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Towards a general theoretical framework (1)

Introduction

Schoenberg published very little on the twelve-tone method and only discussed twelve-tone composition with a selected group of pupils of the calibre of Webern or Berg. Before attempting to deal theoretically with the subject, he considered it a prerequisite to write an all-embracing study of musical logic:

For nearly twenty years I have been collecting material, ideas and sketches for an all-inclusive textbook of composition. When I shall finish it, I do not know. In any case: I have published nothing about 'composition with 12-tones related to one another' and do not wish to do so until the principal part of my theory was ready: the 'Study of Musical Logic'. For I believe that meaningful advantage can be derived from this composition when it is based on knowledge and realization that comes from musical logic. And that is also the reason why I do not teach my students: '12-tone composition', but 'composition', in the sense of musical logic; the rest will then come, sooner or later, by itself.¹

This project, which preoccupied him intermittently for several long periods from the time of the completion of the *Harmonielehre* onwards, eventually failed to reach fruition, and three years before his death, Schoenberg wrote:

One day there will be a theory which abstracts rules from these compositions. Certainly the structural evaluation of these sounds will again be based upon their functional potential.²

In view of the absence of a guiding theoretical statement from Schoenberg himself, a general framework for dealing with the dodecaphonic works may be inferred by interpreting Schoenberg's fragmentary statements in the light of his compositional practice and assessing their significance in terms of their value in reconstructing musical structure. Schoenberg's only three extended essays on the method, though of a general and introductory nature, indicate

¹ Quoted in Goehr, 'Schoenberg's *Gedanke* Manuscript', p. 4.

² Schoenberg, *Structural Functions of Harmony*, p. 194.

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his preoccupation with various problematical questions.³ The substantial amount of extant sketch musical material showing not only the manipulation of sets but often various stages in the conception and development of material, provides another primary source for studying the manner in which Schoenberg viewed and worked with the new method. The analysis of the compositions supported by the notions which can be inferred from these writings and sketches provides the basis for constructing a conjectural account of Schoenberg's conception of twelve-tone composition.

In his writings Schoenberg dealt with the technical aspects of the method in an unproblematic and largely pragmatic manner, while exhibiting a constant concern as to the desirability and consequences of integrating tonally laden material and twelve-tone procedures. In a manuscript of 1923, he wrote that the introduction of

consonances (major and minor triads) and also the simpler dissonances (diminished triads and seventh chords) – in fact almost everything that used to make up the ebb and flow of harmony – are, as far as possible, avoided.⁴

According to Schoenberg, the avoidance of tonal material was not a requisite of the new method but arose from the desire

to try out the new resources independently, to wrest from them possibilities of constructing forms, to produce with them alone all the effects of a clear style, of a compact, lucid and comprehensive presentation of the musical idea.⁵

Twenty-five years later, Schoenberg reviewed his position:

It seemed in the first stages immensely important to avoid a similarity with tonality. The feeling was correct that those free combinations of simultaneously sounding tones – those 'chords' – would fit into a tonality. Today's ear has become as tolerant to these dissonances as musicians were to Mozart's dissonances.⁶

The twelve-tone method provided in the early stages a regulating technique for organic composition with non-tonal configurations, as is more explicitly stated in the following passage, written around 1948:

The third advantage of composition with a set of twelve-tones is that the appearance of dissonance is regulated. Dissonances are not used here as in many other contemporary compositions as an addition to make consonance more 'spicy'. For the appearance of such dissonant tones there is no con-

3 These are Schoenberg, 'Twelve-Tone Composition', 'Composition with Twelve Tones (1)', and 'Composition with Twelve Tones (2)', in *Style and Idea*. See also 'Vortrag/12TK/Princeton', an early version of 'Composition with Twelve Tones (1)'.

4 'Twelve-Tone Composition', in *Style and Idea*, p. 207

5 *Ibid.*

6 'Composition with Twelve Tones (2)', in *Style and Idea*, p. 246

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ceivable rule, no logic, and no other justification than the dictatorship of taste. If dissonances other than the catalogued ones are admitted at all in music, it seems that the way of referring them all to the order of the basic set is the most logical and controllable procedure toward this end.⁷

In the 'Addendum' of 1946 to 'Composition with Twelve Tones (1)', Schoenberg admitted that in the course of the previous ten years the strict avoidance of 'octave doubling and prominent appearances of fundamental chords of harmony. . .[had] been loosened to some degree' and justified their incorporation into twelve-tone composition on the grounds that their presence in the context of 'the characteristic melodies, rhythms, phrasings and other formal devices which were born simultaneously with the style of the freedom of the dissonance' would not recreate tonality.⁸ The style of the freedom of the dissonance – the sound world of *Erwartung* and *Herzgewächse* – is, however, far removed from the pre-1946 American dodecaphonic works, which achieved a distinct set of idiomatic features more akin to some of the late tonal works. In this respect Samson noted that in the Scherzo of the Second String Quartet

by couching such unorthodox harmonies in a traditional rhythmic language of Beethovenian energy and drive, Schoenberg created in this movement a sound world which presents close analogies with some of his later serial music. If we compare the movement to passages from the Fourth String Quartet, composed some twenty years later and itself often suggesting D minor, we find that in both instances the on-going energy is generated as much by rhythmic as by harmonic means.⁹

The examination of the European twelve-tone works also reveals that the incorporation of tonal functions and tonally laden material took place at a much earlier stage than that admitted by Schoenberg in the 'Addendum', and even suggests that it was never totally absent.

The new method provided Schoenberg with a concise system of 'self-defined' musical relations which, in a constructional sense, could replace those formerly given by tonality. Yet unlike tonality, the twelve-tone method has no recourse to generalized functionality, in the sense that it does not prescribe functional relations which are constant for all compositions, such as the hierarchy of tonal distance provided by the circle of fifths in tonal music. But progression is 'associative' and 'non-functional' since no tonal motivation, hence no tonal function, can be inferred without recourse to the connotations of a generalized system of functions, such as tonality.¹⁰ On the contrary, in twelve-tone composition 'the normative factor is determined without any reference to means of

7 *Ibid.*, p. 247

8 'Addendum' to 'Composition with Twelve Tones (1)', in *Style and Idea*, p. 244

9 Samson, *Music in Transition*, p. 108

10 See Babbitt, 'The String Quartets of Bartók', pp. 377 and 380.

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its being so recognized other than by internal structure, which is not true in tonal music, and by priority, which is not necessary in tonal music'.¹¹

Schoenberg's twelve-tone works generally show that he was unwilling to relinquish completely the functional relations of tonality and often concentrated implications formerly pertaining to a tonal region or key on single pitch-classes or pitch-levels. This compositional approach is not exclusive to the dodecaphonic works and has been described in relation to the Expressionist compositions as the replacement of 'a harmonically valid form by an overall melodic one, [which] though it could not have the significance of the old forms, nevertheless enabled the composer to differentiate between sections which return to their starting-point and those which move away from it'.¹² In order to achieve functional differentiation within the context of the continuous permutations of the total chromatic, Schoenberg developed a variety of procedures for delineating structural hierarchies by integrating twelve-tone relations and traditional means for articulating musical discourse. Although some of these procedures are common to several works, each composition comprises a unique syntactical constellation exhibiting varying degrees of dependence on traditional tonal functions and idioms.

The tonal implications of the twelve-tone works of the early American period have come to the attention of several writers, such as Newlin and Cone,¹³ while the earlier twelve-tone works have generally been regarded as uncompromisingly devoid of tonal connotations. In these earlier works, though the deployment of tonal functionality is relatively less extensive, the large-scale unfolding of the composition is mainly controlled by the tonally directed motion of certain individual lines and line complexes. Similarly, the abandonment of classical balancing phrase-construction in some of the later works, such as the String Trio, and its replacement with a kind of 'musical prose', reminiscent of that of the Expressionist period, has been viewed as the counterpart of a more autonomous type of twelve-tone syntax. In this respect, it is most illuminating to examine tonal motion and association in those works generally regarded as exhibiting rather attenuated tonal motivation; for it reveals the procedures for establishing pitch hierarchies in extreme conditions, as will be shown in the discussion of the third movement of the Wind Quintet later in this chapter, and in the examination of the String Trio in the final chapter.

Schoenberg's music exhibits a comparatively high degree of consistency in the use of the twelve-tone method, yet analysis occasionally reveals 'licences' or deviations from strict twelve-tone criteria in order to accommodate events which seem to arise from outside the domains of twelve-tone relations. This

11 Babbitt, review of *Quatrième Cahier (n.d.): Le Système dodécaphonique*, p. 265

12 W. and A. Goehr, 'Arnold Schoenberg's Development towards the Twelve-Tone System', p. 91

13 Newlin, 'Secret Tonality in Schoenberg's Piano Concerto', pp. 137–9, and Cone, 'Beyond Analysis', pp. 86–7

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tendency is even more pervasive in Berg, where the large diversity of integrative devices and the many musical and dramatic motivations stretch and obscure the boundaries of Schoenberg's method.¹⁴

The presence of gestures and sonorities which do not derive directly from the particular integrative devices of the work, but often characterize technically dissimilar compositions, is not exclusive to Schoenberg. The inter-War period saw the emergence of music in which elements derived from traditional tonality were integrated with new means of structuring music. The works of Stravinsky, Bartók, Berg, and Webern retain to a certain extent tonal functions as well as a variety of tonal idioms. Similarly, some of Schoenberg's earlier twelve-tone compositions drew heavily on the sound world of his late atonal works.¹⁵ For instance the repertoire of textures and harmonies, and the reliance on formal prototypes in the Piano Suite, Op. 25, were anticipated in *Pierrot lunaire*. Generally the new methods did not immediately generate unprecedented sonorities, but often recreated musical contexts which preceded their conception. In this respect, before engaging in a discussion of the works composed with the twelve-tone method, it seems appropriate to examine in the course of this chapter the type of syntax involved in his earlier music. The cursory discussion of certain aspects of the Second String Quartet, *Erwartung*, and 'Valse de Chopin' from *Pierrot* which follows aims at characterizing lines of continuity and attempts to establish whether those events which seem to respond to other than twelve-tone criteria can be explained by tendencies already present in the tonal and atonal works.

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In many of Schoenberg's atonal and twelve-tone 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.¹⁶ It is important to distinguish these pitch-class and pitch-level centres from the analogies to, or substitutes for, tonal functions found in the music of some composers.

14 For a detailed account of Berg's twelve-tone practice see Perle, *The Operas of Alban Berg*, vol. 2: *Lulu*, pp. 85–207. The possibility of conceptualizing some of Berg's recondite schemes has been questioned by Babbitt in *Words about Music*, p. 24.

15 Schoenberg's explanation of the twelve-tone method to a group of pupils in 1923 concluded with the following remark:

You use the row and compose as you had done it previously. That means: Use the same kind of form or expression, the same themes, melodies, sounds, rhythms as you used before.

(Schoenberg's *Tone-Rows*, *Style and Idea*, p. 213.)

16 Berger's 'Problems of Pitch Organization in Stravinsky' deals with a similar concept, which he calls 'pitch-class priority'.

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Substitutes for tonal centres are frequently found in Bartók, whose music often exhibits the use of novel elements performing functions analogous to large-scale tonal relations.¹⁷ Schoenberg's music indicates that he also was interested to some extent in devising such analogies, but these will be discussed as special cases. The use of individual pitch-levels and pitch-classes as tonal centres has also been identified in Berg. Perle commented in relation to *Wozzeck* that 'though one notes the occasional presence of tonic functionality in this otherwise "atonal" work. . . the centrality of a given pitch or collection of pitches is no less unmistakable in many of the "atonal" sections of *Wozzeck*'.¹⁸ Perle explained in relation to the tonal centre which he identified as being the primary linear focal element in scene 1 in *Wozzeck* that 'its priority was expressed through repetition, durational preponderance, and prominence at registral and temporal boundaries'.¹⁹

In Schoenberg the structural importance of tonal centres and the manner in which they are used varies not only among different works but also among different sections of a single work. However, many of Schoenberg's compositions share certain devices for creating hierarchies; namely, the structure of regular metre and the prominence of those pitch-levels or pitch-classes which appear at the boundaries of groupings, often reinforced by leading-note and appoggiatura-like semitonal figures, and frequently supported by perfect fifths and by the use of idiomatic cadential gestures. While the nature of conventional metric structure remains essentially unaffected by the new situation, the retention of pitch-class centres or pitch-level centres unsupported by tonal progression creates a new syntactical context in which tonal motion is achieved through the polyphonic unfolding of hierarchically structured lines.

Even in the case of *Erwartung*, a work characterized by its tonal elusiveness, Walter and Alexander Goehr identified a melodic framework connecting important events and thus enabling 'the composer to differentiate sections which return to their starting-point and those which move away from it'. Although the very nature of the musical language of *Erwartung* seems to resist analysis, it is possible to observe even here certain tendencies which would recur in a much more systematic manner in later music.

An examination of *Erwartung* from this point of view reveals that the overall design of the vocal line at the beginning of each scene has many elements in common with the opening of scene 1. As shown in ex. 1, at the opening of each scene, boundaries of groupings tend first to emphasize C#, then E#/F, and finally Eb. The comparison of the opening bars of the first three scenes

17 For instance, in the third movement of the Fourth String Quartet, the pitch-class content of the chord which is slowly built up in the opening bars (A-B-C#-E-F#-G#) reappears at the end of the first section, b. 31-34, transposed at the perfect fifth (E-F#-G#-B-C#-D#), and is restated in its original transpositional level in the coda, b. 64 to end. The manner in which this harmony is used suggests that an analogy to a tonic-dominant relation was intended.

18 Perle, *The Operas of Alban Berg*, vol. 1: *Wozzeck*, p. 130

19 *Ibid.*, pp. 134-5. In the original Perle uses the term 'tone centre'.

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shows that in each case the vocal line freely permutes some of the pitch-levels of the opening gesture and either starts from or aims towards C# (ex. 1). Some

Ex. 1.1

The musical score for Ex. 1.1 consists of five staves of music. The first two staves are labeled 'Scene 1' and the last three are labeled 'Scene 2', 'Scene 3', and 'Scene 4'. A 'closing section' is also shown. The score includes bar numbers (3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 15, 16, 17, 19, 22, 23, 24, 38, 39, 40, 41, 42, 43, 45, 90, 92, 93, 94, 95, 97, 98, 99, 101, 125, 126, 128, 129, 130, 131, 418, 420, 421, 423) and various annotations: brackets for groupings, circles for boundaries of groupings, and boxes for pitch-classes present in the opening vocal gesture. A legend at the bottom left explains these symbols: a bracket for 'groupings', a circle for 'boundaries of groupings', and a box for 'pitch-classes present in the opening vocal gesture'.

of these pitch-levels are also present in the opening bars of the fourth scene and the closing section (b. 418), but in these two cases C#³ is replaced by C#². In this sense, the opening vocal fragment defines a 'harmonic area', which performs an 'articulating' role.²⁰ Some of these melodic shapes recur in highly

²⁰ Discussing Bartók's string quartets, Babbitt commented on the 'articulative role' of harmonies recurring at a fixed tonal level in different contexts in such a way that the harmonic structure itself possesses different implications; see 'The String Quartets of Bartók', pp. 381–2. See also his comments on the articulative function of the E minor chord in *Symphony of Psalms* in 'Remarks on the Recent Stravinsky', p. 168.

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dissimilar contexts. For example, the vocal line at the opening of the third scene follows the overall pattern of the last vocal phrase which closes on Eb in the first scene; yet the contexts are dissimilar:

scene 1, b. 23–24 C#³ D² Db² F#³ E³ D² Eb²
 scene 3, b. 90–93 C#³ B² C³ F#³ E³ D³ Eb²

A reference to the gestures of the original context occurs after a further close on Eb² (b. 95), in another fragment similarly closing on D#² (Eb²), b. 101, which is followed by a *tremolando-sul-pont.* figuration reminiscent of the one in scene 1 (b. 24). The diagonal lines in ex. 1 draw attention to some of the many vocal phrases which follow the same overall pattern in terms of their points of arrival and departure. W. and A. Goehr refer to such cross-references and continuous reinterpretations of the material when they write:

In *Erwartung* we experience a sense of being overwhelmed and lost in a maze of variation and juxtaposition of elements which are hardly memorable and result in a seeming structural incoherence. . . Though the chordal structure is complex and the individual parts are heavily doubled in augmented fourths, sevenths, etc. (which in this case tend to loosen the vertical coherence), an arc is circumscribed and the basic tonal principle of movement away from and towards a point or centre is retained. . . One feels that Schoenberg here already starts ‘composing with notes’; that is, that he tended to replace triads as the functional agents with the identity of individual tones.²¹

Schoenberg’s writings on the twelve-tone method give ample evidence of his concern with the problems involved in integrating tonally laden material and the new resources. But the deployment of only certain aspects of tonality creates a new and complex situation, for tonality is an integrated system, in which form, metric structure, voice leading, dissonance treatment, and harmonic progression explain each other. From the standpoint that regards twelve-tone music and tonality as constituting totally separate and well defined systems, the acknowledgement of tonal elements in a twelve-tone context raises the problematic issue of ‘mixed systems’. Dealing with this, Boretz pointed to the incongruities in construing ‘a twelve-tone trichord as also a tonal triad in the same piece under the same explanation’.²² Since the premises in Boretz’s conception are at the basis of much current research on Schoenberg, it is important to examine them in detail.

Boretz considers ‘the total constructional hierarchy of each single piece to be inferable from its data alone, without recourse to a conventional lexicon or grammar’.²³ For him the shared aspects between different pieces of music are ‘not best understood as a “common practice” or “common language”’, because

21 W. and A. Goehr, ‘Arnold Schoenberg’s Development towards the Twelve-Tone System’, p. 89

22 Boretz, ‘Meta-Variations, Part IV: Analytic Fallout (1)’, p. 150

23 *Ibid.*, p. 147

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he considers such an approach only appropriate to a construction where the individual's importance is mainly that of an *instance* of structure in a domain of such structures.²⁴ The construction of an 'individual-syntactical' model for each piece has the advantage that it is more likely to account for its singularity than an analysis based on a 'general-syntactical' model for a literature, such as that proposed by Forte for atonal music.²⁵ Yet, dismissing the notion of common language or practice is problematic on various accounts. Its first corollary is the possibility of music which exhibits no continuities with the past, and can only be understood in terms of totally novel rules. Once the notion of a 'common language' is discarded, the cognitive mechanisms involved in the process of inferring the syntactical rules of musical structures are reduced to the analysis of the set of measurements of the data of the piece. Consequently, the gap between pre-analytical perception of the music, with its reference to past experience, and analytical reconstruction widens. Moreover, Boretz's mode of inquiry cannot be concerned with questions of historical derivation, modelling, and reference. Schoenberg's own view was that he was working within a tradition from which he derived modes of musical thought and an array of common musical elements, conventional techniques (such as development and variation) and a repertoire of formal prototypes. Even a cursory examination of his music reveals it to be imbued with references to the music of the past. The problems, rightly pointed out by Boretz, arising out of the idea of 'mixed systems' only exist if we think that twelve-tone music constitutes an autonomous musical system. On the other hand, if we regard the twelve-tone method, as Schoenberg did, as a means for fortifying musical logic in place of a weakening tonality, we need not exclude the possibility of remnants of tonal thought or of any other element of continuity derived from earlier music. Although, as Boretz points out, one should be wary of assigning words 'like "cadence" and "phrase" in their tonal sense (or without specified alternative sense) to non-tonal pieces',²⁶ I believe that one should not dispense with such terminology altogether.

Babbitt's characterization of the way in which Bartók integrates self-defined structural devices with the conventions of tonality in his string quartets provides a seminal model for this type of enquiry.²⁷ His remarks on the question of contextuality and tonal motivation are particularly relevant to Schoenberg's compositional attitude. Babbitt considers that Bartók was 'unwilling to abandon completely the employment of generalized functional tonal relations, existing prior to a specific composition'.²⁸ For, even though Bartók was aware of the 'hazards inherent in the use of a language overladen with connota-

24 *Ibid.*, p. 146

25 See the discussion of Forte's analysis of Webern Op. 5/IV in Boretz, pp. 218–23

26 *Ibid.*, p. 149

27 Babbitt, 'The String Quartets of Bartók'

28 *Ibid.*, p. 377

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tion, in which the scarcely suggested is perceived as the explicitly stated', he knew that 'the exclusive employment of unique, internally-defined relationships, which can avoid this danger, leads to a considerable sacrifice of tonal motivation'.²⁹ According to Babbitt, Bartók tackled the problem of achieving a balance between these two methods, without oversimplifying the problem by assigning separate areas of control to each, that is, substituting segmentation for integration.³⁰ While Babbitt recognizes the relative independence of these two organizational principles in Bartók's music, his discussion of the third movement of Schoenberg's Fourth String Quartet – his only published extended analysis of a twelve-tone work – focuses exclusively on the set-determined aspects of the music.³¹ For he considers that Schoenberg's extensive use of the serial method establishes a context, while its sporadic use as an integrative device in the detail – as in Bartók's string quartets – is determined by the context in which it occurs.³² Babbitt's analysis implies that elements originally belonging to a tonal context provide a conventional framework, a vehicle, for the articulation of twelve-tone relations but disregards their function in reciprocally determining the choice of twelve-tone procedures and their role in the structuring of large-scale continuity.

The notion of 'composing with notes' can be traced back to the practice in much classical music of treating certain notes in such a way that they perform the associative function ordinarily attributed to keys. The reinterpretation of harmonic function of individual notes explains certain large-scale enharmonic changes, such as the famous D \flat /C \sharp alteration in the *Eroica*. According to Walter Goehr, Schoenberg used to analyse the *Eroica* in his classes in terms of individual notes carrying the implication of keys.³³

Composing with formal prototypes and their idioms*Integration of tonally evasive material and historical forms*

The 'style of the freedom of the dissonance' involved a kind of 'musical prose' almost devoid of a sense of metre, in which intuitively associated musical gestures evoking a world of traumatic images combined into a web of free-moving melodies punctuated by overlapping cadences in the individual parts. In the twenties, Schoenberg came to regard the dependency of this type of music on text and free association as a serious limitation.³⁴ Such constructional qualms would have been utterly unacceptable to Schoenberg in the previous

29 Ibid., p. 377

30 Ibid., p. 378

31 Babbitt, 'Set Structure as a Compositional Determinant'

32 Babbitt, 'The String Quartets of Bartók', pp. 382–3

33 This information was passed to me by Alexander Goehr.

34 See Schoenberg, 'Analysis of the Four Orchestral Songs Op. 22', p. 27.