework is superimposed on the R contour from C72(a)iii/C72(b)i. Note that fragments 1 and 2 of C72(b)vi both employ the identical number of pitch repetitions/oscillations (in both cases using adjacent pitches a tone apart).

[34] Many of the contours in this chain remain close to those of their obvious sources in the IR row chart, C72(b)xi. The contour of the opening hexachord is also replicated on C72(b)ix (in trombone II).

[35] The α3 and α5 rotations share the same D/Ab/Bb group (with identical contour and registral deployment).

refining the α-chain on the lower right of the sketch, re-assigning registers whilst retaining the earlier pattern of internal repetitions, but the sketch trails off into noteheads at the beginning of the second link, suggesting that the hexachordal continuity problems remained to be resolved.

Summary

These sketches, dating mostly from the final weeks of 1966, were apparently intended for the last section of a projected work provisionally entitled *Etudes, Inventions and a Sonata*. Instrumental indications in the early sketches suggest an orchestral piece, although by the time the composer ceased work on it, it had seemingly evolved into a piano piece. The extant material includes two almost identical continuity drafts (C72(a) i and iii), each of which outlines two independent short passages, distinguished here as [A] and [B], for which corresponding preliminary notations exist. In addition, there are a small number of sketches for additional material not incorporated into [A] and [B], which therefore probably postdate the continuity drafts, and which reveal mutual interactions and similarities of gesture.

Ernest Newman photographed the composer on 13 December 1966, ostensibly in the process of notating the earliest 'concept' sketch for the work (C72(b)iii). Like the *Requiem Canticles* 'concept' in the C115 pocket sketchbook, this involves a musically configured

aggregate with an extracted series, which ultimately became the work's prime form (although the 'concept' itself was never incorporated into any of the extant sketches or drafts). This series initially became the basis for expansion on C72(b)i, where its R and RI transformations are subjected to exploratory rotation-transposition (using an abridged methodology), albeit with numerous inaccuracies of realisation. Stravinsky drafted an early outline for the end of [A] beneath these provisional charts, basing the pitch configurations on the faulty charts, and referencing additional configurations from the 'concept' template.

When the composer elaborated his principal rotations charts (via C72(b)vii), he noticed and corrected the errors, but the subsequent drafts of the passage reveal his ongoing difficulties in reconciling the (obviously desirable) material of the original sketch with a legitimate serial substructure.

Stravinsky sketched the music for [B] in three independent segments, each of which is elaborated from a different chain of serial verticals, derived from IR α/β and Iβ. The sketches for these blocks reveal mutual gestural associations, ultimately based on the 'concept' template, and were eventually drawn together in a sequence differing somewhat from the final score (72(b)xiii – the first block [B1] being placed at the end). Stravinsky eventually reordered the blocks in the 72(a) drafts, albeit at the expense of serial propriety, a procedure that recalls his flexibility with compositional blocks in the *Requiem Canticles* interlude.

Afterword

Between the introduction of the rotation-transposition matrix in *Movements* and work on his unfinished 'sonata' in late 1966, Stravinsky's sketch materials consistently reveal the unmistakable presence of background template-based techniques as a crucial component of his compositional *modus operandi*. These techniques are ostensibly not organic products of the ongoing compositional process, but instead represent synthetic background mechanisms, furnishing sets of conceptual musical parameters, which, as Stravinsky himself observed[1], stand in a somewhat oblique relationship to 'real-time' compositional material and continuity. This aspect of the templates is frequently implicit in their visual appearance, occasional annotations (e.g. dates etc.), physical isolation, and intermittent emergence throughout the sketches.

The C115 pocket sketchbook, a crucially important source that has previously gone unnoticed in the literature, exemplifies the essential nature of Stravinsky's late template morphology. Its constituent notations (though small in number), made over an extended period and probably without recourse to the piano, are condensed and rudimentary, largely conceptual in character, and remain independent of the subsequent elaborations in the main sketch collections. Most of these notations also bear fundamental resemblances to other 'concept' templates such as those for *A Sermon, a Narrative and a Prayer* (SNP 11) and the unfinished 1966 'sonata' (C72(b)iii).

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[1] *Conversations*, 15.

One characteristic feature that emerges strongly from the foregoing survey of the late sketch collections is the great range and diversity of template practices employed by the composer. Although certain template archetypes and procedural consistencies are observable, and to a large extent codifiable, the single most striking feature of the materials is the avoidance of a rigidly uniform methodology within and between sketch collections, in favour of the pursuit of divergent template archetypes and transformational procedures, ranging from the synthetic 'series II' and $\chi\delta$II templates of *Movements* I, through the direct cloning of entire passages in the *Movements* and *Requiem Canticles* interludes, to the invariant diagonal and vertical template practices of *Abraham and Isaac* and the use of contour templates in *Movements* IV, *Introitus* and *The Owl and the Pussycat*. This variety does not result from an indiscriminate approach to compositional procedure, but is clearly a conscious strategy, deeply interrelated with Stravinsky's individual attitude to composition in general and to serial technique in particular.

Indeed, the heterogeneous means by which templates were propagated and transformed in the sketches suggest that such template-based procedures were closely affiliated to Stravinsky's proclivity for composing at the piano. This instrument therefore not only provided a convenient means of aurally evaluating his compositional material as he proceeded, but also offered a medium through which conceptual or 'pre-compositional' matter, furnished by templates, could be processed to yield substantive compositional material[2].

[2] Cf. *Autobiography*, 5, where Stravinsky's use of the piano as a method of 'compos[ing] in direct contact with the physical medium of sound' is discussed in the context of his early aptitude for improvising at the instrument.

The rarity of unused or abandoned sketches within Stravinsky's sketch collections from various periods of his career has often been regarded, undoubtedly correctly, as a result of his reliance on the piano as an initial means of filtering compositional choices. However, the use of conceptual templates as repositories for key structural ideas and as referential guides for various compositional parameters must also account to a large extent for what superficially appear to be dramatic advances between successive sketches, or the abrupt appearance of elaborate and/or definitive material (e.g. *Danse de la Terre*). It is therefore ironic that templates have been previously mistaken for unused or abandoned notations, the necessity of which they appear to have largely abnegated by providing elemental models for keyboard experimentation.

The unmistakable reliance on idiosyncratic template-based processes is not exclusive to the serial music, and its appearance in sketch collections dating from at least as early as 1910-13[3] suggests that such procedures were an integral and ongoing component of Stravinsky's compositional process from very early in his career, and not simply an incidental or localised feature of his sketches. This fact raises many questions concerning the nature of the composer's putative 'stylistic periods' and his *modus operandi* in a broader sense. For example, it demands further investigation of the composer's still shadowy musical tutelage in early twentieth-century Russia. How did these techniques originate and do they have any precedent? Were they original stratagems of the composer's own invention or did they evolve, even partly, though tuition or by example? What is the precise connection between template processes and the use of appropriated popular and folk music in Stravinsky's

[3] See the discussion of the *Rite of Spring* sketch materials in the introduction to the present dissertation.

'Russian' period, a source whose fundamental importance to the composer's earlier music has been persuasively demonstrated by Richard Taruskin?[4]

The conspicuous interaction between template morphology and serial *modus operandi* in the late works also casts new light on the 'period of adjustment' prior to the 'turn-of-the-corner' represented by *Movements*[5]. The principal technical challenge in the composer's tentative adoption of serial techniques in the early- and mid-1950's can now be viewed as concerned primarily with the search for a symbiosis between pre-established template-based techniques and the discovery of effective methods of devising and manipulating serial invariants as pitch 'filters'.

An overview of Stravinsky's career as a serialist in the 1950s and '60s reveals a distinct predilection for expanding available 'fields of choice' rather than limiting them, as in the Webernian and Schoenbergian examples that acted as his initial role models. His earliest works to show evidence of serial treatment (Cantata, Septet, *Three Songs from William Shakespeare* and *In Memoriam Dylan Thomas*) use short, easily malleable, note-rows and are considerably more content- than order-based in their approach to pitch organisation. *Agon* and *Canticum Sacrum* are both emphatically eclectic in their attitude to technical resources. Tucker has demonstrated that the diverse mix of non-serial, proto-serial and dodecaphonic methodologies employed in both works, usually regarded as an involuntary consequence of Stravinsky's serial 'apprenticeship', in fact represents a conscious decision not to limit his resources. For instance, the earliest (December 1953) sketches for *Agon*

[4] Taruskin, *Stravinsky and the Russian Traditions*, passim.
[5] Both quotes from *Themes and Conclusions*, 33.

include notations for both serial and non-serial parts of the ballet (viz. bb.81-95 together with the opening fanfare, eventually reworked as the *Pas de Quatre*)[6]. Significantly, *Threni*, Stravinsky's first consistently twelve-note work based on transformations of a single row, introduces rotational and other permutation schemes to extend the scope offered by the serial charts.

It would thus appear that the subsequent advance which the composer later termed the 'turn-of-the-corner' – the actual point of no return – lay in his discovery of an effective means of extending available serial choices through rotation techniques evolved from Krenek's example. This extension, through the evolution of a complex and highly idiomatic serial technique, facilitated the creation of a more flexible pitch matrix as a suitable network of choices with which to accommodate continuity of technical *modus operandi* in the form of template methodologies. The range of choices was maximised by the various strategies employed in interpreting the data offered by the transposition-rotation matrices[7]. Such a range of choice was evidently a prerequisite for the unimpeded propagation of templates within the serial fabric – 'I can create my choice in serial composition just as I can in any tonal contrapuntal form . . . . and I compose *in the same way that I always have*.'[8]

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[6] Tucker, 1992, especially 50-56 and the whole of her Chapter 3 (58-82).

[7] The use of two distinct series in *Requiem Canticles* is clearly another unorthodox procedure intended to enlarge the palette of available pitch sequences. Spies may be correct in suggesting that Stravinsky became aware of 'deficiencies' (i.e. degeneracies) in series II (the first to have been elaborated, as was seen in Chapter 12) which would have resulted in considerable redundancy, effectively limiting his choice of pitch material (Spies, 'Some Notes on Stravinsky's Requiem Settings', 234-7). Certainly, as Spies speculates, Stravinsky introduced the second series (series I) only after some preliminary sketching had taken place (although he suggests that this may have related to the Prelude, in fact a much later compositional stage).

[8] *Conversations*, 24-5 (emphasis added).

The technical aspects of template morphology within the sketches for the serial works examined in this dissertation are clearly refined and complex. Detailed investigation of such involved technical processes is possible largely because the nature of the ongoing serial techniques exposes the methodology by which templates (particularly those involving pitch/intervallic configurations) were transformed and modified. However, it seems probable that parallel, if less transparent, disciplines (for instance concerning the treatment of octatonic pitch-configurations)[9] may govern the practice of template morphology within the earlier, pre-serial, sketch collections, thus offering a possible fresh approach to the future study of this repertoire.

[9] See Van den Toorn, *The Music of Igor Stravinsky* (passim) and 'Octatonic Pitch-Structure in Stravinsky', for a discussion of some of the principal issues involved here.

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