



## City Research Online

### City, University of London Institutional Repository

---

**Citation:** Pick, Edward (2013). Tonality in Schoenberg's music with particular reference to the Piano Concerto. (Unpublished Doctoral thesis, City University London)

This is the unspecified version of the paper.

This version of the publication may differ from the final published version.

---

**Permanent repository link:** <https://openaccess.city.ac.uk/id/eprint/3017/>

**Link to published version:**

**Copyright:** City Research Online aims to make research outputs of City, University of London available to a wider audience. Copyright and Moral Rights remain with the author(s) and/or copyright holders. URLs from City Research Online may be freely distributed and linked to.

**Reuse:** Copies of full items can be used for personal research or study, educational, or not-for-profit purposes without prior permission or charge. Provided that the authors, title and full bibliographic details are credited, a hyperlink and/or URL is given for the original metadata page and the content is not changed in any way.

Tonality in Schoenberg's Music with particular reference to the  
Piano Concerto

by

Edward Pick

A thesis submitted in partial fulfilment of the requirements for the degree of  
Doctor of Musical Arts

City University London, Department of Creative Practice & Enterprise,

Centre for Music Studies

and the Guildhall School of Music & Drama, London, April, 2013

## Table of Contents

List of Musical Examples	3
List of Figures	7
List of Abbreviations	8
Acknowledgements	9
Abstract	11
Introduction	12
Chapter 1. Defining Tonality and Atonality in Schoenberg's Music	20
Chapter 2. The Search for Tonal Elements in Schoenberg's Oeuvre	36
Chapter 3. An Overview of Published Analyses of Schoenberg's Piano Concerto	62
Chapter 4. A New Appraisal of Schoenberg's Piano Concerto, Part I: Melodic Elements	81
Chapter 5. A New Appraisal of Schoenberg's Piano Concerto, Part II: Serial and Harmonic Elements	104
Conclusion	125
Bibliography	133

## List of Musical Examples

1	Smith Brindle's perception of tension	31
2	Smith Brindle's classification of consonance and dissonance	33
3	Schoenberg, Op. 11, No. 1, bb. 1-3	37
4	Schoenberg, Op. 11, No. 2, b. 16	38
5	Schoenberg, Op. 11, No. 2, b. 40	39
6	Schoenberg, Op. 11, No. 2, b. 66	39
7a	Schoenberg, Op. 19, No. 2, b. 1	41
7b	Schoenberg, Op. 19, No. 2, bb. 7-9	41
8	Schoenberg, Op. 21, No. 21, bb. 1-3	42
9	Schoenberg, Op. 21, No. 20, bb. 28-30	43
10	Schoenberg, Op. 21, No. 21, bb. 24-30	44
11	Schoenberg, Op. 16, No. 3, opening chord	44
12	Schoenberg, Op. 19, No. 3, bb. 3-4	45
13	Schoenberg, Op. 11, No. 2, b. 51	47
14	Schoenberg, Op. 16, No. 1, bb. 33-9	48
15	Schoenberg, Op. 23, No. 1, bb. 1-7	48
16	Schoenberg, Op. 23, No. 5, bb. 1-4	49
17	Schoenberg, Op. 23, No. 5, bb. 73-9	50
18	Schoenberg, Op. 23, No. 5, bb. 99-103	51
19	Schoenberg, Op. 23, No. 5, bb. 109-13	51
20	Schoenberg, Op. 23, No. 5, bb. 95-9	51
21	Schoenberg, Op. 25, <i>Menuett</i> , bb. 31-3	52
22	Schoenberg, Op. 25, row-forms	53
23	Schoenberg, Op. 25, <i>Musette</i> , bb. 24-5	54
24a	Schoenberg, Op. 33b, b. 1	54
24b	Schoenberg, Op. 33b, bb. 65-8	54
25	Schoenberg, Op. 25, <i>Menuett</i> , b. 1	55
26	Schoenberg, Op. 25, <i>Gavotte</i> , bb. 1-2	56
27	Schoenberg, Op. 25, <i>Präludium</i> , bb. 15-16	56
28	Schoenberg, Op. 25, <i>Präludium</i> , bb. 17-19	57
29a	Schoenberg, Op. 41, b. 219, piano	58
29b	Schoenberg, Op. 41, b. 255, piano	58
30a	Schoenberg, Op. 41, bb. 225-8, strings	59
30b	Schoenberg, Op. 41, b. 234, strings	59
31	Schoenberg, Op. 41, bb. 265-7	59
32	Schoenberg, Op. 41, bb. 263-4, piano	60
33a	Schoenberg, Op. 42, row, basic series (P-3)	63
33b	Schoenberg, Op. 42, row, retrograde inversion (RI-8)	63
33c	Schoenberg, Op. 42, row, retrograde (R-3)	63
33d	Schoenberg, Op. 42, row, inversion (I-8)	63
34	Schoenberg, Op. 42, bb. 296-7, analysis by Alegant	64

35	Schoenberg, Op. 42, bb. 329-30, piano	66
36	Schoenberg, Op. 42, bb. 1-6, analysis by Brendel	67
37a	Schoenberg, Op. 42, b. 86, piano, 'Hatred' motif	71
37b	Schoenberg, Op. 42, b. 176, double basses, 'Hatred' motif	71
38	Schoenberg, Op. 42, bb. 1-39, piano, right hand, analysis by Newlin	73
39a	Schoenberg, Op. 42, b. 7, interpretation 1 by Edward Pick	74
39b	Schoenberg, Op. 42, b. 7, interpretation 2 by Edward Pick	74
40	Schoenberg, Op. 42, bb. 491-2, piano, analysis by Newlin	75
41	Schoenberg, Op. 42, bb. 1-9, two-piano reduction	84
42	Beethoven, Piano Concerto No. 4, Op. 58, I, bb. 1-13, two-piano reduction	85
43	Schoenberg, Op. 42, bb. 1-39, piano, right hand	86
44	Schoenberg, Op. 42, bb. 443-67, melody	87
45a	Beethoven, 33 Variations on a Waltz by Diabelli, Op. 120, Theme, bb. 26-32	88
45b	Beethoven, 33 Variations on a Waltz by Diabelli, Op. 120, Var. I, bb. 1-5	88
46	J. S. Bach, Passacaglia and Fugue in C minor, BWV 582, bb. 1-8 (theme)	89
47a	'Joy to the World', opening melody	91
47b	Schoenberg, Op. 42, bb. 1-3, piano, right hand	91
48	Schoenberg, Op. 42, bb. 215-19, piano	92
49	Schoenberg, Op. 42, b. 326, piano	93
50	Schoenberg, Op. 42, b. 376, two-piano reduction	93
51a	Schoenberg, Op. 42, bb. 35-7, piano, right hand	94
51b	Schoenberg, Op. 42, b. 175, trombone	94
51c	Schoenberg, Op. 42, bb. 262-3, violins	94
52a	Schoenberg, Op. 42, bb. 1-2, piano, right hand	95
52b	Schoenberg, Op. 42, b. 286, piano, right hand (uppermost pitches)	95
53a	Beethoven, Piano Sonata in C, Op. 2, No. 3, I, b. 1	96
53b	Beethoven, Piano Sonata in C, Op. 2, No. 3, II, b. 1	96
53c	Beethoven, Piano Sonata in C, Op. 2, No. 3, III, b. 1	96
53d	Beethoven, Piano Sonata in C, Op. 2, No. 3, IV, b. 1	96
54	Schoenberg, Op. 42, bb. 133-41, Violin 1 and oboe	96

55	Schoenberg, Op. 42, bb. 465-7, piano	97
56a	Schoenberg, Op. 42, bb. 329-30, piano	98
56b	Schoenberg, Op. 42, b. 490, short score	98
57a	Schoenberg, Op. 42, b. 1, piano, right hand	99
57b	Schoenberg, Op. 42, b. 329, end, piano, right hand	99
57c	Schoenberg, Op. 42, b. 468, Clarinet 1 & Bassoon 1	99
57d	Schoenberg, Op. 42, b. 491, piano	99
58	Schoenberg, Op. 42, bb. 5-6	100
59	Schoenberg, Op. 33a, bb. 17-18	100
60	Schoenberg, Op. 42, bb. 468-73, full score	101
61	Schoenberg, Op. 42, bb. 241-6, full score	102
62	Schoenberg, Op. 42, rows, combinatoriality	105
63	Schoenberg, Op. 42, P-3, perfect fourths and major/minor thirds	106
64	Schoenberg, Op. 42, P-3, local key centres	106
65	Berg, Violin Concerto, row	107
66	Webern, Op. 17, No. 3, row	108
67	Meyer, cadence (example of predictability)	109
68	Schoenberg, Op. 42, bb. 37-8, short score	110
69	Schoenberg, Op. 42, b. 231, short score	110
70	Schoenberg, Op. 42, bb. 264-5, short score	111
71	Schoenberg, Op. 42, bb. 308-9, brass	111
72	Schoenberg, Op. 42, bb. 463-7, short score	112
73	Schoenberg, Op. 42, b. 489, beat 2, short score	113
74	Schoenberg, Op. 42, b. 492, beat 2, short score	113
75	Schoenberg, Op. 42, bb. 269-70, short score	114
76	Schoenberg, Op. 42, bb. 262-3, strings	115
77	Schoenberg, Op. 42, bb. 1-7, piano, jazz chord- designations	116
78a	Schoenberg, Op. 42, b. 286, piano	117
78b	Schoenberg, Op. 42, b. 295, piano	117
79a	Schoenberg, Op. 42, b. 286, second crotchet, piano	118
79b	Schoenberg, Op. 42, b. 286, second crotchet, piano (enharmonic equivalent)	118
80	Schoenberg, Op. 42, bb. 292-4, piano	119
81	Schoenberg, Op. 42, b. 336, two-piano reduction	120
82	Schoenberg, Op. 42, bb. 107-9, short score	120
83	Schoenberg, Op. 42, b. 152, beat 2, short score	120
84	Schoenberg, Op. 42, bb. 265-6, short score	121
85	Schoenberg, Op. 42, bb. 249-52, full score	122
86	Schoenberg, Op. 42, bb. 419-20, short score	122
87	Schoenberg, Op. 42, bb. 443-50, short score	124
88	Schoenberg, Op. 23, No. 4, bb. 1-2	130
89	Schoenberg, Op. 23, No. 4, bb. 18-19	131



## List of Figures

1	Lendvai, Axis System	68
2	Stephan, 'Formal layout'	76
2 (cont.)	Stephan, 'Formal layout'	77
3	A comparison of some analyses of Schoenberg's Piano Concerto	80

## List of Abbreviations

*GMO – Grove Music Online*

*ITO – In Theory Only*

*JAMS – Journal of the American Musicological Society*

*JASI – Journal of the Arnold Schoenberg Institute*

*JMM – Journal of Mathematics and Music*

*JMT – Journal of Music Theory*

*MA – Music Analysis*

*ML – Music and Letters*

*MTS – Music Theory Spectrum*

*PNM – Perspectives of New Music*

## Acknowledgements

I offer my thanks to my supervisor, Dr Rhian Samuel, for her thorough guidance and constant stream of suggestions. Thank you also to Dr Alexander Lingas for making me aware of some useful sources and for his additional help. I am also grateful to Professor Ronan O'Hora, who has remained an inspiring teacher. Further thanks go to the Newby Trust, Robert and Georgina Collington, for the Gwendolyn Reiche Memorial Scholarship, the Honourable Society of Knights of the Round Table and the Worshipful Company of Bakers; the financial support of these organisations facilitated my research and I am hugely indebted to them for their generosity. Finally, thank you to my family and friends for their persistent encouragement and support.

## Declaration

I hereby grant powers of discretion to the librarians of City University and the Guildhall School of Music & Drama to allow this thesis to be copied in whole or in part for study purposes, subject to normal conditions of acknowledgement.

## Abstract

This thesis examines Schoenberg's use of tonal elements in various works written after 1909. The meanings of the terms, tonal and atonal, are first explored; subsequently, tonal aspects and their connection to a work's structure are investigated in several of Schoenberg's atonal and serial pieces. Schoenberg's serial technique in his later works such as the Piano Concerto was less rigid than in works such as the *Suite für Klavier*; these later pieces also contain many retrospective, tonal, elements. A number of analyses of the Concerto, including those by Brian Alegant, Walter Bailey, Alfred Brendel, Kenneth Hicken, Martha Hyde, Guerino Mazzola and Benedikt Stegemann, Dika Newlin, and Rudolph Stephan, have attempted to take into consideration these elements. An overview of these analyses is presented here, followed by the author's own assessment of the Concerto. This, it is proposed, offers an enlightened approach to the performance of Schoenberg's piano music.

## Introduction

As noted by John Rink, there have been significant developments in performance studies in recent years.<sup>1</sup> Researchers have taken a variety of approaches: historical performance, the study of manuscripts, recordings and, more recently, of the performers themselves. Advancements in computing power have also been harnessed to assess the performer during the act of performance.<sup>2</sup> My research combines the insight I have gained as a performer of Schoenberg's music with analysis of the scores; it stems from my fascination with the tonal implications of Schoenberg's atonal and serial music.

My goal in this thesis is to re-appraise Schoenberg's musical language across a range of his so-called 'atonal' and serial works, in terms of its reception among theorists, concert-goers and performers, culminating in an analysis of the Piano Concerto, Op. 42. Naturally, an understanding of the structure of a work at all levels by the performer must be a prerequisite for its communication to the listener; therefore, I hope that my research will enrich my own performance of this work. I focus especially on the piano music, since the initial spark for this dissertation was from these works; occasional reference is also made to various other instrumental pieces by Schoenberg and other composers, both serial and non-serial.

The language of Schoenberg's atonal and serial music, in particular,

---

<sup>1</sup> John Rink, 'The State of Play in Performance Studies' in Jane W. Davidson, ed., *The Music Practitioner: Research for the Music Performer, Teacher and Listener* (Aldershot: Ashgate Publishing Limited, 2004), 37.

<sup>2</sup> See, for example, Eric Clarke, 'Empirical Methods in the Study of Performance' in Eric Clarke and Nicholas Cook, eds., *Empirical Musicology: Aims, Methods, Prospects* (New York: Oxford University Press, 2004), 77-102.

its harmonic vocabulary, is difficult to analyse: his Piano Concerto is testament to this. It does not seem to fit a particular mould; but of course, there is no reason that it should. It has yet to become part of the core repertoire of pianists and there are relatively few recordings of the work, compared to the more popular twentieth-century concertos, such as those by Bartók, for example.<sup>3</sup> Schoenberg's music seems to attract a small group of listeners in comparison to the number of academics who have analysed and continue to analyse his music, often as a means of understanding his serial technique. Through playing Schoenberg's music, I have been fortunate in experiencing its allure, although undoubtedly one needs to devote a sizeable amount and specific type of effort to it before a sense of fulfilment and understanding can be attained. It may well be that atonal and serial works demand that the listener spend more time analysing them than he or she might ordinarily spend on a traditionally tonal work, in order to discern their important features, but I hope that my later commentary will provide proof of the fruitfulness of such an endeavour.

A key – or 'tonality' – is often elusive in Schoenberg's atonal and serial music (I use the terms 'atonal' and 'serial' only to distinguish between

---

<sup>3</sup> Recordings consulted include Arnold Schoenberg, Piano Concerto, Op. 42, with Emanuel Ax, cond. Esa-Pekka Salonen, Philharmonia Orchestra of London, CD, Sony 53289, 1993, recorded 1992; Schoenberg, Piano Concerto, Op. 42, with Alfred Brendel, cond. Michael Gielen, SWF Sinfonieorchester Baden-Baden, CD, Philips 446 683-2, 1996, recorded 1993; Schoenberg, Piano Concerto, Op. 42, with Glenn Gould, cond. Robert Craft, C. B. C. Symphony Orchestra, CD, Sony 52664, 1994, recorded 1961; Schoenberg, Piano Concerto, Op. 42, with Amalie Malling, cond. Michael Schønwandt, Danish National Symphony Orchestra, CD, Chandos 9375, 1995, recorded 1994; Schoenberg, Piano Concerto, Op. 42, with Maurizio Pollini, cond. Claudio Abbado, Berliner Philharmoniker, CD, Deutsche Grammophon 427 771-2, 1990, recorded 1988; Schoenberg, Piano Concerto, Op. 42, with Peter Serkin, cond. Pierre Boulez, London Symphony Orchestra, CD, Erato 88175, 1986, recorded 1985; Schoenberg, Piano Concerto, Op. 42, with Mitsuko Uchida, cond. Pierre Boulez, Cleveland Orchestra, CD, Philips 289 468 033-2, 2001, recorded 2000.

Schoenberg's musical periods; an extended discussion of what these terms might imply appears in Chapter 1), but not necessarily altogether absent. Time spent investigating these works can lead to revelations regarding keys (or chords) which might not initially be obvious to either the performer or the listener. Schoenberg's use of serial technique includes linear and vertical use of the row, and free octave transposition of any of the pitches.<sup>4</sup> Since it is a primary tool for the construction of a serial work, knowledge of a work's serial process can benefit the listener considerably, as with Webern's sophisticated use of the technique involving canon in, for instance, the fourth movement of his Second Cantata, Op. 31.<sup>5</sup> Such details can only be appreciated, initially, by the composer; thereafter, by analysts.<sup>6</sup> An appreciation can then be imparted to other listeners, by way of programme notes, for example. Some analysts believe that serialism provides only limited unity; for example, in *Serial Composition*, Smith Brindle avows that this unity can only be thematic and that this could just as easily be provided without serialism.<sup>7</sup> Serial analysis involves assigning a single number to every pitch with the same name (e.g. all E-flats might be assigned pitch-class 3, all E-naturals might be 4, etc.). It therefore allows an analyst to disregard interval and register (which would usually be considered extremely valuable to a musical analysis). However, full knowledge of the manipulation of a work's rows does not necessarily provide a

---

<sup>4</sup> For further discussion of Schoenberg's serial works, see, for example, Arnold Whittall, *Schoenberg's Chamber Music* (London: BBC, 1972), 31-64.

<sup>5</sup> Anton Webern, *Second Cantata*, Op. 31 (Vienna: Universal Edition, 1956).

<sup>6</sup> See Kathryn Bailey, 'Canon and Beyond: Webern's Op. 31 Cantata', *MA*, 7/3, October, 1988, 320-8.

<sup>7</sup> Reginald Smith Brindle, *Serial Composition* (Oxford: Oxford University Press, 1966), 193.

comprehensive analysis of the piece.

Of the systems of atonal/serial analysis that came to the fore in the twentieth century, one of the most notable is Allen Forte's set-theory.<sup>8</sup> Forte aimed to provide a system that would avoid any trace of a relationship to tonal terminology and facilitate the discussion and comparison of any groups of notes by collecting pitches together; this grouping is sometimes carried out arbitrarily, though consistently. In the case of Schoenberg's music, the use of hexachords in his serial compositions is clear – as noted by Milton Babbitt – thus the analyst imbricates (that is, divides the pitch-material into small overlapping groups, to be analysed separately and compared with each other) via hexachords.<sup>9</sup> Therefore, in the case of serial music, smaller units than the twelve-note row can be invoked (such as trichords, for example).<sup>10</sup> Forte's system has been used profitably to analyse the consistency of Schoenberg's musical language in many of his works, in particular, his use of specific hexachords in both a linear and vertical fashion.<sup>11</sup>

However, neither serial analysis nor set-theory addresses issues of tonality. Nicholas Cook, for one, complains strongly that set-theory takes no account of the difference between assessing a written score and hearing a

---

<sup>8</sup> See Allen Forte, *The Structure of Atonal Music* (New Haven: Yale University Press, 1973). See also John Rahn, *Basic Atonal Theory* (New York: Schirmer Books, 1980).

<sup>9</sup> See Milton Babbitt, 'Three Essays on Schoenberg, 1968' in Stephen Peles, Stephen Dembski, Andrew Mead and Joseph N. Straus, eds., *The Collected Essays of Milton Babbitt* (Princeton: Princeton University Press, 2003), 222-36.

<sup>10</sup> Despite Forte's system gaining widespread recognition, there has been much criticism of it. Ethan Haimo discusses the validity of set-theory in 'Atonality, Analysis and the Intentional Fallacy', *MTS*, 18/2, Autumn, 1996, 167-99.

<sup>11</sup> For example, Allen Forte, 'Sets and nonsets in Schoenberg's atonal music', *PNM*, 11/1, Autumn-Winter, 1972, 43-64.

performance of an atonal work.<sup>12</sup> Put simply, it is the tonal background in such works that is ignored in set-theory analysis.<sup>13</sup> My investigation is intended to help fill this gap. The pitch-language and harmonic style of Schoenberg's serial works are not completely governed by serialism; it is now widely accepted that the use of a twelve-note system does not preclude the integration of triads and tonal elements, and this is particularly applicable to Schoenberg's later works. As noted by George Perle in *Serial Composition and Atonality*, it is evident

that triadic structure does not necessarily generate a tone center, that nontriadic harmonic formations may be made to function as referential elements, and that the assumption of a twelve-tone complex does not preclude the existence of tone centers.<sup>14</sup>

Silvina Milstein believes that

in many of Schoenberg's atonal and twelve-note works, tonal function is not abandoned completely, but single pitch-classes or pitch-levels, rendered prominent by virtue of their position as boundaries of groupings, are often made to bear implications formerly pertaining to tonal regions or keys and therefore function as true tonal centres, displaying centricity within a given context without necessarily carrying all the implications of the tonal system.<sup>15</sup>

From a personal perspective, even while learning, for example, Schoenberg's *Walzer*, Op. 23, No. 5, I was not always aware of statements of the row. Conversely, I was first drawn to its various tonal allusions. This

---

<sup>12</sup> Nicholas Cook, 'Perception: A Perspective from Music Theory' in Rita Aiello and John A. Sloboda, eds., *Musical Perceptions* (New York: Oxford University Press, 1994), 79.

<sup>13</sup> Richard Taruskin takes Forte to task precisely for this reason, with regard to the latter's analysis of the opening of Stravinsky's *The Rite of Spring*. See Richard Taruskin, 'Letter to the editor from Richard Taruskin', *MA*, 5/2-3, July-October, 1986, 313-20.

<sup>14</sup> George Perle, *Serial Composition and Atonality* (London: Faber & Faber, 1968), 7.

<sup>15</sup> Silvina Milstein, 'Schoenberg's Serial Odyssey', *ML*, 73/1, February, 1992, 70. Similarly, as noted by Milstein in the aforementioned article, Arthur Berger explores the significance which individual pitches can have (with regard to Stravinsky's music), without necessarily being supported by a key or hierarchy. See Arthur Berger, 'Problems of Pitch Organization in Stravinsky', *PNM*, 2/1, Autumn-Winter, 1963, 11-42.

is especially pertinent, because it must be one of the clearest uses of a row in Schoenberg's output (and will be discussed in greater detail later). A player might be distracted by technical concerns which could override the ability to analyse; on the other hand, since Schoenberg is imaginative in his use of the row, one might be forgiven for not immediately noticing its presence. In fact, the need to recognise the row is questioned by some: pianist Alfred Brendel claims that while the listener need not be aware of the presentation of the four melodic forms of the row at the beginning of Schoenberg's Piano Concerto, for example, a sense of unity still prevails, if indirectly.<sup>16</sup>

As far as the concert hall is concerned, serial analysis and set-theory seem not to have filtered through sufficiently from the academic to the performing world to stand shoulder-to-shoulder with the understanding of tonal music. This may be because the notions are relatively new, or perhaps because these systems have not proven to be useful-enough tools. Alternatively, it may be that, despite the methods being able to define important aspects of formal structure, they may fail to address other equally salient aspects of atonal and serial music.

Chapter 1 first examines the meanings of the terms, tonal and atonal. There follows a discussion of consonance and dissonance, which relies considerably on Smith Brindle's previously-mentioned *Serial Composition*; his perception of tension struck me as a simple yet far-reaching concept. Rather than the long-standing notion of harmonic consonance relating to triads, it relies partly on the premise that the greater the distance between

---

<sup>16</sup> Alfred Brendel, *Alfred Brendel on Music* (London: Robson Books, 2001), 315, originally in 'The New York Review of Books', 16 February, 1995.

simultaneously-sounding pitches, the more consonant the sound, regardless of their relationship to a triad or traditionally classifiable chord.<sup>17</sup> This has been a useful aid in my thesis, as will be explained later. Following the necessary consideration of tonality and its connected terms, Chapter 2 investigates the prevalence of tonal elements – sometimes subtle, sometimes overt – across a range of Schoenberg’s atonal and serial works.

Chapter 3 provides the row of the Piano Concerto, followed by a brief presentation of the most significant analyses of the work. All of these offer contrasting approaches to serial analysis and set-theory, and many focus particularly on the harmonic language (i.e. vertical sonorities) of the work; I extract pertinent points from these analyses. The analyses are by Brian Alegant (2002/3), Walter Bailey (2010), Alfred Brendel (written in 1995 and published in 2001), Kenneth Hicken (1974), Martha Hyde (1983), Guerino Mazzola and Benedikt Stegemann (2008), Dika Newlin (1974) and Rudolf Stephan (1972).<sup>18</sup> All of the analyses, except those by Stephan, Mazzola and Stegemann, are concerned only with the opening 39 bars, during which the note row is presented in basic series, retrograde inversion, retrograde and inversion. While enlightening, they either address only a small section of the work or they leave important aspects unaccounted for.

---

<sup>17</sup> See Smith Brindle, 74.

<sup>18</sup> Brian Alegant, ‘Inside the Cadenza of Schoenberg’s Piano Concerto’, *Integral*, 16/17, 2002/2003, 67-102; Walter B. Bailey, ‘Listening to Schoenberg’s Piano Concerto’ in Jennifer Shaw and Joseph Auner, eds., *The Cambridge Companion to Schoenberg* (Cambridge: Cambridge University Press, 2010), 238-46; Brendel, 311-21; Kenneth Hicken, ‘Schoenberg’s ‘Atonality’: Fused Bitonality?’, *Tempo*, New Series, 109, June, 1974, 27-36; Martha M. Hyde, ‘The Format and Function of Schoenberg’s Twelve-Tone Sketches’, *JAMS*, 36/3, Autumn, 1983, 453-80; Guerino Mazzola and Benedikt Stegemann, ‘Hidden symmetries of classical tonality in Schönberg’s dodecaphonic compositions’, *JMM*, 2/1, March, 2008, 37-51; Dika Newlin, ‘Secret Tonality in Schoenberg’s Piano Concerto’, *PNM*, 13/1, Autumn-Winter, 1974, 137-9; Rudolf Stephan, ‘Formal layout’ in Arnold Schoenberg, *Concerto for Piano and Orchestra, Op. 42* (London: Philharmonia, 1972), 7-8.

The differing approaches of the authors highlight the fact that, beyond serial analysis itself, there is no agreed method of analysing other aspects of serial music.

Facilitated by the tonal trends proffered in Chapter 2 and inspired by the widespread interest of various authors in assessing the tonal elements of the Piano Concerto in Chapter 3 (but also noting the lack of comprehensive analyses of it), Chapters 4 and 5 present a more detailed account of its fascinating language. This begins, in Chapter 4, with a discussion of melody and motif. Subsequently, in Chapter 5, the row itself is assessed, then the existence of tonic and dominant harmony, triads, isolated tonal moments, the presence of tension and resolution, the presence of consonance, according to Smith Brindle's tension scale, and bitonality. After this, some conclusions are presented, including the possible implications for the performer and listener. It is hoped that my own insight will encourage performers and listeners alike to consider that Schoenberg's atonal and serial works do not necessarily defy all aspects of traditional tonality, as the (perhaps unfortunate) term, 'atonal', might suggest. With the approach I demonstrate, one may be able to appreciate aspects of Schoenberg's works which need not rely entirely on a familiarity with serial structure or atonal analysis (such as the line taken by Forte). I hope that the commentary provided here, along with my subsequent performances, will reflect my passion for Schoenberg's music and reveal a composer who never totally abandoned his traditional tendencies.

## Chapter 1. Defining Tonality and Atonality in Schoenberg's Music

This chapter presents a brief discussion of the development of tonality from a historical perspective and of tonality's possible links with the harmonic series. Following this, there is an assessment of some definitions of 'tonality' by various authors, followed by a comparison of tonality with the term, 'atonality'. After this, there is a brief discussion of the terms, 'pantonality', 'extended tonality', 'monotonicity' and 'post-tonality'. Subsequently, some conclusions are drawn with regard to the concept of tonality in Schoenberg's music. Finally, the notions of consonance, dissonance, tension and release are discussed; this paves the way for some of my analysis of Schoenberg's music in later chapters.

The term, 'tonal', is not straightforward to define as it has a number of possible meanings, depending on the context. The specific tonal system used in Western Classical music is the major/minor tonal system, which did not appear suddenly but was part of a gradual progression over time.<sup>1</sup> The term, 'tonality', was first used by Choron in 1810 to describe the arrangement of the dominant and subdominant above and below the tonic, in order to differentiate between *tonalité moderne* and *tonalité antique*.<sup>2</sup> As noted by Brian Hyer, we can perceive 'a reduction in musical practice from eight or more modes in Cinquecento music to a mere two in music of the

---

<sup>1</sup> However, there is some disagreement about whether tonality evolved gradually. See, for example, Harold S. Powers, 'Is Mode Real? Pietro Aron, the Octenary System, and Polyphony', *Basler Jahrbuch für historische Musikpraxis*, 16, 1992, 9-52.

<sup>2</sup> Brian Hyer, ed., 'Tonality' in *GMO* (accessed 9 July, 2012), <http://0-www.oxfordmusiconline.com.wam.city.ac.uk/subscriber/article/grove/music/28102>.

Seicento’; therefore, there is justification in perceiving a natural progression from modality to major/minor tonality.<sup>3</sup> There is general agreement that the new major/minor tonal system coincided with a simplification of musical texture, which was created from harmonic sonorities above a *basso continuo*, in contrast to the contrapuntal music prior to this. Thus, there was an increased interest in vertical sonorities.<sup>4</sup>

However, tonality, in its broader sense, when treated as ‘the arrangement of musical phenomena around a referential tonic’, also holds true for some modal music as well as later Classical music.<sup>5</sup> Furthermore, as a contrast to ‘atonal’ music from around 1909 onwards, modal music might fall under the broader umbrella of tonality. Thus, the term, ‘tonality’, is also capable of extending its reach backwards in this way.

There has long been interest in whether the physical properties of sound contribute to tonality. An early attempt by a musicologist to grapple with sound from a scientific viewpoint is Hermann Helmholtz’s *On the Sensations of Tone* (1863). However, despite his own efforts to show that tonality stems from the harmonic series, even Helmholtz admitted that the notion of tonality as a unifying tool – that is, the decision to begin and end a piece with a chord of, for example, C major – is purely a human construct and has nothing to do with any natural law.<sup>6</sup>

---

<sup>3</sup> Hyer.

<sup>4</sup> Hyer.

<sup>5</sup> Hyer.

<sup>6</sup> Hermann Helmholtz, *On the Sensations of Tone: as a Physiological Basis for the Theory of Music*, trans. Alexander J. Ellis (Mineola: Dover Publications Inc., 1954), 235 and 249. Based on *Die Lehre von den Tonempfindungen als Physiologische Grundlage für*

Recent authors still believe that the harmonic series may be a contributor to this construct; Schoenberg's own view, for example, is that any note 'can pass for a fundamental if its most important characteristics are strengthened, for example, if its major third and its perfect fifth are reinforced'.<sup>7</sup> Similarly, the pianist and musicologist Charles Rosen believes in a connection between the physical properties of sound and tonality, defining tonality as 'a hierarchical arrangement of the triads based on the natural harmonics or overtones of a note'.<sup>8</sup> Ernő Lendvai (whose Axis System will be mentioned in Chapter 3) also cites the overtone relations as a contributor to tonality.<sup>9</sup> Rudolph Reti is less willing to accept the link between the harmonic series and tonality, arguing that it is doubtful whether the ear can readily detect the overtone series.<sup>10</sup>

Schoenberg's main views on tonality are: every isolated major triad can of itself express a key (I would extend this to include the minor triad also); if no contradiction is added it can be taken for a tonic chord; but every succeeding chord contests the feeling for this tonality and pleads for

---

*die Theorie der Musik*, 4th Edition (Braunschweig: Friedrich Vieweg und Sohn, 1877). This was originally published as *Die Lehre von den Tonempfindungen als Physiologische Grundlage für die Theorie der Musik* (Braunschweig: Friedrich Vieweg und Sohn, 1863).

<sup>7</sup> Arnold Schoenberg, 'Problems of Harmony', trans. Adolph Weiss, *PNM*, 11/2, Spring-Summer, 1973, 8, originally presented as a lecture by Schoenberg at the Akademie der Künste, Berlin, subsequently revised in May, 1934.

<sup>8</sup> Charles Rosen, *The Classical Style* (London: Faber and Faber Limited, 1976), 23.

<sup>9</sup> Ernő Lendvai, *Béla Bartók: An Analysis of his Music* (London: Kahn & Averill, 1971), 1. However, in the major/minor tonal system, both major and minor thirds are used in cadences and final chords of works, despite the fact that the latter cannot boast any practical audibility in the harmonic series (whereas the former can; it is the fifth harmonic above a fundamental). Hence, the argument for the harmonic series as a contributor to tonality can be brought into question.

<sup>10</sup> Rudolph Reti, *Tonality, Atonality, Pantonality: A Study of Some Trends in Twentieth Century Music* (Chatham: W. & J. Mackay & Co. Ltd., 1958), 39.

others.<sup>11</sup> He ultimately arrives at a definition of tonality:

the art of combining tones in such successions and such harmonies or successions of harmonies, that the relation of all events to a fundamental tone is made possible.<sup>12</sup>

This is very similar to the definition provided by Hugo Riemann (1849-1919), who considers tonality to be ‘the special meaning that chords receive through their relationship to a fundamental sonority, the tonic triad.’<sup>13</sup> Lendvai suggests a considerable number of prerequisites for classical harmony (i.e. tonal music): the functional affinities of the fourth and fifth degrees; the relationship of relative major and minor keys; the overtone relations; the role of leading notes; the opposite tension of the dominant and subdominant; the duality of tonal and distance principles.<sup>14</sup> Ethan Haimo suggests that the following, similar, elements help to establish tonality: the existence of a tonic; the use of a referential diatonic collection; differentiation between consonances and dissonances, with the former resolving to the latter (presumably an error – dissonances would be expected to resolve to consonances); the use of triads and classifiable seventh chords and the organisation of these chords into coherent harmonic progressions.<sup>15</sup> Thus, there is a considerable degree of concurrence among authors regarding the important contributors to tonality. One subtle difference is that some writers consider the triad to be vital, whereas, for others, a single note

---

<sup>11</sup> Schoenberg, ‘Problems’, 10.

<sup>12</sup> Schoenberg, ‘Problems’, 11.

<sup>13</sup> Cited in Carl Dahlhaus, *Studies on the Origin of Harmonic Tonality* (Princeton: Princeton University Press, 1990), 7.

<sup>14</sup> Lendvai, 1.

<sup>15</sup> Ethan Haimo, *Schoenberg’s Transformation of Musical Language* (Cambridge: Cambridge University Press, 2006), 3.

is enough. Carl Dahlhaus (1928-1989) differentiates between ‘melodic’ and ‘harmonic’ tonality, stating that ‘relationships among tones [i.e. notes] need not be reducible to chordal contexts in order to fall under the concept of tonality.’<sup>16</sup> This is in concurrence with Roger Sessions, who believes that intervals cannot avoid tonal connotations (the fifth will suggest the tonic and dominant, a rising semitone a leading note and tonic, etc.).<sup>17</sup> It is clear that a melody, in its construction, can infer harmony; the simplest example of this would be a melody which uses the pitches of a tonic triad. Reti refers to melodic tonality as ‘tonality through pitches’.<sup>18</sup> He explains that ‘in melodic tonality the tonical force is, quite naturally, more directly bound to the recurrence of the tonical pitch’; i.e. the more times one hears the same pitch, the more significance it gains.<sup>19</sup>

Despite much of Schoenberg’s music being described as ‘atonal’, the meaning of the term is not clear-cut. Furthermore, the term is often applied generally, without due consideration of its true implications. ‘Atonal’ is often placed in opposition to ‘tonal’ – Haimo contemplates the assertion, ‘anything that tonality is, atonality is not’, which he recognises to be insufficient – though not by Schoenberg himself, who disapproved of the term.<sup>20</sup> Although Schoenberg states that a tonal scheme for a work is not essential and he explored other means of structuring a work (for instance,

---

<sup>16</sup> Dahlhaus, 17.

<sup>17</sup> Roger Sessions, *Harmonic Practice* (New York: Harcourt, Brace & Co., 1951), 40.

<sup>18</sup> Reti, 77.

<sup>19</sup> Reti, 77.

<sup>20</sup> Haimo, *Schoenberg’s Transformation*, 3.

using motif and thematic presentation – serialism may be viewed as part of this exploration), this thesis will show that he never totally abandoned all aspects of tonality.<sup>21</sup> Schoenberg's break from traditional tonal music is described by Ethan Haimo as 'the birth (and death) of new music' and he cites August, 1909 (when Schoenberg began writing *Erwartung*, Op. 17) as the date for this musical birth/death.<sup>22</sup> Schoenberg said: 'In this period [of presumed atonality] I renounced a tonal centre,' but added '– a procedure incorrectly called 'atonality''.<sup>23</sup> He elaborated on his feelings for the term, 'atonal': 'Only in the language of publicity is it thought adequate to emphasize in this way a negative quality of whatever is being advertised.'<sup>24</sup>

Was Schoenberg simply scrambling to justify his music through renouncing the term 'atonal', or was his renunciation sincere? Haimo says that 'the case for using the word 'atonal' cannot lightly be dismissed. It has come to be so widely accepted that it might appear to border on sheer contrariness to restrict its use'.<sup>25</sup> It has indeed become widely-used, but an accepted definition remains elusive. Yet, in support of Schoenberg's disapproval of the term, Haimo writes that there is a negative feeling surrounding its use and that it may be wiser to avoid it.<sup>26</sup> Reginald Smith Brindle says, more positively, that atonality is 'by now accepted as signifying an all-inclusive tonality which includes all possible harmonic

---

<sup>21</sup> Schoenberg, 'Problems', 15-16.

<sup>22</sup> Haimo, *Schoenberg's Transformation*, 346 and 348.

<sup>23</sup> Arnold Schoenberg, *Style and Idea*, ed. Leonard Stein, trans. Leo Black (London: Faber and Faber, 1975), 86.

<sup>24</sup> Schoenberg, *Style and Idea*, 210.

<sup>25</sup> Haimo, *Schoenberg's Transformation*, 2.

<sup>26</sup> Haimo, *Schoenberg's Transformation*, 3.

products of the ‘total chromatic space’ enclosed by the twelve semitones within the octave’.<sup>27</sup> Of course, we seem to have gone full circle, arriving at a definition which relates more to notions of tonality than to no key at all. In light of this discussion, I should make my standpoint clear. I believe the term ‘atonal’ ultimately points towards an abandonment of traditional tonal aspects, which I believe to be an inaccurate label for Schoenberg’s music. Therefore, through this thesis, I aim to steer the reader towards the possibility of recognising aspects of traditional tonality in Schoenberg’s music, even in works which might usually be described as atonal. I use the term ‘atonal music’ simply as a way of referring to Schoenberg’s music written after 1909 (in accordance with Haimo’s explanation), while ‘serial music’ refers to Schoenberg’s music written after the *Walzer*, No. 5 from *Fünf Klavierstücke*, Op. 23.<sup>28</sup> As such, the terms simply refer to periods of Schoenberg’s output, without the traditional implications they may have for some readers.

Over the course of the twentieth century and into the twenty-first century, the terms, pantonality, extended tonality, monotonicity and post-tonality have appeared, although commentators rarely agree completely on their exact meanings. Pantonality (the term preferred by Schoenberg) signifies ‘the relation of all tones to one another, regardless of occasional

---

<sup>27</sup> Reginald Smith Brindle, *Serial Composition* (Oxford: Oxford University Press, 1966), 11.

<sup>28</sup> Arnold Schoenberg, *Fünf Klavierstücke*, Op. 23 (Copenhagen: Wilhelm Hansen Edition, 1951).

occurrences, assured by the circumstance of a common origin.’<sup>29</sup> This suggests inclusiveness, although George Perle argues that such music is in no key at all: despite acknowledging pantonality as a ‘consequence of the merging of all tonalities’, he claims that ‘the immediate effect[...]was the obliteration of the characteristic features of tonality in general’.<sup>30</sup> Extended tonality may be viewed in a similar way to pantonality (although, as this discussion has shown, a precise definition has not been determined). It is intended that this thesis will show that the above viewpoint asserted by Perle is not entirely accurate. While it may be possible to link post-tonality with pantonality, its name seems to suggest music which has departed from traditional tonality – in which case, it may mean something closer to atonality. However, if this is the case, in what ways and to what extent might such post-tonal music defy traditional tonality? The focus of this dissertation is not semantics, but this discussion should at least cause the reader to question the worth of the above terms, if their meanings can appear so vague and occasionally even contradictory.

Norton Dudeque points out that Schoenberg’s view of monotonicity is that everything relates to one pitch, the tonic.<sup>31</sup> That is to say that there are no modulations as such, only journeys to different key areas, all of which relate to the tonic. Of course, when to call something a modulation is

---

<sup>29</sup> Schoenberg, ‘Problems’, 20.

<sup>30</sup> George Perle, *Serial Composition and Atonality* (London: Faber & Faber, 1968), 7.

<sup>31</sup> Norton Dudeque, *Music Theory and Analysis in the Writings of Arnold Schoenberg (1874-1951)* (Aldershot: Ashgate, 2005), 113. For further discussion of monotonicity, see Dudeque, 113-16.

always subjective: how does one determine how long a passage of music must remain related to one pitch or chord, for this to be considered a tonic? The confusion caused by the numerous terms may well reflect the fact that Schoenberg's music (and that of other late-nineteenth and early-twentieth century composers) was changing in ways which were proving difficult to describe; furthermore, the meanings of the terms often overlap and blur.

Having surveyed the distinguishing features of tonality, we can conclude that at one end of the tonal spectrum would lie a piece that displays all of the aforementioned tonal attributes. Nearing the opposite end of the spectrum, a piece might include only fleeting tonal implications or references (some of these tonal implications have to be extracted in a subjective manner, relying on aural perception and the segregation of material) and at the furthest 'atonal' point on the spectrum would lie a piece without any tonal reference whatsoever; but is this a theoretical possibility only?

It could be that Schoenberg's 'atonal' works (i.e. all of his works not explicitly given a key signature) are not so much atonal as tonally ambiguous, requiring the listener to be drawn one way then another, pulled by many different chords and keys in rapid sequence. In tonal music, a tonic binds together a set of pitches: all bear particular relationships to this tonic, each relationship rational within the system. A tonic may be perceived (though not necessarily sounded) when a sufficient number of events (notes or chords) has occurred. For example, a straightforward C major chord at the outset of a work may be enough to establish a key, but in, for example,

Bach's chorale, *Es ist genug*, whose first-phrase melody moves from A to D-sharp, uncertainty lingers for a while. As the number of tonally-related events is increased, the uncertainty is reduced.<sup>32</sup> In tonal music from the seventeenth to the nineteenth centuries, such uncertainty is generally eventually resolved. But a tonal relationship may exist between two events, immediately to be replaced by another created by ensuing events. This would produce a sense of constant modulation, not outside the realm of tonal theory, yet not practised until the late-nineteenth to the early-twentieth century.

It is perhaps the brevity of tonal allusions in serial and atonal music, as well as their constant transformation, that poses such a challenge to the tonally-accustomed ear; but since Schoenberg was aware of the potential tonal suggestions of even brief moments (as cited earlier), a consideration of such elements seems justified. Using Schoenberg's Third String Quartet as an example, Hans Keller believed that one can fill in mentally the tonal subtext that is being subverted and by-passed if one plays a serial work slowly.<sup>33</sup> Of course, this highlights part of the problem: events sometimes occur too quickly for the listener to be able to gain a sense of key at normal speed; yet the events may still exist.

The issue of bitonality/polytonality has so far been sidestepped. However, it is necessary to mention the terms here, since I will later propose

---

<sup>32</sup> See J. S. Bach, Cantata, No. 60, BWV 60, *O Ewigkeit, du Donnerwort* (Wiesbaden: Breitkopf & Härtel, n. d.).

<sup>33</sup> Cited in Allen Shawn, *Arnold Schoenberg's Journey* (Cambridge, Massachusetts: Harvard University Press, 2003), 110. See Schoenberg, String Quartet No. 3, Op. 30 (Mainz: Schott, 1984).

that Schoenberg's music displays certain characteristics which can be likened to bitonality. Bitonality is sometimes associated with the French school of composers such as Debussy and early Stravinsky. Rudolph Reti talks about Debussy's use of bitonal chords which 'convey the feeling that two overtone series, for instance two triads, are combined in one harmony.'<sup>34</sup> Polytonality may be seen loosely as an extension of bitonality, involving several keys simultaneously. Even these terms cannot boast a clear-cut meaning though; there is a lack of consensus regarding their exact nature. As will be seen, although Schoenberg's music differs considerably from the music of the aforementioned composers (where bitonality is often used in a more obvious and extended manner), some aspects of his music still bear a likeness to it, even if on a far-removed level.

The notion of consonance and dissonance will now be briefly examined; even in a tonally ambiguous language, Schoenberg nevertheless creates variation in the level of consonance and dissonance. Just as the harmonic series is considered by some to be a contributor to tonality, it is also often invoked as a contributor to harmonic consonance. Schoenberg himself states that 'the most nearly perfect consonance (after the unison) is the first tone of the overtone series, thus the one that occurs most frequently, consequently the strongest: the octave.'<sup>35</sup>

Rudolph Reti asserts that 'there is no scale of gradation set up in

---

<sup>34</sup> Reti, 28.

<sup>35</sup> Schoenberg, *Theory of Harmony*, trans. Roy E. Carter (London: Faber and Faber, 1978), 22, originally published as *Harmonielehre* (Vienna: Universal Edition, 1911).

musical theory for dissonances.<sup>36</sup> Yet Schoenberg in fact hoped that the ear may detect such a scale of gradation, claiming that the more immediate overtones contribute more to consonance than the more remote ones. He believed that the distinction between them is ‘only a matter of degree, not of kind’ and that it

simply depends on the growing ability of the analyzing ear to familiarize itself with the remote overtones, thereby expanding the conception of what is euphonious, suitable for art, so that it embraces the whole natural phenomenon.<sup>37</sup>

This has some similarities with Smith Brindle’s re-evaluation of consonance and dissonance, presented in his book, *Serial Composition*.

Example 1 shows his tension scale.

Ex. 1. Smith Brindle’s perception of tension<sup>38</sup>

The musical notation shows a sequence of six chords. The notes are: Treble: B $\flat$ , B $\flat$ , G, G, E, E $\flat$ ; Bass: E, E, B $\flat$ , B $\flat$ , B $\flat$ , B $\flat$ . An arrow below the staves points from left to right with the text "tension disperses".

Smith Brindle employs the pitches, C, D-flat and E to demonstrate his point, although various pitches could have been used to create the same effect. He states that harmonic relationships are inevitably formed when several sounds occur simultaneously and believes that these relationships still

<sup>36</sup> Reti, 38.

<sup>37</sup> Schoenberg, *Theory of Harmony*, 21.

<sup>38</sup> Smith Brindle, 74.

remain tonal ones.<sup>39</sup> Smith Brindle explains that the above example leads to the following conclusions:

1. Tension decreases in proportion to the size of the interval separating the dissonant notes.
2. Consonance is increased by placing the 'strongest' interval in the bass [i.e. between the bottom two pitches of a chord], even though it may be in an inverted position.
3. Consonance is further increased by placing the natural harmonic bass of the 'strongest' interval as the lowest note of the chord.<sup>40</sup>

Therefore, regarding points 2 and 3, E-C in the bass (a minor 6<sup>th</sup>) is considered more consonant than C-D-flat (a minor 2<sup>nd</sup>): compare 'a' with 'b' in Ex. 1. Furthermore, C-E (a major 10<sup>th</sup>) is considered more consonant than E-C (a minor 6<sup>th</sup>): compare 'b' with 'f'. Thus, Smith Brindle may be treating the root position major triad as most consonant, in order to reach the above conclusion (although it is not possible to know for certain, since there is no G to complete the triad in the above examples).

Smith Brindle also suggests a classification for consonance and dissonance (Ex. 2). He explains that at 'e', what would normally be considered a strong dissonance (the second chord) can sound more consonant than the strongest consonance (the first chord).<sup>41</sup> This is an innovative approach to perceiving harmony. Just as one can imagine a tonality/atonality spectrum (as mentioned earlier), Smith Brindle's approach may be applied locally to certain parts of a work, to assess the general content of the music on a consonance/dissonance spectrum. Though this is not directly linked with the notion of tonal structure, an awareness of

---

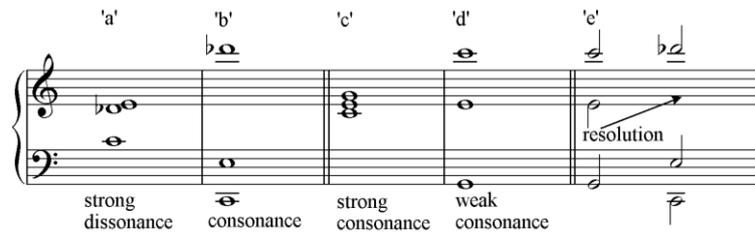
<sup>39</sup> Smith Brindle, 11.

<sup>40</sup> Smith Brindle, 75.

<sup>41</sup> Smith Brindle, 74.

changes in the level of consonance (i.e. variation in harmonic tension) in atonal music could widen the musical palette for the listener.

Ex. 2. Smith Brindle's classification of consonance and dissonance<sup>42</sup>



It might be noted that, although he does not explicitly state it, Smith Brindle seems to treat the perfect fourth as somewhat less stable than the perfect fifth or the major third. For example, compare the first chord at 'e' in Ex. 2 (where there is an interval of a compound perfect fourth – in fact the gap is three octaves plus a fourth between the lowest and highest pitches) with 'b' (where there is a compound major third between the lowest two pitches) and 'c' (where there is a perfect fifth between the lowest and highest voices); 'b' and 'c' are described as a 'consonance' and 'strong consonance' respectively, whereas the first chord of 'e' requires resolution, according to Smith Brindle.

In *A Generative Theory of Tonal Music*, Lerdahl and Jackendoff assert that derivation from the overtone series is not a necessary condition for harmonic consonance.<sup>43</sup> While this may appear to challenge the views of

<sup>42</sup> Smith Brindle, 73.

<sup>43</sup> Fred Lerdahl and Ray Jackendoff, *A Generative Theory of Tonal Music*

Schoenberg and Smith Brindle, on closer inspection, perhaps all the authors are in fact advocating similar methods of assessing the level of consonance in atonal music. Rather than focusing simply on triadic consonance (if indeed the triad can justify its position as a consonant sound through its roots in the harmonic series), all authors seem to be acknowledging that other harmonic intervals can be treated as consonances. I believe that this is a mindset which can prove fruitful for listening to Schoenberg's music, as will be revealed later.

In traditionally tonal music, a specific use of consonance and dissonance is the creation of tension and release; for example, a suspension requires its resolution. A sense of release (or closure) can also be attained at a cadence, which itself may be decorated with a suspension or an appoggiatura. Such traditional elements can also be found in Schoenberg's music, as parts of the following chapters will show, although they often differ somewhat from the conventional use in strict tonal music.

The discussion in the next chapter will explore the potential for tonal allusions across a range of Schoenberg's works: the elements inspected include the presence of a tonic (and, occasionally, of its supporting dominant), the use of chords as tonal points of reference (which can be likened to the structural use of a tonic), the existence of triads, isolated points of momentary tonal stability (i.e. passages displaying a key other than the tonic/dominant), the presence of tension and resolution, the presence of

---

(Cambridge, Massachusetts: The Massachusetts Institute of Technology, 1983), 291.

consonance (according to Smith Brindle's tension scale), and bitonality. The elements often overlap, since some passages display several of the above attributes. The aforementioned set of elements will also form the basis for my later analysis of Schoenberg's Piano Concerto.

## Chapter 2. The Search for Tonal Elements in Schoenberg's Oeuvre

This chapter investigates the existence of tonal elements across a range of Schoenberg's music, beginning chronologically with his atonal music, then moving on to the serial works. It is by no means a comprehensive assessment of Schoenberg's oeuvre, rather, an attempt to demonstrate the consistent trend of the inclusion of tonal elements throughout Schoenberg's life.

It would now be considered disingenuous to attempt a chord-by-chord diatonic analysis of Schoenberg's music, since it is widely accepted that his atonal and serial compositions defy this possibility; but such analysis does not equate to assessing tonal elements within a serial work, which may still be a worthwhile pursuit. As G. W. Hopkins asserts, 'the error of many commentators has been to seek in atonal music a logic of the same *type* as that present in classical diatonicism'.<sup>1</sup> Of course, without a referential tonic, a functional harmonic progression and a large-scale tool of reference such as an over-arching melodic line, the classification of any simultaneously-sounding group of pitches is open to debate; Ex. 3 illustrates this. Hopkins claims that, with regard to the opening of Schoenberg's Op. 11, No. 1, bar 3 is heard as an 'unstable' A major chord. How is Hopkins determining this? He is presumably prioritising melody in his assessment of the pitches: it could be understood to be in A minor, the G-sharp in bar 1 being a chromatic passing note to G-natural, the lowered seventh of the

---

<sup>1</sup> G. W. Hopkins, 'Schoenberg and the "Logic" of Atonality', *Tempo*, New Series, 94, Autumn, 1970, 17.

melodic minor scale. This is supported by the uppermost notes of the accompaniment, B in bar 2 and D-flat (enharmonic equivalent: C-sharp) in bar 3 – a Picardy third. It will also be noted that the rhythm of the melodic line gives the F in bar 3 a sense of being a suspension.

Ex. 3. Schoenberg, *Drei Klavierstücke*, Op. 11, No. 1, bars 1-3<sup>2</sup>



Historically, although it can be argued that harmony was arrived at through the combination of melodies, I disagree with Hopkins' prioritising of the melody to such a degree.<sup>3</sup> I would like to suggest an alternative interpretation of this chord in bar 3: a quasi-B-flat minor chord. This interpretation ignores the tonal implications of the melody in isolation, instead devoting more significance to the harmony. It acknowledges the compound perfect fifth between the upper and lower voices (B-flat to F), with the D-flat as the third of the minor chord; A will therefore be heard as a dissonance. The final E-natural also militates against the B-flat minor sound, but, having heard the F sound with the B-flat and D-flat on the previous beat, the E can be heard as an unresolved lower neighbour-note.<sup>4</sup>

<sup>2</sup> Excerpts are taken from Arnold Schoenberg, *Drei Klavierstücke*, Op. 11 (Vienna: Universal Edition, 1994).

<sup>3</sup> However, Hopkins' approach is supported to some degree by Martha Hyde's findings regarding Schoenberg's approach to composition, in that he often began with a melody. This will be discussed in Chapter 3.

<sup>4</sup> George Perle notes that the opening of Op. 11, No. 1 presents an intervallic cell

The above example highlights the precarious nature of analysing atonal/serial music, caused mainly by the lack of a rigorous tonal hierarchy and also by the lack of traditionally-classifiable chords.<sup>5</sup>

To begin with, the presence of tonic and dominant harmony will be assessed. While Schoenberg's atonal works do not begin and end with an obvious tonic triad, the second piece from *Drei Klavierstücke*, Op. 11, for example, alludes subtly to the preferential treatment of the tonic and dominant. As seen in Ex. 4, in bar 16, beat 1 (the time signature is 12/8), B-flat minor is hinted at.

Ex. 4. Schoenberg, *Drei Klavierstücke*, Op. 11, No. 2, bar 16



The bass note is doubled, lending extra significance to this pitch (it also appears again on the second quaver of beat 3) and the next note up is a C-sharp (enharmonic equivalent: D-flat); thus, the first two pitches of a B-flat minor triad in root position are present; furthermore, the left hand fills in the missing F on the second quaver to complete the triad.

Bar 40 (beat 1) achieves a similar effect for an E-flat minor triad; the E-flat 'root' is reiterated on beat 3 (Ex. 5). This moment, as with Ex. 4, is

---

which is important on a larger thematic level. See George Perle, *Serial Composition and Atonality* (London: Faber & Faber, 1968), 9-15.

<sup>5</sup> It may also reflect the fact that two listeners may perceive the same event differently, depending on the conditioning that produced the perception.

further enhanced by the fact that it falls on a strong beat.

Ex. 5. Schoenberg, Op. 11, No. 2, bar 40



Bar 66 (the final bar of the work) finishes on a chord that alludes to E-flat minor, as the C and F could be interpreted as unresolved neighbour notes to B-flat and G-flat (or E-flat) respectively (Ex. 6). Again, the E-flat in the bass falls on a strong beat (beat 3) and the final chord includes a G-flat, thus recreating to some degree the effect heard in bar 40.

Ex. 6. Schoenberg, Op. 11, No. 2, bar 66



Thus, bar 16 is based on the dominant (although of course it is in minor form and therefore not a regular dominant chord), while bar 40 and the second half of bar 66 are based on the tonic chord. In order to interpret these moments in this way, a prioritisation of certain pitches over others must be acknowledged: for instance, E-flat must be taken as the root in Exs. 5 and 6. However, it has already been explained that the music accomplishes this through the placing of these chords on strong beats and the fact that, in

each case, the second pitch up from the bass note can easily function as the third of a minor triad. It will be noted that in Exs. 4 and 5, it could be argued that the ‘strongest’ interval is between the bottom two pitches of the chord, which increases the level of consonance, according to Smith Brindle’s earlier suggestion of placing the strongest interval in the bass (i.e. at the bottom of the chord). I recognise that, with so many intervening notes separating the aforementioned structural points of reference, their significance may pass the listener by. As will be discussed later, the need for a considerable level of familiarity on the part of the listener may be a prerequisite to benefit from such moments.

Another significant feature of the ending (though not tonal) is the sighing effect of the last two chords, achieved through the *diminuendo* and the falling melodic shape. Thus, these dynamic and melodic features provide a sense of resolution comparable to that achievable through tonal means. The inclusion of traditional appoggiaturas to create tension and resolution is also a part of Schoenberg’s musical language, as will be discussed further below.

Another example of tonic-dominant structure occurs in Op. 19, No. 2.<sup>6</sup> At the opening is a dyad, G-B (Ex. 7a); the piece finishes with a dyad of C-E, followed by the original G-B dyad – to which is added a chord containing the pitches, E-flat, F-sharp, B-flat and D (Ex. 7b). Allen Shawn describes the final chord as a fifteenth chord, but this is not accurate: the

---

<sup>6</sup> Olli Väisälä assesses the evidence of prolongation organisation in Op. 19, No. 2 and Op. 11, No. 2 in ‘Concepts of Harmony and Prolongation in Schoenberg’s Op. 19/2’, *MTS*, 21/2, Autumn, 1999, 230-59.

uppermost note would correspond to the sixteenth (if C is taken as a root), but this is beyond normal extensions.<sup>7</sup> Taking C as the root, the chord is a series of major and minor thirds stacked on top of the basic C major triad, which is in fact the basis for the construction of certain jazz chords.<sup>8</sup>

Ex. 7. Schoenberg, *Sechs Kleine Klavierstücke*, Op. 19, No. 2<sup>9</sup>

(a) bar 1



(b) bars 7-9



The significance of the opening and closing dyads is achieved through the initial repetition of the first, followed by the stepwise approach to the final dyad (in the left hand), which links the two moments. As with Ex. 6, the placing of the C-E dyad in the bass register at the end of the piece creates a sense of traditional closure on a quasi root-position chord.<sup>10</sup> Of course, it could be argued that the G-B dyad in fact creates a sense of tonal stability,

<sup>7</sup> Allen Shawn, *Arnold Schoenberg's Journey* (Cambridge, Massachusetts: Harvard University Press, 2003), 120.

<sup>8</sup> Possible links between Schoenberg's harmonic language and jazz are discussed more in Chapter 5.

<sup>9</sup> Excerpts are taken from Arnold Schoenberg, *Sechs Kleine Klavierstücke*, Op. 19 (Vienna: Universal Edition, 1940).

<sup>10</sup> This is confirmed by Allen Shawn. See Shawn, 120.

since it is repeated so many times. Therefore, one might just as easily perceive a ‘key’ of G major.<sup>11</sup>

Similarly, traces of tonic-dominant relationships remain in ‘*O alter Duft*’ (‘O ancient scent’ or ‘O old perfume’), the final song of Schoenberg’s ground-breaking song cycle, *Pierrot Lunaire*, Op. 21. As a song about nostalgia, the tonal references can of course be seen as part of the dramatic scenario. As noted by Jonathan Dunsby, an E major tonality may be perceived at the beginning of the song (shown in Ex. 8) and throughout (for example, at bars 1, 3, 14, 16 and 24 in the piano).<sup>12</sup>

Ex. 8. Schoenberg, *Pierrot Lunaire*, Op. 21, No. 21, bars 1-3<sup>13</sup>

The image shows a musical score for Schoenberg's *Pierrot Lunaire*, Op. 21, No. 21, bars 1-3. The score is arranged in a standard orchestral format with parts for Flöte, Klarinette in A, Geige, Violoncell, Rezitation, and Klavier. The tempo is marked 'Bewegt (♩ = ca 60)'. The key signature has one sharp (F#). The piano part features dynamic markings 'p' and 'pp'. The vocal part (Rezitation) has the lyrics 'O al - ter Duft aus Mür - chenzeit,'. The piano part has a complex harmonic structure with many accidentals.

Schoenberg lends significance to the opening right-hand thirds in the piano

<sup>11</sup> This is suggested by Deborah Stein in ‘Schoenberg’s Opus 19, No. 2: Voice-Leading and Overall Structure in an Atonal Work’, *ITO*, 2/7, October, 1976, 30. There is also a discussion of syncopation in this work by Charles Morrison in ‘Syncopation as Motive in Schoenberg’s Op. 19, Nos 2, 3 and 4’, *MA*, 11/1, March, 1992, 85-90.

<sup>12</sup> Jonathan Dunsby, *Pierrot Lunaire* (Cambridge: Cambridge University Press, 1992), 71.

<sup>13</sup> Excerpts are taken from Arnold Schoenberg, *Pierrot Lunaire*, Op. 21 (Vienna: Universal Edition, 1941).

through the sparse texture and the initial doubling of the vocal line by the upper note of each third. Dunsby suggests that there may be a sense of preparation for this E major tonality in the form of a quasi-dominant chord (in the piano part) in bar 30 of the previous song, ‘*Heimfahrt*’ (Ex. 9).<sup>14</sup>

Ex. 9. Schoenberg, *Pierrot Lunaire*, Op. 21, No. 20, bars 28-30

As shown in Ex. 10, triads also feature significantly at the end of this work. For example, in ‘*O alter Duft*’, at bar 28, we hear two minor triads and an augmented triad in the piano, which may be viewed as an extension of the opening thirds. The final broken octave E in the piano may be an affirmation of the opening E major tonality.<sup>15</sup>

While these works do not display a diatonic collection or hierarchy governing all their chords, the above musical quotations have shown that, at the very least, a flirtation with tonic-dominant relationships still occurs.

A tonic-dominant relationship is not the only means of creating tonal stability; a repeated chord can act as a point of reference in a musical work, assuming the role of the tonic chord without actually being one.

<sup>14</sup> Dunsby, 71.

<sup>15</sup> Dunsby, 72.

Ex. 10. Schoenberg, *Pierrot Lunaire*, Op. 21, No. 21, bars 24-30

As seen in Ex. 11, in Schoenberg's *Farben*, No. 3 from *Fünf Orchesterstücke*, Op. 16, a certain tonal grounding of this kind is achieved through the almost constant sounding of the opening chord throughout the piece.

Ex. 11. Schoenberg, *Fünf Orchesterstücke*, Op. 16, No. 3, pitches of the opening chord<sup>16</sup>

Significantly, the chord also closes the work. As noted by Charles Burkhart, however, Op. 16, No. 3 is not in fact based solely on one unchanging chord,

<sup>16</sup> Excerpts are taken from Arnold Schoenberg, *Fünf Orchesterstücke*, Op. 16 (London: Eulenburg, 1952).

yet it remains a significant feature.<sup>17</sup>

Aside from the above structural tonal features, Schoenberg's music contains occasional isolated instances of tonality which are unrelated to tonic or dominant harmony. One such moment appears in Op. 19, No. 3 at the end of bar 4 (Ex. 12).

Ex. 12. Schoenberg, *Sechs Kleine Klavierstücke*, Op. 19, No. 3, bars 3-4



By coincidence, this chord is almost exactly the same as the one from Op. 11, No. 1, bar 3, shown previously in Ex. 3. Here, again, a B-flat minor harmony can be perceived. B-flat arrives in the bass (doubled, which reinforces its 'root' quality), beneath the held chord comprising A, D-flat and F; A is therefore a dissonant note (an unresolved neighbour-note). This interpretation (as with other moments I have previously mentioned) requires that the listener accept the chord as a stable entity, much like the way in which one perceives jazz chords as stable, despite the fact that they contain pitches which fall outside the simple triad. There is a difference of course: jazz music, at least in the earlier part of the twentieth century, was still traditionally tonal (i.e. used a hierarchy of chords within a key, even if the chords themselves have extensions to them); this is in contrast to Op. 19,

---

<sup>17</sup> See Charles Burkhart, 'Schoenberg's Farben: An Analysis of Op. 16, No. 3', *PNM*, 12/1-2, Autumn, 1973-Summer, 1974, 141.

No. 3, which does not display a hierarchical chordal structure.

This excerpt also presents an example of a traditional appoggiatura: in bar 4, the left-hand C resolves downwards conventionally onto B-flat (supported by a *diminuendo*). Nicholas Cook explores this piece in numerous imaginative ways: he re-writes it to conform to the key of F-sharp minor, puts the left hand up a semitone, swaps the registers around (presenting the left hand as upper melody, which means that the right hand becomes the accompaniment below), changes the time signature and rhythm, and shifts successive phrases down a semitone.<sup>18</sup> His investigations are, partly, to explore the issue of tension and release in the harmonic language, claiming that

either the tension/release quality built into Op. 19/3 has to do purely with what are called its ‘secondary features’ – the phrasing and so on – and has nothing to do with its pitch structures; or else Schoenberg has created some kind of atonal equivalent of the harmonic tension you get in tonal music.<sup>19</sup>

My indication of the B-flat minor chord and the traditional appoggiatura has provided evidence of a different viewpoint from either of those suggested by Cook – namely, that fully-traditional tonal elements remain.

A similar example of resolution can be found in Op. 11, No. 2, bar 51 (Ex. 13). The uppermost note in the left hand on beat 2 (C-sharp: an upper neighbour-note) resolves downwards in a traditional manner to the B of the B diminished triad (in first inversion) on beat 3, although the right-hand E on beat 4 remains dissonant. However, since we hear a resolution in

---

<sup>18</sup> Nicholas Cook, *A Guide to Music Analysis* (Oxford: Oxford University Press, 1987), 343-354.

<sup>19</sup> Cook, *A Guide*, 345.

the left hand and a *diminuendo* from the right-hand A to the E, Schoenberg creates the aural illusion of a resolution (not dissimilar to Ex. 6, above).

Ex. 13. Schoenberg, *Drei Klavierstücke*, Op. 11, No. 2, bar 51



Therefore, even in instances where the harmonies do not resolve completely, a sense of resolution is still implied through the gradation of tone (often supported by the resolution of dissonance in some, if not all, of the voices) – i.e. some ‘secondary features’ contribute, in agreement with Nicholas Cook’s aforementioned viewpoint.

A further contributor to the aural impression that a tonal point of reference has been established is ostinato: see Ex. 14. Here, in the first movement of *Fünf Orchesterstücke*, Op. 16, from bar 34 to the end, ostinato pervades the music and is used to create texture, beginning in the cello part. As will be seen later, repetition (at various levels) is a key feature of the Piano Concerto.<sup>20</sup>

As mentioned in Chapter 1, it is possible to assess the level of consonance of atonal/serial music using Smith Brindle’s tension scale. There are passages (sometimes of considerable length) where, according to this system, the writing can be described as consonant; see, for example,

---

<sup>20</sup> For a discussion of Op. 16, No. 1, see Ethan Haimo, *Schoenberg’s Transformation of Musical Language* (Cambridge: Cambridge University Press, 2006), 322-7.

bars 1-7 of Op. 23, No. 1 (Ex. 15).

Ex. 14. Schoenberg, *Fünf Orchesterstücke*, Op. 16, No. 1, bars 33-9,  
ostinato

\*) Das 1. u. 2. Pult der Violoncelli immer der 1. Spieler arco, der 2. Spieler pizz.  
\*\*) Das 3. u. 4. Pult

Ex. 15. Schoenberg, *Fünf Klavierstücke*, Op. 23, No. 1, bars 1-7<sup>21</sup>

Sehr langsam (♩ = 108)

<sup>21</sup> Excerpts are taken from Arnold Schoenberg, *Fünf Klavierstücke*, Op. 23 (Copenhagen: Wilhelm Hansen Edition, 1951).

In Ex. 15 (above), the often-wide gaps between the voices are evident.

Having considered the incidence of momentary tonal references in a range of Schoenberg's atonal music, we move now to an assessment of his serial music, beginning again with an investigation of tonic and dominant elements. Schoenberg first used a note row in *Fünf Klavierstücke*, Op. 23, No. 5.<sup>22</sup> In this work, one row is used repeatedly without transposition, inversion or retrograde; the only changes are in register. Schoenberg also groups pitches together to form vertical alignments of the row. C-sharp and A seem to have significance; they are the first two pitches of the row and their importance is made clear at the outset through clear articulation and differentiation of dynamics: they are presented as right-hand melody, with an accompanying left-hand part at a softer dynamic (Ex. 16).

Ex. 16. Schoenberg, *Fünf Klavierstücke*, Op. 23, No. 5, bars 1-4



In the first significant climax of the piece, beginning at bar 74 (shown in Ex. 17), C-sharp and A maintain their importance, appearing simultaneously as a minor sixth, the upper note (A) being the highest note of the piece so far.

---

<sup>22</sup> Pianist Mitsuko Uchida notes a fascinating point: the first hexachord of the row of Op. 23, No. 5 contains the same pitches as the second hexachord of the row of the Piano Concerto, Op. 42 (though not in the same order) and vice versa. See Mitsuko Uchida, 'Schoenberg's Piano Concerto: an introduction' in the CD sleeve notes in Arnold Schoenberg, Piano Concerto, Op. 42, cond. Pierre Boulez, Cleveland Orchestra, CD, Philips 289 468 033-2, 2001, recorded 2000, 11. However, there is a misprint in the booklet: the fifth and sixth pitches of the row in Ex. 4 are the wrong way round.

Ex. 17. Schoenberg, Op. 23, No. 5, bars 73-9, first climax

The musical score for Schoenberg's Op. 23, No. 5, bars 73-9, is presented in two systems. The first system (bars 73-76) is in 4/8 time and features a first climax. It includes markings such as 'poco rit...', 'Molto pesante', 'ff', 'NB²', and '76'. The second system (bars 77-79) is in 3/8 time and features a 'Langsamer' section. It includes markings such as 'più p', 'ff', 'sf', and '79'. The score is written for piano with treble and bass staves.

The climax dissipates at bar 77 on a single note, E, which might relate to the C-sharp and A as the missing note of an A major triad, not least because the A-C-sharp dyad appears in the left hand very shortly afterwards in bar 79. Arnold Whittall notes that bars 77-9 may indeed be a reference to a diatonic cadence in A, remarking that the significance of A may be inherent in the basic form of the series, since in the first hexachord, only the G-natural is not diatonic to A major.<sup>23</sup>

Later in the piece, at bar 100, the opening melody is recalled briefly (Ex. 18). Subsequently, A and C-sharp feature as an accompanying *tremolo* figure in the lead-up to the end of the piece, where there is a quasi-perfect cadence in D major (Ex. 19). Were it not for the presence of G-sharp in the first chord of this final bar, it would be a dominant ninth chord. The final dyad of F-sharp-D can easily be related to a D major triad. Therefore, this might be another reference to traditional tonal music of the past.

<sup>23</sup> See Arnold Whittall, *Serialism* (Cambridge: Cambridge University Press, 2008), 48-9.

Ex. 18. Schoenberg, Op. 23, No. 5, bars 99-103

Ex. 19. Schoenberg, Op. 23, No. 5, bars 109-13

As seen in Ex. 20 (below), at the final outburst at bar 97, however, A and C-sharp are not as prominent as they are in the previous examples, although the gesture relates to the first climax (shown in Ex. 17).

Ex. 20. Schoenberg, Op. 23, No. 5, bars 95-9

Despite this and the fact that the piece is not framed with a tonic A (since it ends with a quasi-D major chord), it can still be said that the pitches A and

C-sharp give a sense of grounding to the work, not least because they occur at other important structural points (the beginning, the first climax, the recurrence of the original melody and the build-up to the end).<sup>24</sup> They therefore function as a referential tonal unit.

The aforementioned cadences are not isolated instances. Allen Shawn notes a tendency for Schoenberg to hint at traditional cadences through the use of semitone movement, citing as an example the ending of the *Menuett* from the *Suite*, Op. 25 (Ex. 21).<sup>25</sup> The semitone movement is in the right hand in both voices of the final two chords (therefore contrary motion) and the left hand (lower voice).

Ex. 21. Schoenberg, *Suite*, Op. 25, *Menuett*, bars 31-3<sup>26</sup>



The *Suite* is Schoenberg's first fully-serial work and it is significant that every one of its movements uses rows which begin and end on either E or B-flat (Ex. 22). This is due not only to the fact that Schoenberg wrote a row which begins on E and ends on B-flat, but also because he used only P-

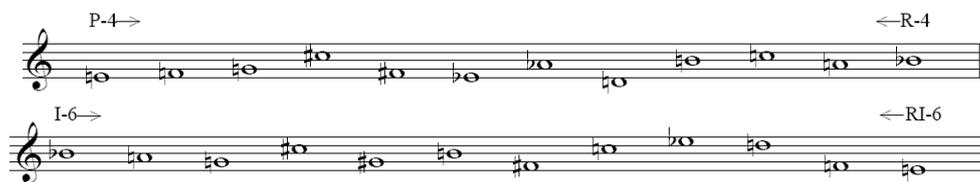
<sup>24</sup> For extensive discussion of *Fünf Klavierstücke*, Op. 23, see, for example, Kathryn Bailey, 'Composing with tones: A Musical Analysis of Schoenberg's Op. 23 Pieces for Piano', *MA*, 26/3, October, 2007, 373-80.

<sup>25</sup> Shawn, 214. Alden Ashforth shows just how significant semitone movement is at cadences in Schoenberg's music, claiming that this feature may function as part of Schoenberg's cadential formula. For example, he notes that every cadence in Op. 19, No. 1 contains semitone movement. See Alden Ashforth, 'Linear and Textural Aspects of Schoenberg's Cadences', *PNM*, 16/2, Spring-Summer, 1978, 209-11.

<sup>26</sup> Excerpts are taken from Arnold Schoenberg, *Suite für Klavier*, Op. 25 (Vienna: Universal Edition, 1952).

4, I-6 and their retrogrades.<sup>27</sup> It is remarkable that the enormous potential for variety which serialism might offer is avoided at the outset of Schoenberg's journey. It is almost as if he still seeks a continuation of tonal unity at some level. Using the same two pitches for the first and last notes of the row-forms mimics the referential functions of the tonic pitch in a tonal work, albeit in a slightly different way.

Ex. 22. Schoenberg, *Suite*, Op. 25, row-forms



Focusing on the *Musette* from the *Suite*, we see that a pedal G is sounded throughout and functions as a referential pitch (see Ex. 23).<sup>28</sup> This is not dissimilar to the effect of the repeated A and C-sharp of Op. 23, No. 5. It will be noted that, of course, this pedal G is used imaginatively; variety is achieved through articulation, position in the beat and register.

A weaker – but arguably still significant – example of a quasi-tonic can be found in Schoenberg's *Klavierstück*, Op. 33b (Ex. 24).<sup>29</sup> The opening

<sup>27</sup> Shawn, 210-11.

<sup>28</sup> Arved Ashby notes the presence of pitch repetition and tonal reference in the *Musette*, also remarking that the *Suite* is orientated to the E-G-B-flat-D-flat tetrachord. Thus, he asserts, fleeting and alternating allusions to E minor and G appear against the E-diminished orientation. See Arved Ashby, 'Schoenberg, Boulez, and Twelve-Tone Composition as "Ideal Type"', *JAMS*, 54/3, Fall, 2001, 604.

<sup>29</sup> Brian Alegant provides an analysis of the construction of *Klavierstück*, Op. 33b, aiming to show how formal structure is achieved through dyadic, tetrachordal and trichordal partitions, noting that repetition of material creates a coherent surface structure. See Brian Alegant, 'Unveiling Schoenberg's Op. 33b', *MTS*, 18/2, Autumn, 1996, 143-66.

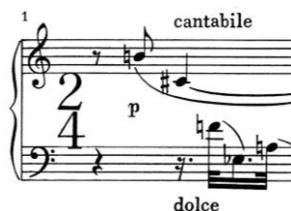
right-hand melody begins with B (Ex. 24a) and the final chord of the work alludes to a B minor triad; the dissonant D-flat can be interpreted as an enharmonic C-sharp, therefore an unresolved appoggiatura (Ex. 24b).

Ex. 23. Schoenberg, *Suite, Op. 25, Musette*, bars 24-5

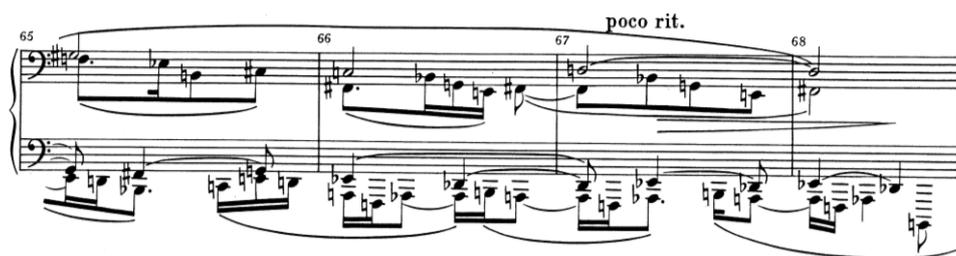


Ex. 24. Schoenberg, *Klavierstück, Op. 33b*<sup>30</sup>

(a) bar 1



(b) bars 65-8



In the last three bars of the piece, the bottom line of the left hand displays group-repetition of the pitches, A-natural-F-A-flat-B-natural – a technique also used in the Piano Concerto. The line ultimately stops on B;

<sup>30</sup> Excerpts are taken from Arnold Schoenberg, *Klavierstück, Op. 33b* (Vienna: Universal Edition, 1959).

this is the lowest note of the final chord and is heard with the remaining pitches of the B minor triad, and with the unresolved appoggiatura.

Some of Schoenberg's serial works (as with the previously-explored atonal works) occasionally display what listeners conditioned to hearing tonal relationships might perceive as isolated tonal moments. One such moment is bar 1 of the *Menuett* from the *Suite* (Ex. 25).

Ex. 25. Schoenberg, *Suite*, Op. 25, *Menuett*, bar 1



Here, there is a teasing glimpse of an E seventh chord on beat 3. If one interprets the A-flat in the right hand (beat 2) as a G-sharp, the harmony becomes clear: it can be argued that the missing B of the dominant seventh chord is not necessary.

Another example occurs over beats 1-3 of bar 1 in the *Gavotte* from the *Suite* (Ex. 26). The right-hand D-flat is held, while a turn figure in the left hand (somewhat hidden, due to the initial octave displacement of B-C) leads towards a B-flat, which is consonant with the D-flat. This left-hand pattern is in fact the B-A-C-H motif in retrograde (i.e. H-C-A-B), which Schoenberg also uses in the Piano Concerto (to be discussed later). Also, in bar 2, over beats 1-2, the C in the left hand, initially dissonant with the D in the right hand (a tone clash), resolves downwards to B, a minor ninth below.

Were it not for the octave displacement, this moment could very easily be interpreted as an almost-conventional appoggiatura.

Ex. 26. Schoenberg, *Suite*, Op. 25, *Gavotte*, bars 1-2



According to Smith Brindle's tension scale, there are certainly moments of consonance in Schoenberg's serial music. Two such moments can be found in the *Präludium* from Op. 25. The first is at bars 15-16, where the wide spacing of pitches is notable (Ex. 27).

Ex. 27. Schoenberg, *Suite*, Op. 25, *Präludium*, bars 15-16



This is a moment of repose: the speed is relaxing considerably here (in an otherwise fast-paced movement) and the more consonant harmonies – effecting a decrease in harmonic tension – match the decrease in momentum. The second moment is at bars 17-19: in this dramatic outburst, the wide spacing of pitches is clear (Ex. 28).

Ex. 28. Schoenberg, Op. 25, *Präludium*, bars 17-19



In some of Schoenberg's later works, he uses a flexible twelve-note system, in which he allows himself the freedom to change the order of the pitches within a hexachord, along with the liberty of octave doublings.<sup>31</sup> Ethan Haimo, in concurrence with Walter Bailey (whose work will be discussed later), considers this to be a conscious decision by Schoenberg to allude to a more Romantic style in his late works.<sup>32</sup> One of Schoenberg's later works which displays such tendencies is *Ode to Napoleon Buonaparte*, Op. 41, composed during the same year as the Piano Concerto (1942).<sup>33</sup> In the *Ode*, the harmony seems to be distilled as the work goes on. As shown in Ex. 29a, major and minor triads often feature prominently. However, they do not always appear as block chords; Ex. 29b shows an instance of triads as broken chords.

---

<sup>31</sup> See Perle, 103-4 and 134.

<sup>32</sup> Ethan Haimo, 'The Late Twelve-tone Compositions' in Walter B. Bailey, ed., *The Arnold Schoenberg Companion* (Westport, Connecticut: Greenwood Press, 1998), 165-7.

<sup>33</sup> For a detailed examination of *Ode to Napoleon Buonaparte*, see Silvina Milstein, *Arnold Schoenberg: Notes, Sets, Forms* (Cambridge: Cambridge University Press, 1992), 119-56.

Ex. 29. Schoenberg, *Ode to Napoleon Buonaparte*, Op. 41, piano<sup>34</sup>

(a) bar 219, triads



(b) bar 255, triads as broken chords



A particular triad – E-flat major – features prominently at times, often in root position (Exs. 30a and b). The appearance of the E-flat chord at several points during the work may justify the final triumphant E-flat major chord: see Ex. 31. Regarding the final E-flat major root-position chord, Schoenberg famously remarked to René Leibowitz on July 4, 1947: ‘it is true that the Ode at the end sounds like E flat. I don’t know why I did it. Maybe I was wrong, but at present you cannot make me feel this.’<sup>35</sup>

Quasi-bitonal elements are also prevalent: one example is at bars 263-4 in the piano part, where clearly identifiable and differing triads are present in each hand (Ex. 32). Furthermore, in bar 264, one needs little imagination to interpret the B-flat bass note in the piano as a dominant, especially since the tonic arrives soon after this point, in contrast to the problems of temporal distance between the tonic and dominant identified in

<sup>34</sup> Excerpts are taken from Arnold Schoenberg, *Ode to Napoleon Buonaparte*, Op. 41 (New York: G. Schirmer, Inc., 1945).

<sup>35</sup> Schoenberg to René Leibowitz, 4 July, 1947 in Arnold Schoenberg, *Letters*, ed. Erwin Stein, trans. Eithne Wilkins and Ernst Kaiser (London: Faber and Faber, 1964), 248.

Op. 11, No. 2.

Ex. 30. Schoenberg, *Ode to Napoleon Buonaparte*, Op. 41, strings, E-flat major triads

(a) bars 225-8

Musical score for strings, bars 225-228. The score is written for four staves (Violin I, Violin II, Viola, and Cello/Double Bass). The key signature is E-flat major. The music features a series of E-flat major triads (E-flat, G, B-flat) in various positions across the staves. Bar 225 starts with a forte (f) dynamic. Bar 226 has a piano (p) dynamic. Bar 227 has a piano (p) dynamic. Bar 228 has a piano (p) dynamic. The triads are sustained and often have a slight tremolo or vibrato effect.

(b) bar 234

Musical score for strings, bar 234. The score is written for four staves (Violin I, Violin II, Viola, and Cello/Double Bass). The key signature is E-flat major. The music is marked **POCO RIT.** (Poco Ritardando). The score shows a series of E-flat major triads (E-flat, G, B-flat) in various positions across the staves. The dynamics are piano (p). The triads are sustained and often have a slight tremolo or vibrato effect.

Ex. 31. Schoenberg, *Ode to Napoleon Buonaparte*, Op. 41, bars 265-7

Musical score for strings and piano, bars 265-267. The score is written for four staves (Violin I, Violin II, Viola, and Cello/Double Bass) and a piano. The key signature is E-flat major. The music is marked **MOLTO RIT.** (Molto Ritardando). The score shows a series of E-flat major triads (E-flat, G, B-flat) in various positions across the staves. The dynamics are forte (ff). The triads are sustained and often have a slight tremolo or vibrato effect.

Ex. 32. Schoenberg, *Ode to Napoleon Buonaparte*, Op. 41, bars 263-4,  
piano



Thus, despite the introduction of a new compositional technique (serialism), the above commentary reveals that Schoenberg continued to explore tonal coherence across a range of works. Arnold Whittall states that while serial music can be an alternative to tonal music, it still coexists and interacts with tonality.<sup>36</sup> I agree with this, but take issue with another of Whittall's assertions that, ultimately, it is most beneficial to focus one's attention on the development of ideas, shapes or motifs, rather than on tonal allusions, in serial music.<sup>37</sup> As the above discussion has shown, taking such sweeping statements at face value may lead to an unwillingness to acknowledge tonal moments, which, in certain atonal and serial works, may in fact be an important part of the musical language. Jim Samson concurs with Whittall, urging the analyst to be circumspect about 'the usefulness and the limitations of an approach which emphasize[s] an atonal work's relationship to its tonal "background"'.<sup>38</sup> He claims that, in such music, pitch may be used to create structure through means other than tonal (e.g. serialism) and that pitch might be used outside its traditional presentation in themes and motifs (this does not apply to serialism, which is generally

---

<sup>36</sup> Whittall, *Serialism*, 3.

<sup>37</sup> Whittall, *Serialism*, 49.

<sup>38</sup> Jim Samson, 'Schoenberg's "Atonal" Music', *Tempo*, New Series, 109, June, 1974, 24.

highly dependent on integrating motifs).<sup>39</sup>

As will be now be clear, I do not consider the exploration of tonal elements to be redundant. In Chapters 4 and 5, I examine the pervasiveness of the above traits in the Concerto, beginning with an assessment of the work's formal structure, followed by a presentation of tonal elements. Prior to this, the following chapter will briefly assess other authors' analyses of the Concerto.

---

<sup>39</sup> Samson, 24.

### Chapter 3. An Overview of Published Analyses of Schoenberg's Piano Concerto

There is no conventional pitch-based analytical method that can span all of the styles of Western art music; neither an analyst nor a casual listener approaching Schoenberg's music can come armed with a holistic theoretical understanding of its language. This is made especially difficult by the fact that Schoenberg's language is not consistent throughout his output. As mentioned in the Introduction, an analysis of a work's serial structure can serve as some sort of aid, but this leaves a great deal of its fabric still to be assessed.

Alexander Goehr takes a rather open-minded approach to analysis, recalling Messiaen's suggestion that Second Viennese compositions be analysed as if their chords were classifiable in a traditional harmonic way. Goehr believes that it might be fruitful for an analyst to describe a masterpiece using whatever language he or she should see fit.<sup>1</sup> While nowadays, Messiaen's approach seems misapplied, one recognises that, at the time he wrote this, Schoenberg's music was still fresh and relatively unknown.

The authors who have contributed significantly to the literature on Schoenberg's Piano Concerto have approached the work in various ways, several even ignoring its serial elements. Eight analyses are briefly discussed below, with the aim of determining points which relate to my own lines of enquiry. In drawing together some of the most significant published

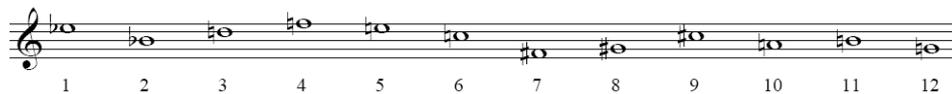
---

<sup>1</sup> Alexander Goehr, *Finding the Key: Selected Writings of Alexander Goehr* (London: Faber and Faber Limited, 1998), 55.

sources on the work, it is hoped that the reader will benefit from being able to study the various approaches in tandem. Before this, the four forms of the row are first shown. Example 33 presents the row and its permutations, the prime form starting on E-flat, and here called P-3 (thus taking C as ‘0’).

Ex. 33. Schoenberg, Piano Concerto, Op. 42, row-forms<sup>2</sup>

(a) Basic Series (P-3)



(b) Retrograde Inversion (RI-8)



(c) Retrograde (R-3)



(d) Inversion (I-8)



### Analysis by Brian Alegant

Brian Alegant has achieved widespread recognition for his detailed analyses of twelve-note music. He particularly admires the cadenza of the Piano Concerto, describing it as ‘the most extended and sophisticated trichordal passage in Arnold Schoenberg’s twelve-tone oeuvre’ and a ‘brilliant

<sup>2</sup> See Arnold Schoenberg, *Concerto for Piano and Orchestra, Op. 42* (Vienna: Philharmonia, 1972).

virtuosic display'.<sup>3</sup> As mentioned previously, the focus of this dissertation is not set-theory (on which Alegant's work is based). However, Alegant reveals details of the construction of the cadenza, which he demonstrates is based on trichords. He asserts that one can learn to hear set-classes (which stem from Forte's set-theory), and if this is indeed the case, as it clearly is for Alegant, then this certainly validates the usefulness of such analysis. Therefore, while he is concerned mostly with exploring the compositional structure of the work, he is keen to link his findings to hearing.<sup>4</sup>

Alegant makes a fascinating – and, with regard to my own approach, pertinent – point: he observes that there may be some tonal references towards the end of the piano cadenza and uses traditional figuring to aid his explanation.<sup>5</sup> One such instance is given in Ex. 34.

Ex. 34. Schoenberg, Piano Concerto, Op. 42, piano, bars 296-7, analysis by Alegant<sup>6</sup>

The trigger for hearing this tonal reference may be the hint of a dominant seventh chord in A in bar 296. The perfect fifth at the bottom of

<sup>3</sup> Brian Alegant, 'Inside the Cadenza of Schoenberg's Piano Concerto', *Integral*, 16/17, 2002/2003, 67.

<sup>4</sup> Alegant, 'Inside the Cadenza', 98-100.

<sup>5</sup> Alegant, 'Inside the Cadenza', 87.

<sup>6</sup> Solo and two-piano excerpts are taken from Arnold Schoenberg, Concerto for Piano and Orchestra, Op. 42, reduction for a second piano by Edward Steuermann (New York: Schirmer, 1944).

the left-hand broken chord, and the fact that all the pitches in bar 296 belong to the scale of A major (the ‘tonic’), contribute to this effect. Once this harmony has been highlighted, Alegant is able to propose that the dominant seventh resolves onto its tonic, A, in bar 297. It is the potential for moments such as these which fascinates me, and which part of my work will explore.

### **Analysis by Walter B. Bailey**

Bailey assesses the work’s links with tradition; he believes that, in the Concerto, Schoenberg succeeded in combining heart with brain.<sup>7</sup> That is to say that, in this work, Schoenberg’s new compositional method (serialism) surpassed its use as an intellectual construct and became a tool which contributed to creating an emotionally-charged work. According to Bailey, Schoenberg may have written to a certain extent with his audience in mind, and this in itself may have led to a more approachable musical style. Bailey also asserts that the work’s four-movement structure mimics symphonic, rather than concerto, form (this presents an alternative view to the one expressed by Sabine Feisst, to be discussed in Chapter 4). He comments on the nature of the phrase structure: pairs of phrases pervade the opening of the work, in keeping with a technique used extensively by composers such as Brahms. This technique also adds to the comprehension and memorability of the music. The sparse texture also maintains a transparency which is in keeping with the simple musical style.

One contentious point is how the opening of the fourth movement is

---

<sup>7</sup> Walter B. Bailey, ‘Listening to Schoenberg’s Piano Concerto’ in Jennifer Shaw and Joseph Auner, eds., *The Cambridge Companion to Schoenberg* (Cambridge: Cambridge University Press, 2010), 238.

‘bitingly dissonant’ due to the simultaneous sounding of G-sharp, F-sharp and G-natural on the first beat of bar 330 (Ex. 35).<sup>8</sup>

Ex. 35. Schoenberg, Piano Concerto, Op. 42, bars 329-30, piano



As shown in Chapter 2, Smith Brindle’s tension scale would lead to a very different interpretation of such widely spaced pitches; namely, a relatively consonant sound. However, Bailey’s comments are a useful stimulus with regard to what features one might examine in the Concerto, in light of Schoenberg’s alleged relaxed musical style.

### **Analysis by Alfred Brendel**

Alfred Brendel, one of the few analysts considered here who is an eminent professional pianist (though now retired), claims that one can, with some imagination, occasionally hear passages of B-flat major, F-sharp minor and C major in the opening 39 bars, derived from the shape of the original row.<sup>9</sup> While he does not provide us with an annotated musical analysis to support his interpretation, it is not difficult to apply his explanation to the score, as shown in Ex. 36. I have considered Brendel’s approach only in the first six bars, but it could be prolonged. Brendel takes into consideration the harmonies beneath the right-hand melody, and the intermittent key centres

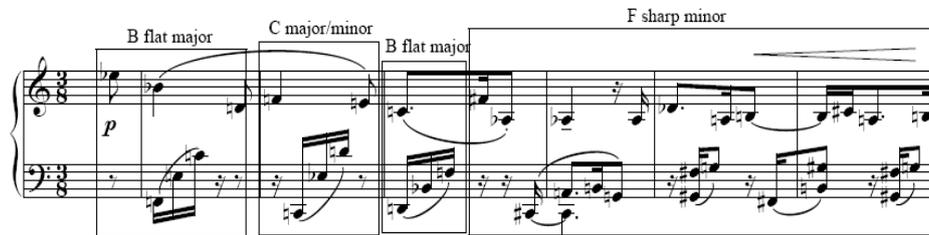
---

<sup>8</sup> Walter B. Bailey, ‘Listening to Schoenberg’, 244.

<sup>9</sup> Alfred Brendel, *Alfred Brendel on Music* (London: Robson Books, 2001), 315. This originally appeared in ‘The New York Review of Books’, 16 February, 1995.

he hears are undoubtedly created by relating the pitches occurring at any given time to the scale or triad most closely associated with them.

Ex. 36. Schoenberg, Piano Concerto, Op. 42, bars 1-6, analysis by Brendel



As will be seen later, my approach to assessing the opening harmonic material of the Concerto relates quite closely to Brendel's. Overall, he perceives no tonal centre or hint of functional harmony.<sup>10</sup> However, he notes that the final chord is a 'kind of C major' which 'recalls Stravinsky's use of harmony, which makes simultaneous use of tonic and dominant'.<sup>11</sup> As I will show later, this chord may be perceived, alternatively, as a C major seventh chord.

### Analysis by Kenneth Hicken

With regard to the Piano Concerto, Kenneth Hicken invokes the term, 'fused bitonality', stating that its characteristics, as revealed in the Concerto, include

- 1) existence of two simultaneous tonal centers at the interval of the tritone
- 2) organization of all pitch items about these centers as two 'tonal components', one for each center
- 3) intimate intermixture of elements from one component with elements of the other
- 4) simultaneous membership of many pitch items in both

<sup>10</sup> Brendel, 316.

<sup>11</sup> Brendel, 315.

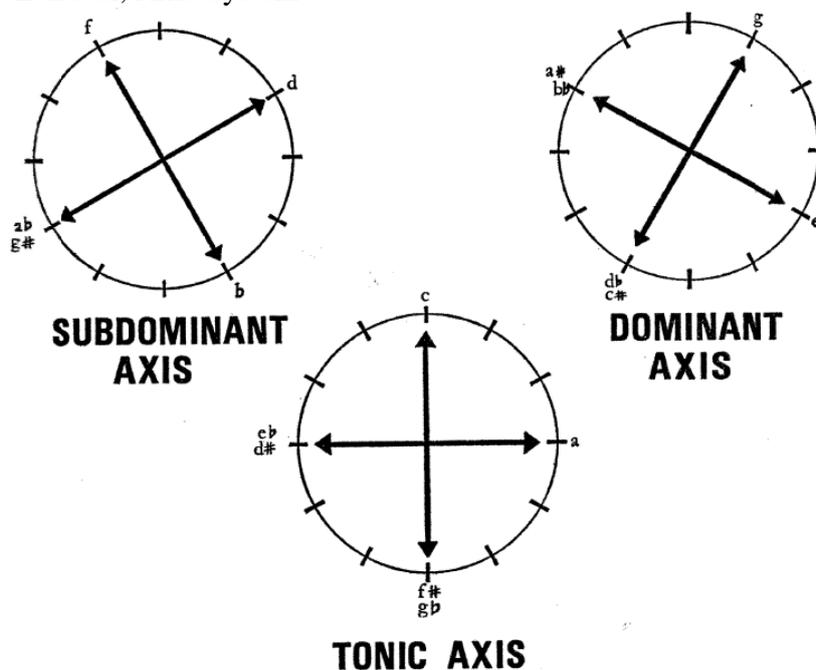
components

5) susceptibility of each component to (quasi-Schenkerian) structure-prolongation analysis

6) susceptibility of the Theme as a whole to such analysis<sup>12</sup>

He claims to have found evidence of this phenomenon throughout Schoenberg's serial compositions; in the Concerto, he cites as evidence bars 1-13 and 172-5, where the tonal centres are C and F-sharp.<sup>13</sup> The pitches, C and F-sharp, can be connected to Ernő Lendvai's Axis System (which relates to Bartók's music), due to the tritonal relationship (see Fig. 1).

Fig. 1. Lendvai, Axis System<sup>14</sup>



Hicken's standpoint has some similarities with those of Brendel (above) and Newlin (to be discussed below), in that these authors also refer to C in their

<sup>12</sup> Kenneth Hicken, 'Schoenberg's 'Atonality': Fused Bitonality?', *Tempo*, New Series, 109, June, 1974, 28.

<sup>13</sup> Hicken, 35.

<sup>14</sup> Ernő Lendvai, *Béla Bartók: An Analysis of his Music* (London: Kahn & Averill, 1971), 3.

analyses (Brendel also refers to F-sharp).<sup>15</sup> Of course, the notion of considering both of these pitches as simultaneous tonics differs from the approaches of both Brendel and Newlin.

### **Analysis by Martha Hyde**

Martha Hyde is concerned mainly with investigating what we can learn about Schoenberg's compositional process through his sketches. She notes that Schoenberg was preoccupied with melody and would often write this first and only afterwards add secondary voices. Once Schoenberg had mastered this approach, he was able to compose without creating detailed sketches of individual passages.<sup>16</sup> Hyde also acknowledges Leonard Stein's assertion that Schoenberg wrote the complete opening melody of the Piano Concerto before adding harmony.<sup>17</sup>

Whilst Hyde offers no detailed analytical work, she supports the notion that Schoenberg thought in quite traditional ways at times, composing as a melodist first. Her work also gives some justification for Dika Newlin's analysis of the melody without full consideration of the context (presented later). Hyde's contribution may also help to explain why, as I will show in Chapter 4, the recurrence of melodies in the work plays an important part in creating tonal unity.

---

<sup>15</sup> Michael Thomas Roeder also mentions that some listeners hear C and F-sharp as opposing tonal regions in the Concerto: see Michael Thomas Roeder, *A History of the Concerto* (Portland: Amadeus Press, 1994), 371.

<sup>16</sup> Martha M. Hyde, 'The Format and Function of Schoenberg's Twelve-Tone Sketches', *JAMS*, 36/3, Autumn, 1983, 478-9.

<sup>17</sup> Leonard Stein, 'From Inception to Realization in the Sketches of Schoenberg' in *Bericht über den 1. Kongress der Internationalen Schönberg-Gesellschaft*, ed. Rudolf Stephan (Vienna: Lafite, 1978), 213-27.

## Analysis by Guerino Mazzola and Benedikt Stegemann

The analytical techniques of Mazzola and Stegemann contrast markedly with those discussed so far. Their methods are derived from serial analysis and set-theory; however, in contrast to what these techniques might ordinarily reveal, Mazzola and Stegemann actively seek out tonal elements:

one cannot expect a straightforward presence of tonal material in Schönberg's dodecaphonic compositions. Our idea is rather to find more abstract structures which are strongly related to tonality as well as to dodecaphonic composition.<sup>18</sup>

If one leaves aside the particularities of their mathematical excursions, one is left with conclusions that complement the interpretations of some of the other authors presented here. Their investigation is designed to explore the existence of symmetry in music, hence the arrival at the tritone relationship which divides the octave exactly in half, as shown in the extract below.<sup>19</sup>

THEOREM 4.1 [extract] There are precisely two major tonalities, viz. the tritonal pair  $Maj_c$ ,  $Maj_{\sharp}$ , which are represented by  $K_c$ . There are precisely two minor tonalities, viz. the tritonal pair  $Min_d$ ,  $Min_{ab}$ , which are represented by  $K_c$ . Their union yields the orbit  $K_c \cdot Maj_c$ .<sup>20</sup>

As with Hicken's observations, the work of Mazzola and Stegemann displays similarities with that of the previously mentioned Bartók specialist, Ernő Lendvai. In Theorem 4.1 (above), Mazzola and Stegemann refer to two tritonal pairs: C and F-sharp, along with D and A-flat. In Lendvai's Axis System, tonic counterpoles are C and F-sharp, along with E-flat and A; subdominant counterpoles are F and B, with A-flat and D (see Fig. 1).

---

<sup>18</sup> Guerino Mazzola and Benedikt Stegemann, 'Hidden symmetries of classical tonality in Schönberg's dodecaphonic compositions', *JMM*, 2/1, March, 2008, 37.

<sup>19</sup> Mazzola and Stegemann, 37.

<sup>20</sup> Mazzola and Stegemann, 41. 'K' represents 'the essence of dissonance production in terms of transformation symmetry': see Mazzola and Stegemann, 39.

Mazzola and Stegemann consider B-flat to be the tonic with regard to the original row, justified by the fact that the first hexachord contains pitch-classes 1-5 of the B-flat major scale, and also because a B-flat major triad is present in bars 1-2 (piano, right hand): thus they label B-flat as ‘0’. The techniques which Mazzola and Stegemann have used to demonstrate the significance of B-flat are in fact similar to those of Brendel: relating the pitches to the closest scale or triad in order to determine a tonic.

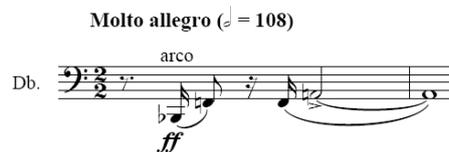
They later state that both the opening (bars 1-43) and bars 444-67 (a reprise of the opening right-hand piano melody) are ‘situated in the basic paradigm of tonic B-flat’.<sup>21</sup> This is in complete contrast to the tonic pitches suggested by the other authors discussed so far. Regarding the opening phrase of the Concerto, they also note that the hemiola in bars 4-6 is an anticipation of the ‘hatred’ expressed overtly in the second movement, although in the opening, a pleasant mood still prevails.<sup>22</sup> This should not be confused with the actual ‘Hatred’ motif, noted by Sabine Feisst, which appears in particular in the first and second movements (Exs. 37a and b).<sup>23</sup>

Ex. 37. Schoenberg, Piano Concerto, Op. 42, ‘Hatred’ motif

(a) bar 86, piano



(b) bar 176, double basses<sup>24</sup>



<sup>21</sup> Mazzola and Stegemann, 48.

<sup>22</sup> Mazzola and Stegemann, 47-8.

<sup>23</sup> Sabine Feisst, *Schoenberg's New World: The American Years* (New York: Oxford University Press, 2011), 76-7.

<sup>24</sup> See Arnold Schoenberg, *Concerto for Piano and Orchestra, Op. 42* (Vienna: Philharmonia, 1972).

Mazzola and Stegemann note a contrast between the tonal implications of the first eight bars of the work and bars 133-42 (where the original right-hand piano theme is played again, this time by Violin 1). Thus, they acknowledge that two occurrences of the same melody, accompanied by different material, may not necessarily point towards the same tonal region.<sup>25</sup>

They notice a constancy of ‘paradigm tonic 7’ in the opening of the second movement (meaning F in this case), supported by a recurrence of B-flat, the first pitch of the row-form in use at this point (P-10), appearing repeatedly as a bass note in bars 176, 178 and 179. Ultimately, they claim that thematic and tonal structure is negated at the end of the movement by a twelve-note hexachord in bars 259-61.<sup>26</sup> The opening 14 bars of the third movement are deemed to be based on the ‘paradigm tonic 6’ (i.e. E). Mazzola and Stegemann also note Schoenberg’s use of the B-A-C-H motif here, appearing (transposed and in a different ordering) as D-E-flat-C-D-flat in bars 264-6. They recognise that this is symbolic but claim that it is devoid of tonal relevance.<sup>27</sup> While they believe that the last movement does not generally intensify what they refer to as the ‘tonal trace’, as has already been mentioned, they assert that bars 444-67 represent a return to the ‘paradigm tonic’ B-flat (although the passage is tonally slightly different from the opening 43 bars, since all twelve pitches are now used).<sup>28</sup>

Their interest in assessing tonal elements is notable, especially since

---

<sup>25</sup> Mazzola and Stegemann, 50.

<sup>26</sup> Mazzola and Stegemann, 49.

<sup>27</sup> Mazzola and Stegemann, 50. In fact, the B-A-C-H motif appears in movements I, III and IV, as noted by Sabine Feisst. See Feisst, 74.

<sup>28</sup> Mazzola and Stegemann, 50.

their approach is derived from an analytical method which would normally preclude such discussion. The method used to determine the original B-flat-tonic-nature of the row is an approach which I, too, will rely on to some degree in Chapters 4 and 5.

### Analysis by Dika Newlin

Below, Newlin's analysis of the melody of the opening 39 bars is given (Ex. 38).

Ex. 38. Schoenberg, Piano Concerto, Op. 42, bars 1-39, piano, right hand, analysis by Newlin<sup>29</sup>

The musical score is presented in a single system with six staves. The key signature is one flat (B-flat). The analysis includes the following labels:

- Staff 1: C: VII b1, I, II (root D, 7 occurs on first beat, b5 first beat, #3 l.h.)
- Staff 2: V, I, VII b1
- Staff 3: III b5 b1, V7, II neapolitan (C#=D<sup>b</sup>)
- Staff 4: I, V III b5 b1, V7
- Staff 5: III b5 b1, V7
- Staff 6: III b5 b1, VII b1, I

<sup>29</sup> Dika Newlin, 'Secret Tonality in Schoenberg's Piano Concerto', *PNM*, 13/1, Autumn-Winter, 1974, 138. I have added bar numbers to the score.

The opening piano melody is analysed (with some supporting harmonic pitches); C is suggested as the tonic. Newlin’s justification for this is demonstrated by her presentation of the ending of the work as an apparent C major chord (to be discussed below). As seen in Ex. 38, Newlin attempts to find tonal references produced almost exclusively by the right hand in the opening, with just a few references to the supporting left-hand harmony. However, some of her suggested chord-designations would be negated by the left hand, if she included these harmonic notes consistently. For example, ‘V’ in bar 7 may be alternatively described (using her own system) as III7 (flat 1, flat 5), if the left-hand harmony is also taken into consideration. Alternatively, the designation v (flat 3) – i.e. a chord of v (minor) in first inversion – may also be considered correct. Examples 39a and b show how groups of pitches may be connected to form the above chord designations.

Ex. 39. Schoenberg, Piano Concerto, Op. 42, bar 7, alternative interpretations

(a) Interpretation 1: III7 (flat 1, flat 5)      (b) Interpretation 2: v (flat 3), first inversion



Newlin invokes all the pitches of the final chords (therefore using harmony) to support her case (although she has not included the alterations

to the V9 chord in the final cadence, in contrast to her method in the opening 39 bars): see Ex. 40. In fact, in bar 491, the G's are sharpened and the B is flattened. While the musical extracts at the beginning and the end are different from each other, it is difficult to justify using two different approaches to create the analysis, especially since Newlin actually has to ignore certain parts of the supporting harmony in the opening melody, in order to prove her case.

It could be argued that the hidden relationships suggested by Newlin are tenuous indeed, because the left hand occasionally militates against them, as I have demonstrated above. At the same time, I do not deny that some similarity exists between Newlin's approach and my own; in each case, in order to make tonal sense of the material, certain elements must be prioritised while others, not heard to be significant, are necessarily passed over. It is clear that assessing Schoenberg's music remains a difficult task.

Ex. 40. Schoenberg, Piano Concerto, Op. 42, bars 491-2, piano, analysis by Newlin<sup>30</sup>

Comparing Newlin's analysis with Brendel's highlights how two different analytical approaches can arrive at oppositional results, since the only place they agree on is bar 2 (Newlin does not suggest chords for every

---

<sup>30</sup> Newlin, 139.

bar; for example, bars 5 and 6 are bare). Regarding an overall tonal scheme, they differ again, since Brendel claims that he can hear no overall tonal centre or hint of functional harmony, whereas Newlin argues for a tonal centre of C.

### Analysis by Rudolf Stephan

Rudolf Stephan's analysis of the Piano Concerto is a detailed one, though his comments mostly pertain to the row and motifs. He does not examine tonality or harmony in the work. His analysis, given below in Fig. 2, appears in the study score of the Concerto and is presumably intended as a general introduction to the formal structure of the work.

Fig. 2. Stephan, 'Formal layout'<sup>31</sup>

<b>Formal layout</b>	
<p>Bars 1—175: 1st movement (Waltz); 176—163; 2nd movement (Scherzo); 264—328: 3rd movement ("Adagio"); 329—492: 4th movement (Rondo)</p> <p><b>I. Andante</b> (♩ = 44; ♩ = 132), 3/4-metre, tripartite, often in passacaglia style</p> <p>1— 85 First section (bipartite: B. 1—46; 46—85)</p> <p>    1— 39 tripartite opening solo (based on basic set and I 5)</p> <p>        1—16 1st part (main theme)</p> <p>        17—28 2nd part</p> <p>        29—39 3rd part (climactic variant of the 1st part)</p> <p>    39— 46 transitional tutti (continuing motives from B. 33 ff., 1st transitional motive)</p> <p>    46— 85 tripartite tutti with piano obligato</p> <p>        46—62 resumption of the 1st part, transposed by a fifth (tutti), combination with the contrasting transitional motive (solo piano)</p> <p>        62—74 resumption of the 2nd part, transposed by a major second, combination with the musical idea developed since B. 39, drawn out in passage work</p>	<p>75—85 Resumption of the 3rd part in a minor second transposition, combination with the musical idea developed since B. 39</p> <p>86—132 Second section (development character) (bipartite: B. 86—106; 107—132)</p> <p>    86— 89 transitional solo (2nd transitional motive)</p> <p>    90—102 Theme of the 1st part (major sixth transposition) combined with both transitional motives, main theme first in the bass (double bass — 1st horn), then in the upper voice (flutes/oboes/clarinets)</p> <p>    103—106 splitting up of the motive from B. 102 (tutti, without piano)</p> <p>    107—116 theme of the 2nd part, minor seventh transposition, worked out contrapuntally (tutti, without piano)</p> <p>    117—121 continuation (augmented fourth transposition)</p> <p>    122—126 continuation, dense contrapuntal treatment with changing chords (minor sixth transposition)</p> <p>    126—131 cadenza with symmetrical</p>

(continued overleaf)

<sup>31</sup> Rudolf Stephan, 'Formal layout' in Arnold Schoenberg, Concerto for Piano and Orchestra, Op. 42 (London: Philharmonia, 1972), 7.

Fig. 2 (cont.). Stephan, 'Formal layout',<sup>32</sup>

- pitch sequences (juxtaposition of the notes of the associated set forms)
- 132 transitional tutti bar
- 133—175 Third section (continuation of the development, recapitulation, and transition to the 2nd movement)
- 133—142 recapitulation of the main theme (1st violin), virtuosically ornamented by the piano, with a rich orchestral accompaniment, and of the 1st transitional motive (B. 140); bipartite (B. 133—155, 155—175)
- 142—155 strongly altered, broken-up form of the theme from the 2nd part (B. 17 ff.), with transition to the 1st transitional motive
- 155—157 transitional bars (solo)
- 158—175 resolution with elements of development, preparation of the scherzo theme (ab B. 160)
- II. Molto allegro** ( $\text{♩} = 108$ )  $\frac{2}{2}$ -metre
- 176—198 Main section (beginning with fifth transposition of the series)
- 199—214 Intermediate section with pointed rhythms (based on fourth transposition)
- 215—234 Middle section related thematically to the main section
- 215—222 poco tranquillo ( $\text{♩} = \text{♩}$ ), based on the minor sixth transposition
- 223—231 climax section ("stringendo"), based on minor second transposition
- 231—234 transitional bars (climax) with anticipation of the recapitulation
- 235—263 Recapitulation (intensified) and coda
- 235—242 return of the beginning of the movement with major third transposition
- 243—263 coda (resolution with elements of development), based on transpositions of minor sixth (B. 253—263) and minor second (B. 243—252)
- III. Adagio** ( $\text{♩} = 56$ )  $\frac{2}{2}$ -metre. Bipartite form
- 264—302 1st part
- 264—276 After two introductory bars,
- main section (tutti), based on tritone transposition
- 277—285 after an introductory solo bar, free inversion of the preceding bars, based on major second transposition, with added new principal voice in the solo piano
- 286—302 Piano Solo (piu largo,  $\text{♩} = 44$ ) and transition to the 2nd part
- 303—329 2nd part
- 303—307 Return to B. 266 ff. (intensified, but shortened) (tutti)
- 308—317 Return to B. 218 ff. (tutti)
- 318—329 Piu largo ( $\text{♩} = 44$ ). Return to B. 286 ff. (solo-tutti). B. 325 ff. Piano cadenza as transition to the finale.
- IV. Giocoso (moderato)**  $\text{♩} = 76$ ,  $\text{♩}$ -metre, in the form of a sonata rondo
- 330—348 Ritornello (bipartite)
- 330—337 1st part (based on basic set)
- 338—348 2nd part (frequent change of transposition)
- 349—370 Couplet (beginning with tritone transposition)
- 371—389 Ritornello (based on basic set). Contrapuntal combination with the couplet theme (in the solo piano), from B. 379 of the 2nd part
- 390—419 meno mosso  $\text{♩} = 96$ , development. B. 404 reminiscence of the adagio theme (in the 1st violin) (cf. B. 266 f.), B. 406 reminiscence of the main theme of the 1st movement (in the clarinet), B. 407 of the main theme of the rondo (in the piano)
- 420—429 Couplet (theme in the flute, then in the clarinet), with transformation of the adagio theme as an additional principal voice (1st oboe)
- 430—443 Ritornello with developmental elements
- 444—467 Recapitulation of the main theme of the 1st movement (in contrapuntal combination with other themes and motives) (apotheosis)
- 468—492 Coda (from B. 481 based on the basic set)

R. St.

Having considered the above analyses, it is now possible to present some conclusions regarding their differing approaches. The most relevant feature of Brian Alegant's article to my own work is his acknowledgement of a potential tonal reference towards the end of the cadenza. Walter Bailey attempts to contextualise the Concerto in terms of Schoenberg's

<sup>32</sup> Stephan, 8.

consideration of his audience, therefore acknowledging the tendency for a more comprehensible style in this work.

Brendel's comments are not without ambiguity, since his suggested key centres are not accompanied by a score to show exactly where they occur. However, if I have succeeded in demonstrating his points accurately, his approach to tonality in the opening of the Concerto seems to be derived from hearing many changing local tonal centres governed by the momentarily-occurring harmonies. The key centres he considers significant are B-flat major, F-sharp minor and C major. Brendel does not prioritise any pitch, and therefore perceives no key centre either at the opening or for the work as a whole.

Hicken's claim that C and F-sharp function as tonal centres in the opening of the work lacks supporting material (such as the relevant instruments or bar numbers he may be referring to which reveal this feature), so the reader is left wanting to know more. Nevertheless, the notion of fused bitonality is intriguing and, out of all the analyses presented, his is the only one which indicates the existence of two equally-important referential pitches.

Hyde's insight will prove to be important for my own approach in Chapters 4 and 5 and, as mentioned above, her assertions also justify Newlin's prioritisation of melody. Mazzola and Stegemann's mathematical work ventures beyond Allen Forte's set-theory; furthermore, in contrast to Forte (who was reluctant to accept the idea that tonality exists in the atonal and serial works of Schoenberg), Mazzola and Stegemann have used their work to relate to tonality and to demonstrate the existence of B-flat as the

tonic in the opening 39 bars of the Concerto.

Newlin is the only author to attempt a full analysis of the opening, recognising C as the tonic (and G as the dominant). However, she has been selective in her inclusion of references to the harmonies, in order to assert her ‘proof’ of the tonic in the music (i.e. she has included harmonic references which support the notion of C as tonic and ignored references which negate it). As mentioned in Chapter 2, even though, historically, harmony may be derived from counterpoint, the harmonic sound at any one moment – if one wishes to discuss it – is the result of the combination of the parts. In my analytical work which follows, I will demonstrate that there are indeed some benefits to discussing the row (and certain melodies) in isolation, partly because certain tonal properties of the row itself exhibit connections to some harmonic aspects of the work. However, when examining harmony, my approach differs from Newlin’s (and Hopkins’, discussed previously in Chapter 2); I assess the full harmonic picture, since I believe the segregation of single melodic lines ignores the more important harmonic implications. Stephan (along with Bailey) acknowledges Schoenberg’s traditional tendencies and is the only author to have assessed the work from a comprehensive structural perspective.

Figure 3 compares the above analysts’ interpretations of the first 39 bars of the Concerto; since Alegant, Hyde and Stephan have not commented on the opening in detail, they cannot be included here. Despite some common ground, it is clear that no two authors agree entirely. The purpose of my study is to feed into the discussion, so that as many approaches as possible are available for consideration by the reader. Each writer has

demonstrated his or her own personal approach to discovering salient features of the music. Inevitably, my approach will also be a personal one, not least because performing a work cannot fail to influence one's relationship to it. As will be shown, it is this experience of performing the work which has led me at times to some perhaps unusual – yet from a personal perspective, enlightening – perceptions of the harmony. Aside from the general lack of concurrence among the analyses, there is widespread interest in seeking out tonal elements in the Concerto; my work stems from this common interest.

Fig. 3. A comparison of some analyses of Schoenberg's Piano Concerto

<b>Author</b>	<b>Overall tonality</b>	<b>Important pitches</b>
Brendel	None	C, F-sharp, B-flat
Hicken	C, F-sharp	C, F-sharp
Mazzola & Stegemann	B-flat	B-flat, F, E
Newlin	C	C, G

## Chapter 4. A New Appraisal of Schoenberg's Piano Concerto, Part I:

### Melodic Elements

Here and in the final chapter, I assess Schoenberg's Piano Concerto in some detail, bearing in mind the analyses previously outlined. Firstly, some background information on the work is presented, followed by a discussion of the formal structure of the work; subsequently, there is an assessment of the structural use of melody and motif, for which Schoenberg's own views serve as a useful introduction. The material on the formal structure highlights the overall shape of the work, while the discussion of melody and motif may be seen loosely as an extension of Walter Bailey's perception of traditional elements in the work, expressed in the previous chapter. Though not directly related to aspects of tonality, the exploration of conventional musical features helps to contextualise the Concerto.

As indicated in Walter B. Bailey's article, 'Oscar Levant, and the program for Schoenberg's Piano Concerto', the circumstances surrounding the creation of the work are unusual and intriguing. Pianist Levant initially commissioned Schoenberg to write a piano piece for him for a fee of \$100, but the work grew dramatically into a concerto. With a certain degree of shamelessness, Schoenberg attempted to get Levant on board as commissioner of the expanded work, but now asked for \$1,000; this request was denied. Nevertheless, Schoenberg completed the work in December, 1942, despite nobody having agreed to his revised fee. Ultimately, Henry Clay Shriver (a former pupil of Schoenberg at UCLA) agreed to the sum and as a result is the dedicatee of the work. Edward Steuermann gave the

first performance of the Concerto on February 6, 1944 in New York, with the NBC Orchestra, under the direction of Leopold Stokowski.<sup>1</sup>

Schoenberg produced a programme for the work, although this was never published in conjunction with it. The function of the programme is not completely clear and, according to Walter Bailey, although it is a useful tool in understanding the creative process, it is not essential for the listener or performer. The programme is as follows:

I Life was so easy  
II Suddenly hatred broke out  
III A grave situation was created  
IV But life goes on<sup>2</sup>

The programme could be read as autobiographical: ‘Life was so easy’ might represent Schoenberg’s way of life before the war; ‘Suddenly hatred broke out’ could represent the Nazi takeover; ‘A grave situation was created’ might be the war and Schoenberg’s need to leave Europe; and ‘But life goes on’ could represent Schoenberg’s return to normal life in California.<sup>3</sup>

We move now to a brief discussion of the formal structure of the work. With regard to the large-scale structure, Allen Shawn claims that Brahms exerted a life-long influence on Schoenberg through the ‘concision, asymmetry, and harmonic adventurousness of his musical language’ and its ‘subtle relationship to both tradition and innovation’.<sup>4</sup> This implies that Schoenberg could not relinquish the traditional elements he had

---

<sup>1</sup> Walter B. Bailey, ‘Oscar Levant, and the program for Schoenberg’s Piano Concerto’, *JASI*, 6/1, 1982, 57-63.

<sup>2</sup> Walter B. Bailey, ‘Oscar Levant’, 64.

<sup>3</sup> Walter B. Bailey, ‘Oscar Levant’, 64.

<sup>4</sup> Allen Shawn, *Arnold Schoenberg’s Journey* (Cambridge, Massachusetts: Harvard University Press, 2003), 6.

accumulated from Brahms but, indeed, remained a die-hard traditionalist with regard to formal structure all his life.<sup>5</sup>

Sabine Feisst notes that the structure of the work relates to Brahms' Piano Concerto No. 2 in B-flat major, Op. 83, since both works include a scherzo. She also links Schoenberg's Concerto to Liszt's Piano Concerto No. 1 in E-flat major, S. 124, since, in each case, the four movements are played *attacca*.<sup>6</sup> However, this is not strictly accurate; short, silent pauses aid definition in Schoenberg's Piano Concerto, whereas there is a literal use of *attacca* in Liszt's work. The duration of Schoenberg's Piano Concerto is about the same as Liszt's Concerto, hovering around the 20-minute mark; thus, it does not offer the gargantuan proportions of Brahms' Concerto No. 2, whose duration is about 45 minutes.

As a departure from the flamboyant Romantic concerto, the concise, modest tone of Schoenberg's Concerto is established from the beginning (Ex. 41). It is a carefree and understated, lilting waltz, flowing in a somewhat shy, coaxing manner.<sup>7</sup> As Michael Steinberg eloquently states, 'what Schoenberg would have wanted is for you to delight in the easy and natural-sounding unfolding of the melody.'<sup>8</sup> Feisst notes the waltz-like first movement, along with the gavotte style of the fourth movement and the inclusion of a military march (presumably referring to bars 444-63), which

---

<sup>5</sup> Schoenberg's reverence for Brahms is clearly expounded in 'Brahms the Progressive' in Arnold Schoenberg, *Style and Idea*, ed. Leonard Stein, trans. Leo Black (London: Faber and Faber, 1975), 398-441.

<sup>6</sup> Sabine Feisst, *Schoenberg's New World: The American Years* (New York: Oxford University Press, 2011), 74.

<sup>7</sup> The opening mood accords with the programme for the work, mentioned earlier in the chapter.

<sup>8</sup> Michael Steinberg, *The Concerto: a Listener's Guide* (New York: Oxford University Press, 1998), 397. For further discussion of Schoenberg's Concerto, see Steinberg, 394-8.

are further contributors to a sound-world of times gone by, reminding the listener of Bach and Mahler.<sup>9</sup>

Ex. 41. Schoenberg, Piano Concerto, Op. 42, bars 1-9, two-piano reduction<sup>10</sup>

The image shows a musical score for two pianos. The top system is labeled 'Piano I' and contains bars 1 through 4. It is marked 'Andante' with a tempo of quarter note = 44 and half note = 132. The music is in 3/8 time and begins with a piano solo marked 'p'. The bottom system is labeled 'Piano II' and contains bars 5 through 9. It is marked 'p dolce'. The key signature has one flat (B-flat).

The piano opens the work alone, which, according to Feisst, recalls Beethoven's Fourth Piano Concerto, Op. 58, which broke the trend of an era through its unusual opening – an unaccompanied soloist: see Ex. 42.<sup>11</sup> The piano plays only one phrase, after which the orchestra takes over the material, thus quickly creating a relationship between the two musical bodies. The opening of Schoenberg's Concerto presents a more ambiguous relationship between piano and orchestra; there are, initially, only subtle interjections from the orchestra. However, the fact that the piano opens the

<sup>9</sup> Feisst, 74.

<sup>10</sup> Solo piano and two-piano excerpts are taken from Arnold Schoenberg, Concerto for Piano and Orchestra, Op. 42, reduction for a second piano by Edward Steuermann (New York: Schirmer, 1944).

<sup>11</sup> Feisst, 74.

work is significant and an intimation of the piano's large role overall: the pianist plays almost continually for the duration of the piece.

Ex. 42. Beethoven, Piano Concerto No. 4, Op. 58, I, bars 1-13, two-piano reduction<sup>12</sup>

The image displays a musical score for the first movement of Beethoven's Piano Concerto No. 4, Op. 58. The tempo is marked 'Allegro moderato'. The score is presented in a two-piano reduction format. The top system includes the 'Solostimme (Original)' and the '\* Orchester-Bearbeitung.' (orchestral reduction). The 'Solostimme' part features piano (*p dolce*) and forte (*sf*) dynamics. The orchestral reduction consists of rests in both staves. The middle system shows the 'Vello.' (viola) part, which is mostly rests. The bottom system shows the piano accompaniment, with dynamics ranging from piano (*pp*) to forte (*sf*).

Rest periods are brief, apart from, most notably, two substantial orchestral interludes in the third movement: bars 264-76 and 303-20, and one in the fourth movement: bars 349-65. Although the writing is not always virtuosic and dense, the psychological strain placed on the performer is therefore still considerable.

Other, more local, aspects of its form are traditional; structural definition is provided by, for example, the cadenza for the solo piano. There is also a small quasi-cadenza at the end of the third movement, which serves as a bridge to the fourth movement, and a final coda – a structural feature

<sup>12</sup> Ludwig van Beethoven, Piano Concerto No. 4 in G major, Op. 58, reduction for a second piano by Max Pauer (London: C. F. Peters, n. d.).

prevalent in Classical and Romantic concertos, which continued into the twentieth century. The beginning of the coda is well defined: it is preceded by a *ritardando* and then begins in a faster tempo with an ostinato pattern in the piano (to be discussed further below). There are also typical moments of climax (not least during the cadenza and the end of the work), just as one would expect in, for example, a Romantic concerto. These features collectively enhance the reference to tradition in the work.

The use of repetition also helps to articulate form. As noted by Alfred Brendel, the first 39 bars function as a theme (or perhaps a kind of exposition), after which are presented some variations and interludes.<sup>13</sup> The right-hand melody in this section presents the material which is manipulated throughout the work (Ex. 43).

Ex. 43. Schoenberg, Piano Concerto, Op. 42, bars 1-39, piano, right hand

Significantly, this material appears as a quasi-recapitulation at the end of the fourth movement at bars 443-67 (See Ex. 44 and compare with Ex. 43) and

<sup>13</sup> Alfred Brendel, *Alfred Brendel on Music* (London: Robson Books, 2001), 316, originally in 'The New York Review of Books', 16 February, 1995.

is only subtly different in rhythm and contour from the opening; therefore, it maintains its identity.<sup>14</sup>

Ex. 44. Schoenberg, Piano Concerto, Op. 42, bars 443-67, melody<sup>15</sup>

Thus, remnants of traditional sonata-form remain. In this quasi-recapitulation, the opening 3/8 material – a waltz (the Viennese waltz is an obsession which pervades Schoenberg’s entire output) – is now presented in 4/4 time, which transforms the material into something close to a march. Transforming material in this way is a demonstration of variation technique. Beethoven manipulates material in a similar manner in his 33 Variations on a Waltz by Diabelli, Op. 120. In this case, however, the immediate change from waltz (Ex. 45a) to march (Ex. 45b) in the first variation is even more striking; it is at once humorous and defiant.<sup>16</sup>

Schoenberg’s keenness to use models from the past is well-known.

For example, the aforementioned *Suite*, Op. 25 uses traditional dance forms

<sup>14</sup> Creating tonal coherence through the repetition of melody will be discussed in more detail later. Brian Alegant and Donald McLean note that creating and returning to a home region is typical in Schoenberg’s larger works. See Alegant and McLean, ‘On the Nature of Enlargement’, *JMT*, 45/1, Spring, 2001, 31-71.

<sup>15</sup> Orchestral excerpts and short scores are taken from Arnold Schoenberg, *Concerto for Piano and Orchestra*, Op. 42 (Vienna: Philharmonia, 1972). The melody at bar 443 is passed from instrument to instrument; for clarity, I have presented it as a continuous line.

<sup>16</sup> For further insight into this work, see Brendel, 113-27.

and, significantly, even includes repeats which, while appropriate in the dance suites of Bach (where ornamentation would aid variety on the second playing), ironically, militate against the organisational methods of serial music.

Ex. 45. Beethoven, 33 Variations on a Waltz by Diabelli, Op. 120<sup>17</sup>

(a) Theme, bars 26-32



(b) Var. I, bars 1-5



Schoenberg's own views on melody are a useful starting point for the following section. He believes that qualities of melody pertain to 'singableness' and states the following factors as contributors to this: relatively long notes; smooth linkage of the registers; movement in waves, more stepwise than by leaps; avoidance of augmented and diminished intervals; adherence to the tonality and its most closely related regions; employment of the natural intervals of a key; gradual modulation; and a cautious use of dissonance.<sup>18</sup> It will be noted that some of these remarks are similar to those of Walter Piston, who, in his pedagogical book,

<sup>17</sup> Beethoven, 33 Variations on a Waltz by Diabelli, Op. 120 in Variationen für Klavier, Band II (Munich: Henle Verlag, 1961).

<sup>18</sup> Arnold Schoenberg, *Fundamentals of Musical Composition*, ed. Gerald Strang and Leonard Stein (London: Faber and Faber Limited, 1967), 98.

*Counterpoint*, states that the outline of a melody is expressed by the visual shape on the page and traditionally this shape is a curve of some kind. Of course, the curve need not be completely consistent to be recognisable.<sup>19</sup> Longer melodies can be made up of a fluctuating or ‘wavy’ curve.<sup>20</sup>

Regarding melodic rhythm, Piston demonstrates that a melody can move in a way which either conforms with the metre, or else contradicts it.<sup>21</sup> He quotes a passage from J. S. Bach’s Passacaglia and Fugue in C minor, BWV 582 as a good example of a melodic rhythm in agreement with the metre (see Ex. 46).

Ex. 46. J. S. Bach, Passacaglia and Fugue in C minor, BWV 582, bars 1-8 (theme)<sup>22</sup>



for diatonic and chromatic melody:

1. Rhythmic and registral balance should be maintained between or among the major divisions of the line (particularly antecedent/consequent balance).
2. Not too many notes (that is, not too many intervals) are to be taken in the same direction without compensatory change in the opposite direction.
3. A general balance should be maintained between upward- and downward-directed movement, this of course modified by whether or not the general tendency of the line is to end higher, lower, or in the same region as it started.<sup>25</sup>

As will be seen below, Schoenberg's music often displays such tendencies. Though his music perhaps requires a greater level of familiarisation on the part of the listener than other styles, such familiarisation could lead to a revolution in the appreciation of his music.

Music psychologist Scott D. Lipscomb asserts that if the listener hears the seven pitches of an ascending major scale in order, he or she may well assume that the eighth note will be the tonic again (one octave higher than the one which begins the scale). However, 'if seven pitches are played at random' (here Lipscomb uses the opening of Schoenberg's Piano Concerto as an example), there is a higher level of uncertainty.<sup>26</sup> Lipscomb's argument assumes that most listeners are more familiar with Ex. 47a (which in fact uses a descending major scale) than b, below.

However, if one did not know the melody to the Christmas carol, 'Joy to the World', in Ex. 47a, but were familiar with most tonal music, one might predict the last note as E, rather than the intended C. Of course, his

---

<sup>25</sup> Charles Wuorinen, *Simple Composition* (New York: C. F. Peters Corporation, 1979), 50.

<sup>26</sup> Scott D. Lipscomb, 'Cognitive organization of musical sound' in Donald A. Hodges, ed., *Handbook of Music Psychology* (San Antonio: The IMR Press, 1996), 165-6.

initial statement of an ascending major scale's eighth note being easily-predicted still holds, since the pull of the leading note is very strong. One must grant Lipscomb his point: Schoenberg's melody is not predictable to most listeners.

Ex. 47. Lipscomb's predictability argument

(a) 'Joy to the World', opening melody<sup>27</sup>



(b) Schoenberg, Piano Concerto, Op. 42, bars 1-3, piano, right hand



While the first melody has been around for many years and is famous (at least in Western culture), the second (from Schoenberg's Concerto) is comparatively new and not well-known. Furthermore, since the pitches are not taken from a diatonic scale, this adds to the difficulty in predicting the next note. Although it is a shame that Lipscomb would cite Schoenberg (he might just as easily have used any less famous tonal melody – in which a scale is not employed so obviously – as a contrast to 'Joy to the World'), he nonetheless demonstrates that there is a difference in melodic style between traditional tonal melodies and melodies of serial music. Conversely, Lipscomb fails to note that the twelfth pitch of a serial melody (if the previous eleven have been played) can be predicted with accuracy.

---

<sup>27</sup> Pre-1833, rev. William Holford, c. 1834, 'Joy to the World', arr. Hugh Keyte and Andrew Parrott in *The New Oxford Book of Carols*, ed. Hugh Keyte and Andrew Parrott (New York: OUP, 1992), 270-1.

How does Schoenberg's writing in the Piano Concerto relate to the above discussion of melody? Various examples below will show that traditional melodic features exist in the Concerto. In the opening, the four forms of the row are presented in sequence: basic series (P-3), retrograde inversion (RI-8), retrograde (R-3) and inversion (I-8), shown previously in Ex. 43. Though the generation of pitches is serial, the line is still organised into four clear phrases, coinciding with the four forms of the row. Their beginnings and endings are articulated clearly; for example, there is a natural breathing point after the first phrase, indicated by the rest in bar 4, and another after the second phrase in bar 8. Schoenberg himself believed this section to be a particularly good example of his melodic writing which displays his heart, rather than only his intellect.<sup>28</sup>

At bars 215-17, there is a series of rising melodic fragments, ultimately compensated by downward patterns from the right hand at bar 218, and, subsequently, by the left hand in bar 219 (Ex. 48).

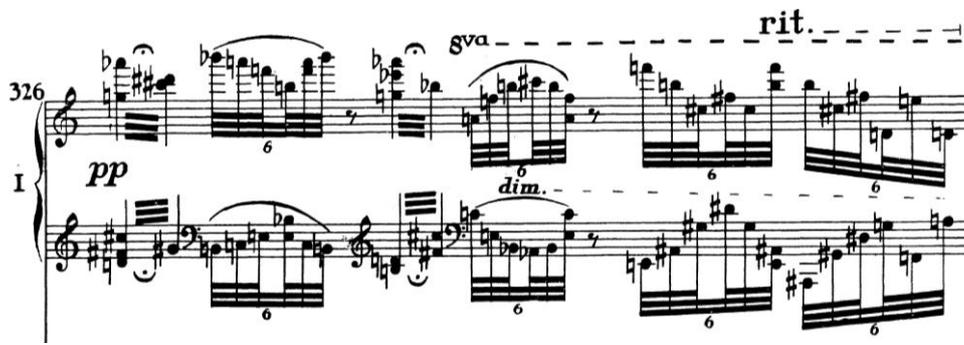
Ex. 48. Schoenberg, Piano Concerto, Op. 42, bars 215-19, piano

The musical score for Ex. 48 is presented in two systems. The first system, labeled 'poco tranquillo', covers bars 215 and 216. It begins with a 6/4 time signature and a tempo marking. The right hand (RH) and left hand (LH) are clearly indicated. Dynamics include piano (p), forte (f), and fortissimo (ff). The score features complex harmonic textures with many accidentals and chromaticism. The second system covers bars 217, 218, and 219. It continues the complex harmonic textures with various dynamics and articulations.

<sup>28</sup> See Arnold Schoenberg, *Style and Idea*, 69-74.

Thus, this passage generally conforms to Piston's remarks and Wuorinen's second and third principles of melodic construction. Subsequently, at bar 326, during the small cadenza-like passage at the end of the third movement, the same thing can be seen. These *presto*, fleeting gestures still maintain a natural upwards/downwards shape in the left hand, with the right hand doing the reverse (Ex. 49).

Ex. 49. Schoenberg, Piano Concerto, Op. 42, bar 326, piano



Similarly, in bar 376, gentle, falling shapes can be perceived in the piano, answered by the orchestra (Ex. 50).

Ex. 50. Schoenberg, Piano Concerto, Op. 42, bar 376, two-piano reduction



As the previous discussion highlights, aspects of traditional melodic writing remain in the Concerto. An equally-significant feature is Schoenberg's use of motif, which is used to create large-scale structural unity. An example of this is the connection between bars 35-37, 175 and 262-3 (Ex. 51). The end of the melody from the right-hand piano part in bars 35-37, which uses the row-form I-8 (Ex. 51a), reappears in the trombone part at bar 175, using I-10 (Ex. 51b) and in the violins at bars 262-3, using I-9 (Ex. 51c). The contour of the original melody is retained in each instance.

However, the connections between Exs. 51a, b and c are not tonal; examples of tonal connections between other passages will be discussed below. Therefore, two factors contribute to unity here: the re-use of the row-form (although at a new transposition) and the preservation of the contour of the motif.

Ex. 51. Schoenberg, Piano Concerto, Op. 42

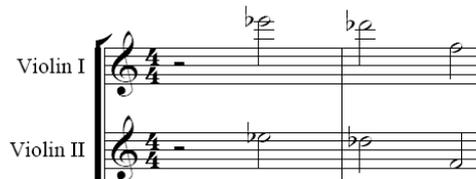
(a) bars 35-7, piano, right hand



(b) bar 175, trombone



(c) bars 262-3, violins



As shown in Ex. 52, Brian Alegant notes a further example: the opening four right-hand pitches of the Concerto, E-flat-B-flat-D-F and the

opening four pitches of the uppermost notes of the right hand in the piano cadenza at bar 286 share the same melodic contour (two descending intervals followed by one rising).

Ex. 52. Schoenberg, Piano Concerto, Op. 42, unity through melodic contour

(a) bars 1-2, piano, right hand



(b) bar 286, piano, right hand

(uppermost pitches)



Alegant points out that they also share rhythmic similarities: in each case, the duration of consecutive pitches is short, long, short, long. He likens this connection to standard practice in a Classical concerto.<sup>29</sup>

The notion of establishing structural unity through the repeated thematic use of particular musical contours is not new: for example, compare the previous example with Ex. 53, below. In Beethoven's Piano Sonata in C, Op. 2, No. 3, despite the enormous contrast in character between movements, the contours of the opening motifs are almost identical (apart from the last movement, which breaks the trend only slightly through the upbeat and the extension of the pattern from the fifth quaver of bar 1). That Beethoven can create such differing musical ideas out of such limited melodic material is testament to his compositional prowess; Schoenberg, too, exhibits the same concern for unity and the means to achieve it.

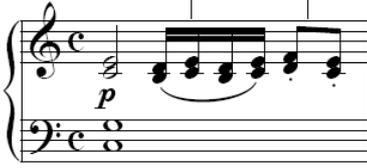
Melody is used to aid the establishment of long-range tonal structure

---

<sup>29</sup> Brian Alegant, 'Inside the Cadenza of Schoenberg's Piano Concerto', *Integral*, 16/17, 2002/2003, 77-8.

in the Concerto; it is particularly noteworthy how often melodic rows appear in their original transposition (i.e. unchanged).

Ex. 53. Beethoven, Piano Sonata in C, Op. 2, No. 3, unifying motifs<sup>30</sup>

<p>(a) I, bar 1</p> <p><b>Allegro con brio</b></p> 	<p>(b) II, bar 1</p> <p><b>Adagio</b></p> 
<p>(c) III, bar 1</p> <p><b>Allegro</b></p> 	<p>(d) IV, bar 1</p> <p><b>Allegro assai</b></p> 

As mentioned previously, the opening melody in bars 1-39 (shown earlier in Ex. 43) appears towards the very end of the work, beginning at bar 443 in the violins (Ex. 44). Prior to this quasi-recapitulation, the right-hand piano melody from the first eight bars of the work (P-3) reappears at bar 133 in Violin 1 and oboe (Ex. 54), although it is subtly different from the first rendition.

Ex. 54. Schoenberg, Piano Concerto, Op. 42, bars 133-41, Violin 1 and oboe



Rows P-3 and I-8 frame the opening presentation of the material by

<sup>30</sup> Beethoven, Sonata in C, Op. 2, No. 3 in Klaviersonaten, Band I (Munich: Henle Verlag, 1980).

the piano, melodically (row P-3 begins and I-8 finishes; see Ex. 43), and it is significant that we hear them one after another at bar 465 in the piano, just before the coda commences, thus possibly representing an abridged version of the opening material (Ex. 55).

Ex. 55. Schoenberg, Piano Concerto, Op. 42, bars 465-7, piano<sup>31</sup>



The frequent melodic re-appearance of row-forms in their original state can be likened to the repetition of melodies in the same key in tonal music. However, in serial music such as the Concerto, pitches are sometimes displaced by an octave (as with Ex. 55), creating new intervals and therefore different melodies. Hence a significant criticism of using serialism to structure a work in this way is that the listener cannot hear returns of a row if octave-displacement is implemented (even when the row begins on its original pitch). This argument questions how useful a system serialism is, if it is not entirely audible. Walter J. Dowling asserts:

the importance of the melodic contour, or shape, is such that it is nearly impossible to recognize a familiar tune if its pitches are played in random octaves on the keyboard: that is, if the original melodic line is broken.<sup>32</sup>

Therefore, while the repetition of row-forms bears a resemblance to a recurring melody in the home key of a traditionally-tonal work, it may not

---

<sup>31</sup> I have changed the fourth and fifth semiquavers of bar 466 (piano part) to B-naturals, in order to conform to the row, since the printed B-flats are generally considered to be misprints.

<sup>32</sup> Walter J. Dowling, 'Melodic Contour in Hearing and Remembering Melodies' in Rita Aiello and John A. Sloboda, eds., *Musical Perceptions* (New York: Oxford University Press, 1994), 173.

have the equivalent audible immediacy. On a structural level, however, this technique is still significant and the listener could become familiar with such repetitions after several hearings of a serial work.

There is also a connection between the beginning and the end of the fourth movement: I-8 begins the movement (Ex. 56a: piano, right hand) and also features in the build-up to the climax (Ex. 56b: piano, left hand). It will be noted that, in Ex. 56b, the piano in fact plays the first five pitches of P-3 in the right hand and the first five pitches of I-8 in the left, thus combining the rows which begin the first and fourth movements respectively. Again, this re-use of material bears a likeness to the re-use of material in the same key in tonal music (although the connection is more remote).

Ex. 56. Schoenberg, Piano Concerto, Op. 42, 4<sup>th</sup> movement connections

(a) bars 329-30, piano

Musical score for piano, bars 329-30. The right hand plays a sequence of notes labeled i, ii, iii, iv, v. The left hand plays a sequence of notes labeled 3, 3, 0. The tempo is marked 'molto stacc.'

(b) bar 490, short score<sup>33</sup>

Short score for bar 490. The Brass section plays a sequence of notes labeled P-3, 1, 2, 3, 4, 5. The Solo Piano section plays a sequence of notes labeled I-8, i, ii, iii, iv, v.

<sup>33</sup> Based on Schoenberg, Concerto for Piano and Orchestra, Op. 42 (Vienna: Philharmonia, 1972) and compiled by Edward Pick.

This use of motif is discussed from a slightly different angle (but with a methodology that leads essentially to the same result) by René Leibowitz.<sup>34</sup>

Leibowitz mentions Schoenberg's concise use of motif in the Piano Concerto, citing four important instances of the opening motif. Leibowitz's observations are shown in Ex. 57: the original motif (Ex. 57a) is inverted (Ex. 57b); it appears in a new rhythm (Ex. 57c); finally, the original and the inversion are combined (Ex. 57d).

Ex. 57. Schoenberg, Piano Concerto, Op. 42, Leibowitz's examples of coherence

(a) bar 1, piano, right hand



(b) bar 329, end, piano, right hand



(c) bar 468, Clarinet 1 & Bassoon 1



(d) bar 491, piano



Therefore, long-range relationships between motifs play a vital role in creating unity in this work; furthermore, they occasionally have tonal significance on some level, when they appear at their original transposition. However, it must be acknowledged that a much more acute level of aural

<sup>34</sup> René Leibowitz, *Schoenberg and His School: the Contemporary Stage of the Language of Music*, trans. Dika Newlin (New York: Da Capo Press, 1970), 131-2.

recognition is demanded of the listener than in traditional tonal music, if he or she is to detect the tonal relationships which Schoenberg presumably hoped these recurrences might provide.

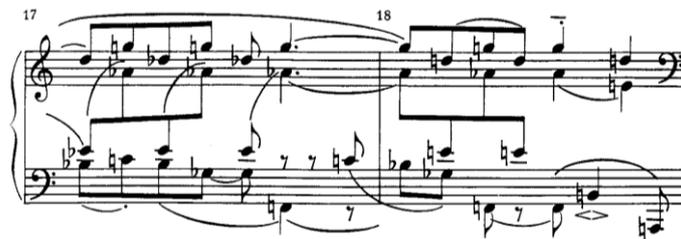
It has been noted that Schoenberg uses motif and melody to create large-scale structure, but small melodic fragments are also repeated in other ways at a local level. Repeating individual pitches is an accepted serial procedure, but group-repetition is non-serial and helps to emphasise further the work's tonal tendency. For example, at bars 5-6 in the right hand, the technique is clear: D-flat (i.e. C-sharp)-A-B-C-sharp-A-B (Ex. 58).

Ex. 58. Schoenberg, Piano Concerto, Op. 42, bars 5-6, group-repetition



Schoenberg had used the technique previously: it can be found in abundance in *Klavierstück*, Op. 33a, for example, at bars 17-18 in both hands, shown in Ex. 59.<sup>35</sup>

Ex. 59. Schoenberg, *Klavierstück*, Op. 33a, bars 17-18<sup>36</sup>



<sup>35</sup> For a detailed structural analysis of Op. 33a, see, for example, Eric Graebner, 'An Analysis of Schoenberg's *Klavierstück*, Op. 33a', *PNM*, 12, 1-2, Autumn, 1973-Summer, 1974, 128-40.

<sup>36</sup> Excerpts are taken from Arnold Schoenberg, *Klavierstück*, Op. 33a (Vienna: Universal Edition, 1956).

The use of ostinato in the Concerto is also notable; this might be viewed as an extension of the group-repetition technique: see Ex. 60. A similar effect occurs at bars 243-6 in the left hand of the piano part (Ex. 61).

Ex. 60. Schoenberg, Piano Concerto, Op. 42, bars 468-73, full score, ostinato<sup>37</sup>

The image displays a musical score for Arnold Schoenberg's Piano Concerto, Op. 42, specifically bars 468-73. The score is organized into two systems. The first system, covering bars 468 to 470, is marked "Stretto (♩ = 120)". It features a piano part with a prominent ostinato pattern in the left hand, while the right hand plays a melodic line. The orchestral parts include I. Kl, I. Fg, S-Klav, I. Gg, II. Gg, Br, Vcl, and Kbs. The second system, covering bars 471 to 473, is marked "cresc. poco a poco". It shows the continuation of the piano part and the entry of the strings with a similar rhythmic pattern. The orchestral parts include I. Kl, I. Fg, I. Trp, S-Klav, I. Gg, II. Gg, Br, Vcl, and Kbs. The score includes various performance instructions such as "pizz.", "p", "zus.", "arco", and "spring.".

<sup>37</sup> Full-score excerpts are taken from Arnold Schoenberg, Concerto for Piano and Orchestra, Op. 42 (Vienna: Philharmonia, 1972).

Ex. 61. Schoenberg, Piano Concerto, Op. 42, bars 241-6, full score

The image displays a full score for Schoenberg's Piano Concerto, Op. 42, bars 241-6. The score is organized into two systems. The first system covers bars 241 to 244, with a tempo marking of *meno mosso* (♩=80). The instruments listed are 1.2 Fl, 1.2 Ob, 1. Kl, 1. Fg, grTr, Beck, S-Klav, Vcl, and Kbs. The piano part (S-Klav) includes markings for *p non legato* and *Stschl.* (staccato). The second system covers bars 245 to 246. The instruments listed are 1. Fl, 2. Fl, 1. Fg, 1.2 Hr, 3.4 Hr, grTr, Beck, S-Klav, Br, Vcl, and Kbs. The piano part (S-Klav) features a *cresc. . . ff* dynamic marking. The brass part (Br) includes a *(get.) pizz.* marking. The score is written in a complex, atonal style characteristic of Schoenberg's twelve-tone technique.

As shown in Ex. 60, from bar 468 (the beginning of the coda) onwards, the top line of the piano part reiterates the initial four pitches of P-3 (E-flat-B-flat-D-F), doubled by Clarinet 1 and Bassoon 1 at bars 468-70, followed by

Violin 1 at bars 470-2, and finally, by Trumpet 1 from bar 472. This localised repetition momentarily gives a sense of tonal grounding to the passage. The rhythmic drive is particularly strong because of the regular sense of downbeat, and the passage helps to build tension towards the end of the work, functioning as a pedal point (similar to a pedal point at the end of a traditionally tonal work). In Ex. 61, the left-hand pitches in the piano part are supported by the cellos and basses, although they present a contrasting rhythm.

This discussion has shown that motif is used to create unity and that melody is a contributor to tonal coherence on the large-scale structural level. Other localised moments such as group-repetition and ostinato also give momentary tonal stability to certain passages. The next chapter will continue the exploration of tonal elements in the work.

## Chapter 5. A New Appraisal of Schoenberg's Piano Concerto, Part II:

### Serial and Harmonic Elements

In this chapter, the tonal implications of the note row are first examined; this is followed by an assessment of the use of harmony to create a tonic (and dominant), the existence of triads, isolated tonal moments, tension and resolution, consonance (according to Smith Brindle's tension scale) and bitonality. Subsequently, in the Conclusion, the relevance of this research to the performer is considered.

The row of the Concerto, shown in Ex. 33a in Chapter 3, is divided into two halves by a tritone. It displays hexachordal combinatoriality, which, as Brian Alegant explains, 'divides the 48 rows of the row-class into twelve distinct quartets, or *regions*'.<sup>1</sup> Whittall defines combinatoriality as a 'quality shared by some twelve-tone collections whereby the collection and one of its transformations combine to form a pair of aggregates'.<sup>2</sup> In other words, the pitches (or pitch-classes) in one half of one row-form at a particular transposition combine with those of one half of a row-form at another transposition to make the complete set of twelve pitches.

Other works by Schoenberg which exhibit hexachordal combinatoriality include the Violin Concerto, Op. 36, the Fourth String Quartet, Op. 37 and the *Phantasy*, Op. 47; thus it is an important part of his American Period works.<sup>3</sup> *Klavierstück*, Op. 33b also displays this feature. Whittall notes Schoenberg's particular tendency to pair P-0 with I-5; the

---

<sup>1</sup> Brian Alegant, 'Inside the Cadenza of Schoenberg's Piano Concerto', *Integral*, 16/17, 2002/2003, 67.

<sup>2</sup> Arnold Whittall, *Serialism* (Cambridge: Cambridge University Press, 2008), 272.

<sup>3</sup> Alegant, 'Inside the Cadenza', 67.

Concerto belongs to this group of works.<sup>4</sup> This pairing is explored in Variations for Orchestra, Op. 31 and in later works. On the other hand, Whittall observes that P-0 is paired with I-3 in *Moses und Aron*.<sup>5</sup> George Perle notes that combinatoriality was particular to Schoenberg; Berg and Webern did not express an interest in the phenomenon.<sup>6</sup>

In the Piano Concerto, P-3, R-3, I-8 and RI-8 are related through hexachordal combinatoriality: the first hexachords of P-3 and RI-8 contain the same six pitches; likewise those of R-3 and I-8 (Ex. 62).

Ex. 62. Schoenberg, Piano Concerto, Op. 42, rows, combinatoriality<sup>7</sup>

Therefore, combining the first hexachords of P-3 and R-3, or the first hexachords of I-8 and RI-8, forms the complete twelve-note set of the original P-3 row: E-flat-B-flat-D-F-E-C and F-sharp-G-sharp-C-sharp-A-B-G. Although the order of pitches differs from one row-form to another, the effect is of going backwards and forwards continuously over the same set of notes, thereby creating a sense of tonal coherence on some level.<sup>8</sup> The first interval of the first hexachord of P-3, the perfect 4<sup>th</sup>, is used again in the

<sup>4</sup> As mentioned in Chapter 3, I have chosen P-3 (rather than P-0) as the designation for the original row of the Concerto (taking C as 0): thus, the relationship between P-0 and I-5 equates to that between P-3 and I-8.

<sup>5</sup> Whittall, *Serialism*, 103.

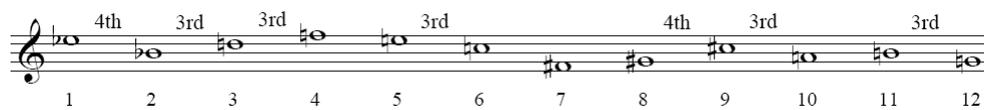
<sup>6</sup> George Perle, *Serial Composition and Atonality* (London: Faber & Faber, 1968), 99.

<sup>7</sup> See Arnold Schoenberg, *Concerto for Piano and Orchestra, Op. 42* (Vienna: Philharmonia, 1972).

<sup>8</sup> For more information on the construction of hexachords and trichords in the Concerto, see Alegant, 'Inside the Cadenza', 67-102.

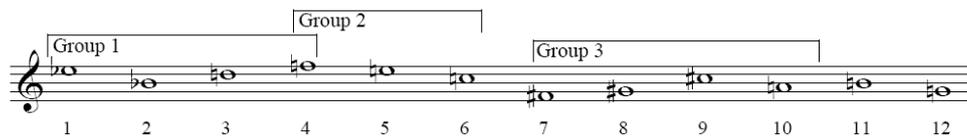
second (but now between the second and third pitches). The last interval is a major 3<sup>rd</sup> in each, and cements the melodic connection of the hexachords; there are in fact four occurrences of the interval of a major 3<sup>rd</sup> altogether, and one minor 3<sup>rd</sup> in P-3, as shown in Ex. 63.

Ex. 63. Schoenberg, Piano Concerto, Op. 42, P-3, perfect fourths and major/minor thirds



As shown by Brendel's approach in Chapter 3, it is perhaps even more striking how easily pitches fall into scales relating to a tonic. It is not difficult to imagine the following local key centres, as shown by the brackets: see Ex. 64.

Ex. 64. Schoenberg, Piano Concerto, Op. 42, P-3, local key centres

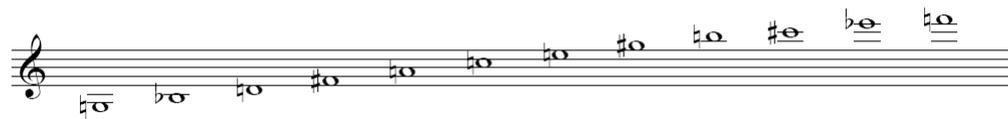


We might easily assume B-flat to be the tonic for the first four pitches (1, 2, 3, 4), and C for pitches 4, 5 and 6; scale degrees 1, 3 and 4 are present in each case (group 1 also includes the fifth degree of the B-flat major scale and thus highlights the B-flat major triad). The pitches of group 3 (7, 8, 9, 10) allude to the key of A major, or perhaps F-sharp minor. A further feature of the row is the short falling sequence of major thirds at the end: C-sharp-A and B-G (9, 10, 11, 12).

In *The Late Twelve-tone Compositions*, Ethan Haimo views the tonal elements of the row slightly differently, but uses a similar approach to the one I have demonstrated. Going through the row in order, he identifies links to the scales of B-flat major (1, 2, 3, 4), F major (2, 3, 4, 5, 6), C major (3, 4, 5, 6), whole-tone (5, 6, 7, 8), A major (7, 8, 9, 10, 11) and D major/whole-tone (9, 10, 11, 12).<sup>9</sup>

As a comparison, Berg's rows also frequently display tonal tendencies, created in conjunction with a referential, tonal feature.<sup>10</sup> For example, the first part of the much-quoted row from his Violin Concerto presents a series of pitches rising in thirds; this is based on the open strings of the violin (G, D, A, E).<sup>11</sup> The last four notes of the row, a whole-tone scale, form the first four pitches of Bach's chorale melody, *Es ist genug*, which is subsequently quoted in the piece. The last four pitches of Schoenberg's row also encompass a tritone.<sup>12</sup> See Ex. 65.

Ex. 65. Berg, Violin Concerto, row<sup>13</sup>



Webern, too, demonstrated an interest in traditional tonal relationships at some level: his choice of row transpositions at important

<sup>9</sup> Ethan Haimo, 'The Late Twelve-tone Compositions' in Walter B. Bailey, ed., *The Arnold Schoenberg Companion* (Westport, Connecticut: Greenwood Press, 1998), 166.

<sup>10</sup> Whittall states that Berg's inclusion of tonal elements has influenced composers such as Dallapiccola and Peter Maxwell Davies. See Whittall, *Serialism*, 84.

<sup>11</sup> For an extensive examination of this work, see Anthony Pople, *Berg: Violin Concerto* (Cambridge: CUP, 1991).

<sup>12</sup> See J. S. Bach, Cantata, No. 60, BWV 60, *O Ewigkeit, du Donnerwort* (Wiesbaden: Breitkopf & Härtel, n. d.).

<sup>13</sup> See Alban Berg, Violin Concerto (Vienna: Universal Edition, 1936).

structural positions attests to this, according to Kathryn Bailey.<sup>14</sup> However, the rows themselves display fewer tonal features; rather, in the early works in particular, they exploit the minor second and demonstrate a quest for symmetry and sequences.<sup>15</sup> For example, the minor second pervades the row of *Drei Volkstexte*, Op. 17, No. 3, shown in Ex. 66.

Ex. 66. Webern, *Drei Volkstexte*, Op. 17, No. 3, row<sup>16</sup>



Of course, the fact that a row exhibits some theoretical tonal features need not have anything to do with the outcome in the work itself. In the case of Schoenberg's Piano Concerto though, the easily-singable nature of the row seems to be a good partner to the traditionally-conceived melodic shapes throughout the work; also, as will be seen later, Schoenberg occasionally harnesses the potential for key-centres exhibited by the row, so the above discussion will prove to be pertinent.

We move now to an examination of the use of tonic harmony in the Piano Concerto. Just as Lipscomb's example of melody was a useful spark earlier, so too is the following example of harmony by Leonard Meyer (Ex. 67).<sup>17</sup> Meyer notes that frequently-heard patterns can quickly be recognised and their endings can be readily anticipated by the listener.<sup>18</sup> Due to the

---

<sup>14</sup> Kathryn Bailey, *The Twelve-note music of Anton Webern* (Cambridge: Cambridge University Press, 1991), 11-12.

<sup>15</sup> Kathryn Bailey, *The Twelve-note music*, 13.

<sup>16</sup> See Anton von Webern, *Drei Volkstexte*, Op. 17 (Vienna: Universal Edition, 1955).

<sup>17</sup> Leonard B. Meyer, 'Emotion and Meaning in Music' in Rita Aiello and John A. Sloboda, eds., *Musical Perceptions* (New York: Oxford University Press, 1994), 24.

<sup>18</sup> Meyer, 24.

conventions of the period, the type of cadence presented below was frequent and typical during the eighteenth century; listeners have heard it so many times that they cannot fail to predict the final chord.

Ex. 67. Meyer, cadence (example of predictability)



Meyer believes that, without this necessary expectation and predictability, there is ‘doubt and uncertainty as to the general significance, function, and outcome of the passage’.<sup>19</sup> Such doubtful and uncertain passages of music do occasionally occur in Schoenberg’s Piano Concerto, but this does not preclude tonal elements occurring elsewhere, even if the listener may not be able to ‘predict’ them.

At various points during the work there are hints of an over-arching tonality, perhaps harking back to tonal music of the past. For example, the closing bars of the opening piano melody (bars 37-8) allude to C major (with an added major seventh) in second inversion, using row I-8 (Ex. 68). The C-E dyad is repeated and the C major seventh harmony is reinforced by the orchestra at bar 37 (although the left-hand piano part soon moves away from this harmony). Although the orchestra frequently doubles the pitches of the piano during the opening material, there is something wistful and memorable about this moment, perhaps because of the sighing minor 6<sup>th</sup> interval in the piano at bar 37 and also the fact that the orchestra has been

---

<sup>19</sup> Meyer, 24.

silent since bar 33 (apart from two gentle notes from the violas in bars 34 and 35). We are therefore made particularly aware of the harmony at this point, although there is no way of knowing yet of its large-scale significance.<sup>20</sup>

Ex. 68. Schoenberg, Piano Concerto, Op. 42, bars 37-8, short score<sup>21</sup>

The image shows a short score for two parts: Solo Piano and Strings. The music is in 3/8 time. The Solo Piano part consists of two staves. The first staff has a treble clef and contains a few notes with accidentals, including a sharp sign. The second staff has a bass clef and contains a more active melodic line with many notes and accidentals. The Strings part also consists of two staves. The first staff has a treble clef and contains a few notes with accidentals. The second staff has a bass clef and contains a few notes with accidentals. The overall texture is complex and dissonant.

Later in the work, the chord of C major seventh (third inversion) appears on beat 1 of bar 231 (significantly, a downbeat), which is an important climax in the second movement (Ex. 69).

Ex. 69. Schoenberg, Piano Concerto, Op. 42, bar 231, short score

The image shows a single bar of music, bar 231, in 3/8 time. The music is in C major. The chord is a C major seventh chord in third inversion, which consists of the notes G, A, B, and C. The notes are arranged in a way that the bass note is G, and the other notes are A, B, and C. The notes are written in a way that they are all on the same staff, and they are all beamed together. The notes are written in a way that they are all on the same staff, and they are all beamed together. The notes are written in a way that they are all on the same staff, and they are all beamed together.

Soon after this, after some final outbursts from the piano at bars 250-

<sup>20</sup> As shown in Chapter 3, Dika Newlin suggests the possibility of C major being important, but uses an approach which differs somewhat from mine. See Dika Newlin, 'Secret Tonality in Schoenberg's Piano Concerto', *PNM*, 13/1, Autumn-Winter, 1974, 139.

<sup>21</sup> Short-score and full-score excerpts are taken from Arnold Schoenberg, Piano Concerto, Op. 42 (Vienna: Philharmonia, 1972) and compiled by Edward Pick.

62, the second movement closes. The third movement begins with the prioritising of the pitches G and D at bar 264 (See Ex. 70). It might be contentious to claim that a listener can easily hear a connection of tonic (C) from the aforementioned moments to dominant (G) at this point, but the phenomenon remains significant in the greater context.

Ex. 70. Schoenberg, Piano Concerto, Op. 42, bars 264-5, short score



Later in the third movement at bars 308-9, during an orchestral interlude, there is a sudden outburst which culminates in a C major chord in first inversion on beat 1 of bar 309 (Ex. 71). This is led by the brass, with bassoons, cellos and basses doubling trombones (all designated as *Hauptstimme*, i.e. the most prominent voices), while the remaining instruments present accompanying material. In the example, therefore, I show just the brass.

Ex. 71. Schoenberg, Piano Concerto, Op. 42, bars 308-9, brass



My chord designations may be perceived through connecting adjacent notes (like broken chords), as shown by the lines. The immediate

drop to *piano* following this passage (at the middle of bar 309) also helps to make it stand out.

As shown in Ex. 72, in the fourth movement, at bars 463-7, the violins play pitches 9, 10, 11 and 12 of I-8, *fortissimo* in unison, holding the final E until beat 1 of bar 466. The wind doubles the E from bar 465 until the first quaver of bar 467. The piano's outburst at bar 465 ends on a C-E dyad, which again reinforces the C major sound. It is significant that this passage occurs immediately prior to the beginning of the coda, which is an important structural point. Here, for clarity, I present a short score.

Ex. 72. Schoenberg, Piano Concerto, Op. 42, bars 463-7, short score<sup>22</sup>

A few bars later, on beat 2 of bar 489, the piano again rests on the C major seventh chord and is reinforced by the orchestra (Ex. 73). The chord of C major seventh in first inversion finally ends the work at bar 492, beat 2 (Ex. 74).

Thus, a ‘tonic’ can be perceived; this tonic stems from the accentuation of the final pitches of I-8, C and E, this row often appearing as the last part of a phrase or section. Moreover, the pitches are often reinforced, as shown in the examples, and harmonised with pitches from the

<sup>22</sup> I have changed the fourth and fifth semiquavers of bar 466 (piano part) to B-naturals, in order to conform to the row, since the printed B-flats are generally considered to be misprints.

chord of C major. Importantly, these moments occur in every movement, and always at significant points (the beginning or end of a movement or phrase, at a climax, an outburst or at a structural feature such as the coda); in this way, they create a web of tonal references to C.

Ex. 73. Schoenberg, Piano Concerto, Op. 42, bar 489, beat 2, short score

The image shows a short score for two instruments: Solo Piano and Brass. The Solo Piano part is written in a grand staff (treble and bass clefs) and features a complex, chromatic melodic line in the right hand and a more rhythmic, chordal accompaniment in the left hand. The Brass part is also written in a grand staff and consists of several chords, some of which are highly dissonant and chromatic, reflecting the atonal nature of the music.

Ex. 74. Schoenberg, Piano Concerto, Op. 42, bar 492, beat 2, short score

The image shows a short score for a piano part, consisting of a grand staff (treble and bass clefs). The music is highly chromatic and dissonant, with a complex, non-hierarchical structure of chords and intervals. The right hand features a dense, multi-note chordal structure, while the left hand has a more rhythmic, chordal accompaniment.

Of course, since there is no hierarchy of triads, these moments are not prepared from a harmonic perspective, as equivalent moments in traditional tonal music would be; this may mean that it is difficult for the listener to recognise them (at least, on one hearing). However, as stated in the Introduction, an awareness of such moments can be passed on to an audience through programme notes, and this may indeed be necessary in the case of Schoenberg's Piano Concerto. As a performer, I have certainly been aware of these moments and feel compelled to connect them.

Other localised tonal moments appear as isolated flashes of key

centres which invoke the sound of the Romantic harmonic world, or, occasionally, the more recent sound-world of jazz. The next section presents such moments for consideration by the reader. One tonal moment occurs at bar 269 in the third movement (Ex. 75). In the following example (given in short score), the key of B minor is implied from the beginning of bar 269 to the second beat of bar 270, at which point there is a chromatic shift downwards to the key of B-flat minor. In fact, triads pervade this section: in bar 269, on the third crotchet, there is an F-sharp major triad (since the inner B-flat is the enharmonic equivalent of A-sharp); then, on the first beat of bar 270, there is a B minor triad, followed by a brief B-flat minor triad on the last semiquaver of the second crotchet (C-sharp=D-flat). The traditional double appoggiatura in the oboe and viola parts (although they do not move simultaneously) will also be noted at bar 269 (top stave).

Ex. 75 Schoenberg, Piano Concerto, Op. 42, bars 269-70, short score



Another striking example occurs at the end of the second movement, in the form of a quasi-plagal cadence. The arrangement of the six pitches played by the strings in bars 262-3 is such that tonal suggestions are clear and present, as shown by the following example. The pitches of Violin 1 are doubled by Violin 2, an octave lower, and the cellos are doubled by the violas, an octave higher; I therefore show just Violin 1 and cello in Ex. 76. The triads of B-flat minor and F minor are sounded (in a broken-chord

fashion), although their sounding overlaps. The B-flat minor triad is, on the one hand, made stronger and more obvious by the fact that B-flat is at the bottom of the chord, and on the other, weakened by the emergence of the F minor triad on top of it. It is therefore a quasi-plagal cadence in F minor, although the F is not at the root of the final chord, as it would be in a traditional plagal cadence. Thus, it seems that Schoenberg's interest in alluding to traditional cadences extended into the Piano Concerto.

Ex. 76. Schoenberg, Piano Concerto, Op. 42, bars 262-3, strings

Although I have discussed the opening already, it is worth returning to it once more. Since the left-hand harmony of the opening 39 bars employs arpeggiated patterns which can be treated as broken chords made up of sevenths, ninths and pitches which relate to classifiable triads (as in Ex. 71, where pitches are grouped together to form implied harmonies), applying jazz chord names seems feasible. Of course, it cannot give the entire harmonic picture (since this is not jazz music and there are pitches which fall outside of my chord-designations), but nor can any other harmonic analysis of this music, as Chapter 3 indicated.

Treating the opening harmonies in the aforementioned manner also conveniently provides a straightforward method of memorising the music, which obviously helps the performer. Example 77 presents a possible interpretation of the opening. It will be noted that the chord-designations

have some links with the key-centres of the row, as described at the beginning of this chapter. For example, Cm11 displays the same tonic as my suggestion of C major for the isolated row (were it not for the presence of the left-hand E-flat, C major harmony would prevail), and Ama7/C-sharp corresponds to A major. My chord designation of Fma7 sus4 in bar 1 corresponds to Haimo's suggestion of F major for the pitches 2, 3, 4, 5 and 6 in the row in isolation, but not to my own. Allen Shawn claims that the accompaniment in the opening section is unsupportive of the melody; this is at odds with my own perception as a performer.<sup>23</sup>

Ex. 77. Schoenberg, Piano Concerto, Op. 42, bars 1-7, piano, jazz chord-designations<sup>24</sup>

The musical score for Ex. 77 consists of two systems of piano accompaniment in 3/8 time. The first system covers bars 1 through 8. Above the staff, jazz chord designations are provided for each bar: Fma7sus4 (bar 1), Cm11 (bar 2), Dm7#5 (bar 3), Ama7/C# (bar 4), G#7sus4 (bar 5), and F#sus4add2 (bar 6). The second system covers bars 9 through 12, with chord designations F#m/G# (bar 9), Ebaug (bar 10), and Ebma7 (bar 11). Fingerings are indicated by numbers 1 through 11 below the notes.

Further tonal moments which occur in the cadenza at bars 286 and 295 (the chord on the second crotchet in both instances) likewise point towards jazz harmonies (Exs. 78a and b). Both of these moments have

<sup>23</sup> Allen Shawn, *Arnold Schoenberg's Journey* (Cambridge, Massachusetts: Harvard University Press, 2003), 110.

<sup>24</sup> Solo piano and two-piano excerpts are taken from Arnold Schoenberg, *Concerto for Piano and Orchestra, Op. 42*, reduction for a second piano by Edward Steuermann (New York: Schirmer, 1944).

structural significance in the cadenza: Ex. 78a is the opening bar of the cadenza, which grabs the listener's attention; the second, Ex. 78b, is a rhythmic reprise of the opening gesture. Thus, they are connected to one another. Schoenberg draws our ear towards the second crotchet in each case through the left hand: at bar 286 the left-hand chords change each semiquaver until the last semiquaver of the first crotchet, at which point this chord is repeated on the next crotchet (and held for a longer duration: a quaver). The same is true for the rhythm in bar 295. This momentary halting of harmonic change creates a point of tonal stability, even if only briefly. Thus, rhythm helps to draw our ears towards the significant stable moments (as with some of the earlier examples of tonic and dominant harmony, which fall on strong beats).

Ex. 78. Schoenberg, Piano Concerto, Op. 42, jazz harmonies

(a) bar 286, piano

(b) bar 295, piano

The aforementioned chord on the second crotchet of bar 286 (shown below in Ex. 79a), when rewritten as shown in Ex. 79b, may be given the chord-designation Bma9 sharp11; this is exactly how I perceive the chord.

In so doing, I relish this as a moment of considerable stability.

With regard to the chord on the second crotchet of bar 295 (see Ex. 78b), the B-flat at the bottom (if taken as a root) may cause a listener to hear B-flat13 (jazz-designation), although the D would not ordinarily be present in this jazz chord. Also, the voicing in this case differs significantly from a typical jazz voicing of the chord. Even so, this again presents a moment of tonal stability for me.

Alternatively, it may conjure up a sense of bitonality (to be discussed further later) through a B-flat major sound in the left hand, combined with perhaps A-flat major in the right hand. In any case, however one wishes to describe the pitches, the sense of consonance is also achieved through the relatively wide spacing of the pitches, according to Smith Brindle's aforementioned perception of tension (to be discussed more below).

Ex. 79. Schoenberg, Piano Concerto, Op. 42, bar 286, second crotchet, piano

(a) Original



(b) Enharmonic equivalent (Bma9 sharp 11)



Furthermore, as shown in Ex. 80, it will be noted that there is a higher level of dissonance in the right-hand chords during the build-up to bar 295. From the second half of bar 292 to the end of bar 293, every right-hand chord contains a semitone clash. In bar 294 the rhythm speeds up, hurtling the music towards bar 295, which therefore functions as a

considerable release of tension.

Ex. 80. Schoenberg, Piano Concerto, Op. 42, bars 292-4, piano

Having presented numerous instances of tonality, at both a structural and local level, other traditional issues will now be considered, beginning with the use of almost conventional tension and resolution. As shown in Ex. 81, at bar 336, the initial semitone clash in the right hand on beat 1 (G-flat-F) is resolved when the F falls to D-flat, and the effect is repeated on the third crotchet of the bar. There are also moments in the Concerto when, if tonality is absent, one can still appreciate a consonance or transparency of sound, according to Smith Brindle's tension scale. For example, at bar 107 in the first movement (during an orchestral interlude), the wide spacing is notable (Ex. 82).<sup>25</sup>

---

<sup>25</sup> It might also be noted that Schoenberg's use of orchestration and timbre, while not directly affecting the level of harmonic consonance or dissonance, nonetheless helps to

Ex. 81. Schoenberg, Piano Concerto, Op. 42, bar 336, two-piano reduction



Ex. 82. Schoenberg, Piano Concerto, Op. 42, bars 107-9, short score, consonance



Then, at bar 152 (beat 2) – the first climactic moment of the first movement (the true climax being at the end) – Schoenberg uses an extremely wide distance between the highest and lowest notes sounded, which gives the sound significant spatial depth (Ex. 83). Again, the wide gaps between the individual pitches of the chord are particularly notable.

Ex. 83. Schoenberg, Piano Concerto, Op. 42, bar 152, beat 2, short score



---

separate out various individual melodic lines, thus increasing the level of clarity in the sound.

Finally, at the opening of the third movement (which has already been shown to be significant on a structural level), the wide spacing of pitches is clear: they are the pitches of open strings on the violin, which may conjure up a certain openness of sound to the listener (Ex. 84). As mentioned in Chapter 3, the B-A-C-H motif is played by the violas, although at a different transposition and in reverse order: D-E-flat-C-D-flat.

Ex. 84. Schoenberg, Piano Concerto, Op. 42, bars 265-6, short score

The next section assesses quasi-bitonal moments. There are times in the Concerto when the presence of two simultaneous harmonic fields is notable. One example is shown in Ex. 85. Here, in bars 250-2, a hexachord, C-sharp-F-sharp-B-E-A-D, is sustained by the orchestra; against this, the piano employs the pitches, G, C, F, B-flat, E-flat and A-flat. Thus, these hexachords are differentiated. The orchestra plays *pianissimo* at first (double bass harmonics, naturally quiet, are marked *forte* for balance's sake) while the piano plays *forte*. Therefore, there is the impression of two separate units sounding simultaneously. Bars 419-20 present another example of quasi-bitonality (Ex. 86). From the end of bar 419 onwards, the piano and oboe parts infer brief tonal moments, but the other instruments of the orchestra subvert them.

Ex. 85. Schoenberg, Piano Concerto, Op. 42, bars 249-52, full score

249 *Flzg.* *pp* *accelerando*

Flutes 1&2

Horns 1&2 *Flzg.* *p*

Trombones 1&2 *Flzg.* *p*

Trombone 3 *ppp* *p*

Tuba *ppp* *p*

Timpani *pp*

Piano *fagitato*

Double Bass 1 *f* *arco (A)* *accelerando*

Double Bass 2 *f* *arco (A)*

Double Bass 3 *f* *arco (E)*

Ex. 86. Schoenberg, Piano Concerto, Op. 42, bars 419-20, short score

419 *rit.*

Flute *p*

Oboe *p*

Clarinet 1

Bassoon

Horn

Trumpets 1 & 2 *o.D.* *pp*

Piano *N* *p dolce molto legato*

Violin I *rit.*

Violin II

Viola

Cello

The piano plays I-0 whilst the trumpets and flutes offer P-7. In focusing on the first four pitches of I-0, the triad of B-flat minor is highlighted, with group-repetition emphasising their temporary stability (bar 420, first 2 crotchets). Similarly, the trumpets and flute begin with only G and D (the first two pitches of P-7) for the first two beats of the bar, thus presenting a stable, perfect fifth.

Another example of quasi-bitonality is bars 443-50 (Ex. 87). Here, the original row is played by the violins (I have segregated this part on the top stave for clarity), but the harmony of the other instruments seems to militate against it. As the discussion in Chapter 1 indicated, defining such terms as tonality and bitonality is not without difficulties; the examples simply show that there are elements of Schoenberg's Piano Concerto which may point towards an effect which relates on some level to bitonality.

In this and the previous chapters, the many and various tonal features of the Concerto – some long-ranging, others fleeting – have been identified. An awareness of these features on the part of the pianist might lead him or her to make them more prominent, thus perhaps bringing the work closer to an audience more at home with traditional tonal music than with the language of Schoenberg's Piano Concerto, with its more remote tonal allusions. This issue will be examined further in the Conclusion.

Ex. 87. Schoenberg, Piano Concerto, Op. 42, bars 443-50, short score

443 H- P-3  $\flat$  2. 3 4 5

*f*

orchestral reduction

*f* *mf* *f*

piano

*f*

Detailed description: This system covers bars 443 to 450. It features a piano part and an orchestral reduction. The piano part begins with a whole rest in bar 443, followed by a series of chords and moving lines in the right and left hands, marked with a forte (*f*) dynamic. The orchestral reduction includes a woodwind line (marked *f*) and a string line (marked *mf*), both featuring triplet patterns. Bar numbers 443, 444, 445, 446, 447, 448, 449, and 450 are indicated above the staves.

6 6 7 8 8 9 10 11

Detailed description: This system covers bars 451 to 458. It continues the piano and orchestral reduction. The piano part shows complex chordal textures and melodic fragments. The orchestral reduction maintains the triplet patterns in the woodwinds and strings. Bar numbers 451, 452, 453, 454, 455, 456, 457, and 458 are indicated above the staves.

9 10 11 12 12

Detailed description: This system covers bars 459 to 466. The piano part continues with dense harmonic structures. The orchestral reduction features intricate rhythmic patterns, including triplets and sixteenth-note figures. Bar numbers 459, 460, 461, 462, 463, 464, 465, and 466 are indicated above the staves.

## Conclusion

While set-theory might sometimes be invoked to analyse Schoenberg's music, I have chosen to discuss it from other points of view, attempting to assess how it might be received while listening in a more traditional manner. I have shown that, across much of Schoenberg's oeuvre, there are allusions to tonality, which in fact bring into question Schoenberg's own claim that he 'renounced a tonal centre'.<sup>1</sup> That this is true for works such as the Piano Concerto proves that serial analysis may not reveal all the salient features of a serial work. The tonal elements I have revealed are:

- The use of a tonic (and dominant) through the inclusion of a referential pitch or chord and the repetition of melodies at a structurally important transposition
- The tonal significance of hexachordal combinatoriality, whereby there is an effect of repeatedly going over a particular harmonic field
- The harnessing of tonal implications of a row to create macro-structure, such as the extension of C-E to the C major and C major seventh chords in the Concerto
- Repetition of certain chords or patterns, including group-repetition and ostinato, and other local moments of temporary tonal stability, often supported by metre or rhythm
- Quotations of traditional cadences
- The presence of triads

---

<sup>1</sup> Arnold Schoenberg, *Style and Idea*, ed. Leonard Stein, trans. Leo Black (London: Faber and Faber, 1975), 86.

- The existence of jazz harmonies

I have also provided evidence of further features such as tension and resolution, including traditional appoggiaturas, and consonance according to Smith Brindle's tension scale.

I have certainly not provided an exhaustive account of every instance of the tonal phenomena I have investigated. Rather, I have given an indication of possible approaches to Schoenberg's music which a listener or performer might find beneficial. The various points of tonal reference to C in the Concerto have their origins in the opening 39 bars, played by the piano. The pitches, C and E, have particular significance at various points in the work and are responsible for the C major/C major seventh harmony which is hinted at throughout and ultimately fulfilled in the final chord of the work. These points may well register with the listener, although perhaps only after several hearings. Also, some clues may be required in the form of programme notes.

The performer may benefit from an awareness of these moments, which function as signposts throughout the work. In performance, knowing where you are in terms of the macro-structure at any point is psychologically important, since it aids composure. It may also help a performer to pace him/herself in terms of the projection/volume of sound which he or she devotes to the music during performance. Put more strongly, a knowledge of the important climaxes and structural features is vital, if the performer is to project them sufficiently (and also perhaps devote less sound to passages which are less significant).

There are also numerous instances of local tonal moments; furthermore, Schoenberg's frequent diversions from the strictness of the row (through group-repetition, for example) show his interest in such moments. These brief points of stability may provide a sense of respite from the more complex harmonic passages which display much more remote tonal connections. Again, they have psychological implications for the performer; complex patterns which use many pitches but contain no repetition are tiring to learn, memorise and perform, whereas patterns involving repetition are much simpler for the brain to comprehend. Therefore, the tonal moments involving group-repetition, for example, naturally provide a sense of relaxation for the performer, even if only briefly.

The performer must be prepared to consider enharmonic equivalents of certain pitches at times, in order to perceive particular moments as tonal ones (along the lines I have highlighted previously); this will not necessarily affect the execution of a passage, but shedding light on the tonal moments (which might otherwise be hidden) may, at the least, provide some mental repose. The more a performer is inclined to search for such elements, the greater the sporadic sense of ease he or she may achieve during performance.

My findings are of course not limited to providing benefits for the performer's mindset; an awareness of certain tonal moments may directly affect the performer's execution of the music in some instances, thereby affecting the listener's experience. For example, knowledge of important tonal moments may lead a player to use subtle rubato to enunciate certain passages. There is evidence of such playing in Mitsuko Uchida's recording

with Pierre Boulez and the Cleveland Orchestra.<sup>2</sup> At bars 286 and 295 – moments which I have shown provide significant tonal stability in the cadenza – Uchida stretches the tempo on the semiquaver before the stable chord in each instance, thus lengthening these moments and increasing their impact on the listener. A similar, subtle flexibility of tempo is notable in Brendel’s playing at both of these moments.<sup>3</sup>

It may well be that certain cadences may also be prioritised by the performer, for communication to the listener; this can be achieved through various means: rubato, articulation and voicing (for example, a particular voice which uses semitone movement in a cadence – mentioned by Allen Shawn and Alden Ashforth in Chapter 2 – may be brought out by the performer, to highlight the referential element).

With regard to the moments of tension and resolution, it must be reiterated that the score itself occasionally provides clues as to the execution of such passages. For example, many of the aforementioned moments of tension and resolution are accompanied by a *diminuendo* to emphasise the effect, like the first two crotchets in the viola part at bar 269 (B-B-flat), shown earlier in Ex. 75. When moments of resolution are present (such as those I have revealed) but are not accompanied by a *diminuendo* to indicate their function, the performer might consider using one to reveal the natural relaxation inherent in the music at that point. Of course, the overall context must always be considered; it may not be appropriate in every instance.

The ability to relate certain chords to traditional tonal harmony (and

---

<sup>2</sup> Arnold Schoenberg, Piano Concerto, Op. 42, with Mitsuko Uchida, cond. Pierre Boulez, Cleveland Orchestra, CD, Philips 289 468 033-2, 2001, recorded 2000.

<sup>3</sup> Arnold Schoenberg, Piano Concerto, Op. 42, with Alfred Brendel, cond. Michael Gielen, SWF Sinfonieorchester Baden-Baden, CD, Philips 446 683-2, 1996, recorded 1993.

to jazz chord designations) aids memorisation. From a personal perspective, this is true for the opening of the work, for example, which I believe to be simplest when considered as jazz harmony, as indicated in Chapter 5. In fact, much of Schoenberg's music requires that the performer memorise, even if he or she uses the score as a back-up. The final movement of the *Suite*, Op. 25, for example, presents such extreme technical challenges that the performer has no option but to memorise many passages. If this considerable task can be made easier through a readiness to interpret chords as tonal ones, this is an added bonus.

While I cannot imagine the consonant passages of music being artificially brought out, if performers (and listeners) can simply allow these passages to function as a contrast to the more dissonant music (where pitches of chords are closer together), then the experience of listening to atonal and serial music could be enhanced, since greater variety in the overall musical palette would be perceived. As will be seen below, there are, however, instances when these moments may subtly affect the tempo.

At least as far as the Piano Concerto is concerned, the term, 'atonal', is not fully justified, since my investigation has highlighted numerous tonal features in the work. There is an accessible sound-world in the Concerto, made all the more exciting by its potential for differing aural perceptions depending on the listener (as demonstrated through the example of Hopkins in Chapter 2). Since there is no precedent in terms of a tonal spectrum for serial music, it is hard to place the work on such a scale. Suffice it to say that the Concerto at least belongs somewhere on the spectrum, some distance away from either extreme; it is neither atonal nor traditionally

tonal, despite its considerable tonal content.

In my forthcoming DMA recital, I will be playing *Drei Klavierstücke*, Op. 11, *Sechs Kleine Klavierstücke*, Op. 19 and *Fünf Klavierstücke*, Op. 23. The above elements are at the forefront of my mind. To give an indication of how such elements may affect my performance, I will take as an example Op. 23, No. 4. As shown in Ex. 88, I am aware of the high level of consonance which the opening displays, due to the fairly wide spacing between the pitches of the chords.

Ex. 88. Schoenberg, Op. 23, No. 4, bars 1-2<sup>4</sup>

Overall, the mood seems to be amiable; the more important upper melody is marked *piano*, while the left hand is kept out of the way (a texture very similar to the opening of Op. 23, No. 5, discussed in Chapter 2) and the marking of ‘*Schwungvoll*’ suggests the typical Viennese lilt so common in much of Schoenberg’s music. Therefore, the lack of tension in the harmonies is a good partner to the relaxed mood to begin with. An awareness of the relaxed mood (through the performance direction and the consonant harmonies) means that executing a relaxed, steady tempo is a priority.

Later, on the second quaver of bar 18, there is the striking

---

<sup>4</sup> Excerpts are taken from Arnold Schoenberg, *Fünf Klavierstücke*, Op. 23 (Copenhagen: Wilhelm Hansen Edition, 1951).

appearance of an F-sharp minor triad in second inversion (Ex. 89). The use of second inversion chords immediately before cadenzas (a structurally significant position) in Classical concertos is well-known; therefore, this moment may well grab the attention of the average listener accustomed to such music. In fact, this chord does indeed signal the coming of an important structural feature: the first extended climax of the piece (which occurs at bar 19). Schoenberg lends the chord significance through the *crescendo* and strong articulation of the pitch immediately before the chord; thus, there is the effect of bouncing onto the second-inversion chord. My inclination is to give this moment slightly more time, in order for the chord's significance to register.

Ex. 89. Schoenberg, Op. 23, No. 4, bars 18-19

The image shows a musical score for two staves, likely piano and violin/viola. The top staff (violin/viola) begins at bar 18 with a piano (p) dynamic and a long, sweeping melodic line that rises and then falls. The bottom staff (piano) begins at bar 18 with a piano (p) dynamic and features a series of triplets. Bar 19 is marked with fortissimo (ff) and continues with dense, rhythmic textures, including triplets in both hands. The tempo marking 'poco rit.' is placed above the first staff at the beginning of bar 18.

Moving to the end of the piece, a particular chord (which first appears on beat one of bar 30) is used as a kind of disjointed pedal-point, appearing at bars 31 (third quaver), 33 (beat two) and bar 35: see Ex. 90. Thus, for the performer, this heralds the end of the work; the repeated

occurrences of the chord allow the performer to gain a sense of relaxation and winding-down; the repetition of one chord is, after all, tantamount to a reduction in harmonic movement.<sup>5</sup>

Ex. 90. Schoenberg, Op. 23, No. 4, bars 29-35

The image shows a musical score for a piano piece, specifically bars 29 through 35 of Schoenberg's Op. 23, No. 4. The score is written for a grand piano and is in 6/8 time. It consists of two systems of staves. The first system covers bars 29 to 31, and the second system covers bars 32 to 35. The music is characterized by complex, atonal harmonies and a focus on texture and dynamics. Bar 29 starts with a piano (p) dynamic. Bar 30 includes the instruction '(ohne Pedal!)'. Bar 31 features a fortissimo piano (sfp) dynamic. Bar 32 starts with a piano (p) dynamic. Bar 33 has a piano (p) dynamic. Bar 34 has a piano (p) dynamic. Bar 35 has a fortissimo piano (fp) dynamic. The score includes various musical notations such as notes, rests, slurs, and dynamic markings.

My intention is to provide programme notes for my DMA recital which indicate the salient tonal features of the works. As mentioned earlier, such tonal elements as can be found in Schoenberg's music do not always have the same aural immediacy as traditional tonal music; written material can help to bridge this gap. I acknowledge that the evidence presented in this thesis is at times subjective, which could lead to highly personalised programme notes, yet this is exactly what the combination of score- and performance-based research can lead to; it has enlightened – perhaps even revolutionised – my appreciation of Schoenberg's music, and I hope it will do the same for other performers and listeners.

---

<sup>5</sup> Much more straightforward points of reference exist in, for example, Wolfgang Rihm's *Brahmsliebewalzer* (which I will also play in my DMA recital). This work is in ternary form; thus, the return to the A-section signals the beginning of the home-straight for the performer. See Wolfgang Rihm, *Brahmsliebewalzer* (Vienna: Universal Edition, 1986).

## Bibliography

### Books and Articles

- Aiello, Rita and John A. Sloboda, eds. *Musical Perceptions*. New York: Oxford University Press, 1994
- Alegant, Brian. 'Unveiling Schoenberg's Op. 33b'. *MTS*, 18/2, Autumn, 1996, 143-66
- . 'Inside the Cadenza of Schoenberg's Piano Concerto'. *Intégral*, 16/17, 2002/2003, 67-102
- and Donald McLean. 'On the Nature of Enlargement'. *JMT*, 45/1, Spring, 2001, 31-71
- Ashby, Arved. 'Schoenberg, Boulez, and Twelve-Tone Composition as "Ideal Type"'. *JAMS*, 54/3, Fall, 2001, 585-625
- Ashforth, Alden. 'Linear and Textural Aspects of Schoenberg's Cadences'. *PNM*, 16/2, Spring-Summer, 1978, 195-224
- Babbitt, Milton. 'Three essays on Schoenberg 1968'. In Stephen Peles, Stephen Dembski, Andrew Mead and Joseph N. Straus, eds., *The Collected Essays of Milton Babbitt*. Princeton: Princeton University Press, 2003, 222-36
- Bailey, Kathryn. 'Canon and Beyond: Webern's Op. 31 Cantata'. *MA*, 7/3, October, 1988, 313-48
- . *The Twelve-note music of Anton Webern*. Cambridge: Cambridge University Press, 1991
- . 'Composing with tones: A Musical Analysis of Schoenberg's Op. 23 Pieces for Piano'. *MA*, 26/3, October, 2007, 373-80
- Bailey, Walter B. 'Oscar Levant, and the program for Schoenberg's Piano Concerto'. *JASI*, 6/1, 1982, 56-79
- . 'Listening to Schoenberg's Piano Concerto'. In Jennifer Shaw and Joseph Auner, eds., *The Cambridge Companion to Schoenberg*. Cambridge: Cambridge University Press, 2010, 238-46
- Berger, Arthur. 'Problems of Pitch Organization in Stravinsky'. *PNM*, 2/1, Autumn-Winter, 1963, 11-42
- Brendel, Alfred. *Alfred Brendel on Music*. London: Robson Books, 2001

- Burkhart, Charles. 'Schoenberg's Farben: An Analysis of Op. 16, No. 3'. *PNM*, 12/1-2, Autumn, 1973-Summer, 1974, 141-72
- Clarke, Eric. 'Empirical Methods in the Study of Performance'. In Eric Clarke and Nicholas Cook, eds., *Empirical Musicology: Aims, Methods, Prospects*. New York: Oxford University Press, 2004, 77-102
- Cook, Nicholas. *A Guide to Musical Analysis*. Oxford: Oxford University Press, 1987
- . 'Perception: A Perspective from Music Theory'. In Rita Aiello and John A. Sloboda, eds., *Musical Perceptions*. New York: Oxford University Press, 1994, 64-95
- Dahlhaus, Carl. *Studies on the origin of harmonic tonality*. Princeton: Princeton University Press, 1990
- Dowling, Walter J. 'Melodic Contour in Hearing and Remembering Melodies'. In Rita Aiello and John A. Sloboda, eds., *Musical Perceptions*. New York: Oxford University Press, 1994, 173-90
- Dudeque, Norton. *Music Theory and Analysis in the Writings of Schoenberg (1874-1971)*. Aldershot: Ashgate, 2005
- Dunsby, Jonathan. *Pierrot Lunaire*. Cambridge: Cambridge University Press, 1992
- Feisst, Sabine. *Schoenberg's New World: The American Years*. New York: OUP, 2011
- Forte, Allen. 'Sets and Nonsets in Schoenberg's atonal music'. *PNM*, 11/1, Autumn-Winter, 1972, 43-64
- . *The Structure of Atonal Music*. New Haven: Yale University Press, 1973
- Goehr, Alexander. *Finding the Key: Selected Writings of Alexander Goehr*. London: Faber and Faber Ltd, 1998
- Graebner, Eric. 'An Analysis of Schoenberg's Klavierstück, Op. 33a'. *PNM*, 12, 1-2, Autumn, 1973-Summer, 1974, 128-40
- Haimo, Ethan. 'Atonality, Analysis and the Intentional Fallacy', *MTS*, 18/2, Autumn, 1996, 167-99
- . 'The Late Twelve-tone Compositions'. In Walter B. Bailey, ed., *The Arnold Schoenberg Companion*. Westport, Connecticut: Greenwood Press, 1998, 157-75

- . *Schoenberg's Transformation of Musical Language*. Cambridge: Cambridge University Press, 2006
- Helmholtz, Hermann. *On the Sensations of Tone: as a Physiological Basis for the Theory of Music*. Trans. Alexander J. Ellis. Mineola: Dover Publications Inc., 1954
- Hicken, Kenneth. 'Schoenberg's Atonality: Fused Bitonality?'. *Tempo*, New Series, 109, June, 1974, 27-36
- Hopkins, G. W. 'Schoenberg and the "Logic" of Atonality'. *Tempo*, New Series, 94, Autumn, 1970, 15-20
- Hyde, Martha M. 'The Format and Function of Schoenberg's Twelve-Tone Sketches'. *JAMS*, 36/3, Autumn, 1983, 453-80
- Hyer, Brian, ed. 'Tonality'. In *GMO*. <http://0-www.oxfordmusiconline.com.wam.city.ac.uk/subscriber/article/grove/music/28102>
- Leibowitz, René. *Schoenberg and His School: the Contemporary Stage of the Language of Music*. Trans. Dika Newlin. New York: Da Capo Press, 1970
- Lendvai, Erno. *Béla Bartók: An Analysis of his Music*. London: Kahn & Averill, 1971
- Lerdahl, Fred and Ray Jackendoff. *A Generative Theory of Tonal Music*. Cambridge, Massachusetts: The Massachusetts Institute of Technology, 1983
- Lipscomb, Scott D. 'Cognitive organization of musical sound'. In Donald A. Hodges, ed., *Handbook of Music Psychology*, 2<sup>nd</sup> ed. San Antonio: The IMR Press, 1996, 133-75
- Mazzola, Guerino and Benedikt Stegemann. 'Hidden symmetries of classical tonality in Schönberg's dodecaphonic compositions'. *JMM*, 2/1, 37-51
- Meyer, Leonard B. 'Emotion and Meaning in Music'. In Rita Aiello and John A. Sloboda, eds., *Musical Perceptions*. New York: Oxford University Press, 1994, 3-39
- Milstein, Silvina. *Arnold Schoenberg: Notes, Sets, Forms*. Cambridge: CUP, 1992
- . 'Schoenberg's Serial Odyssey'. *ML*, 73/1, February, 1992, 62-74
- Morrison, Charles. 'Syncopation as Motive in Schoenberg's Op. 19, Nos 2, 3 and 4'. *MA*, 11/1, March, 1992, 75-93

- Newlin, Dika. 'Secret tonality in Schoenberg's Piano Concerto'. *PNM*, 13/1, Autumn-Winter, 1974, 137-9
- Perle, George. *Serial Composition and Atonality*. London: Faber and Faber, 1968
- Piston, Walter. *Counterpoint*. New York: W. W. Norton & Company, Inc., 1947
- Pople, Anthony. *Berg: Violin Concerto*. Cambridge: CUP, 1991
- Powers, Harold S. 'Is Mode Real? Pietro Aron, the Octenary System, and Polyphony'. *Basler Jahrbuch für historische Musikpraxis*, 16, 1992, 9-52
- Rahn, John. *Basic Atonal Theory*. New York: Schirmer Books, 1980
- Reti, Rudolph. *Tonality, Atonality, Pantonality: A Study of Some Trends in Twentieth Century Music*. Chatham: W. & J. Mackay & Co Ltd, 1958
- Rink, John. 'The State of Play in Performance Studies'. In Jane W. Davidson, ed., *The Music Practitioner: Research for the Music Performer, Teacher and Listener*. Aldershot: Ashgate Publishing Limited, 2004, 37-51
- Roeder, Michael Thomas. *A History of the Concerto*. Portland: Amadeus Press, 1994
- Rosen, Charles. *The Classical Style*. London: Faber, 1976
- Samson, Jim. 'Schoenberg's "Atonal" Music'. *Tempo*, New Series, 109, June, 1974, 16-25
- Schoenberg, Arnold. *Letters*. Ed. Erwin Stein, trans. Eithne Wilkins and Ernst Kaiser. London: Faber and Faber, 1964
- . *Fundamentals of Musical Composition*. Ed. Gerald Strang and Leonard Stein. London: Faber and Faber, 1967
- . 'Problems of Harmony'. Trans. Adolph Weiss. *PNM*, 11/2, Spring-Summer, 1973, 3-23
- . *Style and Idea*. Ed. Leonard Stein, trans. Leo Black. London: Faber and Faber, 1975
- . 'Brahms the Progressive'. In Schoenberg, *Style and Idea*. Ed. Leonard Stein, trans. Leo Black. London: Faber and Faber, 1975, 398-441

- . *Theory of Harmony*. Trans. Roy E. Carter. Berkeley and Los Angeles: University of California Press, 1978
- Sessions, Roger. *Harmonic Practice*. New York: Harcourt, Brace & Co., 1951
- Shawn, Allen. *Arnold Schoenberg's Journey*. Cambridge, Massachusetts: Harvard University Press, 2003
- Smith Brindle, Reginald. *Serial Composition*. Oxford: Oxford University Press, 1966
- Stein, Deborah. 'Schoenberg's Opus 19, No. 2: Voice-Leading and Overall Structure in an Atonal Work'. *ITO*, 2/7, October, 1976, 27-43
- Stein, Leonard. 'From Inception to Realization in the Sketches of Schoenberg'. In Rudolf Stephan, ed., *Bericht über den 1. Kongress der Internationalen Schönberg-Gesellschaft*. Vienna: Verlag Elisabeth Lafite, 1978, 213-27
- Steinberg, Michael. *The Concerto: a Listener's Guide*. New York: Oxford University Press, 1998
- Stephan, Rudolf. 'Formal layout'. In Schoenberg, Piano Concerto, Op. 42. London: Philharmonia, 1972, 7-8
- Taruskin, Richard. 'Letter to the editor from Richard Taruskin'. *MA*, 2/3, July-October, 1986, 313-20
- Uchida, Mitsuko. 'Schoenberg's Piano Concerto: an introduction'. In the sleeve notes in Arnold Schoenberg, Piano Concerto, Op. 42. With Mitsuko Uchida, piano. Cond. Pierre Boulez, Cleveland Orchestra. CD, Philips 289 468 033-2, 2001, recorded 2000
- Väisälä, Olli. 'Concepts of Harmony and Prolongation in Schoenberg's Op. 19/2'. *MTS*, 21/2, Autumn, 1999, 230-59
- Whittall, Arnold. *Schoenberg's Chamber Music*. London: BBC, 1972
- . *Serialism*. Cambridge: Cambridge University Press, 2008
- Wuorinen, Charles. *Simple Composition*. New York: C. F. Peters Corporation, 1979

## Scores

- Bach, J. S. Cantata, No. 60, BWV 60, *O Ewigkeit, du Donnerwort*. Wiesbaden: Breitkopf & Härtel, n. d.
- . Passacaglia & Fugue in C minor, BWV 582. In *J.S. Bach Organ Works*, Book 10. Sevenoaks: Novello, 1964
- Beethoven, Ludwig van. Sonata in C, Op. 2, No. 3. In *Klaviersonaten*, Band I. Munich: Henle Verlag, 1980
- . Piano Concerto No. 4 in G major, Op. 58. Reduction for a second piano by Max Pauer. London: C. F. Peters, n. d.
- . 33 Variations on a Waltz by Diabelli, Op. 120. In *Variationen für Klavier*, Band II. Munich: Henle Verlag, 1961
- Berg, Alban. Violin Concerto. Vienna: Universal Edition, 1936
- Keyte, Hugh and Andrew Parrott, eds. 'Joy to the World', pre-1833, rev. William Holford, c. 1834. Arr. Hugh Keyte and Andrew Parrott. In *The New Oxford Book of Carols*. New York: OUP, 1992, 270-1
- Rihm, Wolfgang. *Brahmsliebewalzer*. Vienna: Universal Edition, 1986
- Schoenberg, Arnold. *Drei Klavierstücke*, Op. 11. Vienna: Universal Edition, 1994
- . *Fünf Orchesterstücke*, Op. 16. London: Eulenburg, 1952
- . *Sechs Kleine Klavierstücke*, Op. 19. Vienna: Universal Edition, 1940
- . *Pierrot Lunaire*, Op. 21. Vienna: Universal Edition, 1941
- . *Fünf Klavierstücke*, Op. 23. Copenhagen: Wilhelm Hansen Edition, 1951
- . *Suite für Klavier*, Op. 25. Vienna: Universal Edition, 1952
- . String Quartet No. 3, Op. 30. Mainz: Schott, 1984
- . *Klavierstück*, Op. 33a. Vienna: Universal Edition, 1956
- . *Klavierstück*, Op. 33b. Vienna: Universal Edition, 1959
- . *Ode to Napoleon Buonaparte*, Op. 41. New York: G. Schirmer, Inc., 1945

———. Concerto for Piano and Orchestra, Op. 42. Vienna: Philharmonia, 1972

———. Concerto for Piano and Orchestra, Op. 42, reduction for a second piano by Edward Steuermann. New York: Schirmer, 1944

Webern, Anton. *Drei Volkstexte*, Op. 17. Vienna: Universal Edition, 1955

———. Second Cantata, Op. 31. Vienna: Universal Edition, 1956

## Recordings

- Schoenberg, Arnold. Piano Concerto, Op. 42. With Emanuel Ax, piano. Cond. Esa-Pekka Salonen, Philharmonia Orchestra of London. CD, Sony 53289, 1993, recorded 1992
- . Piano Concerto, Op. 42. With Alfred Brendel, piano. Cond. Michael Gielen, SWF Sinfonieorchester Baden-Baden. CD, Philips 446 683-2, 1996, recorded 1993
- . Piano Concerto, Op. 42. With Glenn Gould, piano. Cond. Robert Craft, C. B. C. Symphony Orchestra. CD, Sony 52664, 1994, recorded 1961
- . Piano Concerto, Op. 42. With Amalie Malling, piano. Cond. Michael Schønwandt, Danish National Symphony Orchestra. CD, Chandos 9375, 1995, recorded 1994
- . Piano Concerto, Op. 42. With Maurizio Pollini, piano. Cond. Claudio Abbado, Berliner Philharmoniker. CD, Deutsche Grammophon 427 771-2, 1990, recorded 1988
- . Piano Concerto, Op. 42. With Peter Serkin, piano. Cond. Pierre Boulez, London Symphony Orchestra. CD, Erato 88175, 1986, recorded 1985
- . Piano Concerto, Op. 42. With Mitsuko Uchida, piano. Cond. Pierre Boulez, Cleveland Orchestra. CD, Philips 289 468 033-2, 2001, recorded 2000