3 Serialism in History and Criticism

ARNOLD WHITTALL

What Happened When

An early account of what became known as serial composition can be traced to 1923, when the composer Josef Matthias Hauer published a text called *Treatise on Twelve-Tone Technique: The Nature of Musicality* (*Lehrbuch der Zwölftontechnik: von Wesen des Musikalischen*). A year later another important feature of musical modernism was pinpointed in a book by Herbert Eimert called *Theory of Atonal Music (Atonale Musiklehre*). Both titles seem to reflect a concern to promote musical characteristics that were starkly opposed to the familiar notion of tonality, of something sacred to the great masters of the past: just as 'atonal' implied the absolute negation of tonality, so 'twelve-tone technique' might appear to imply the absolute negation of tonality's 'seven-tone technique', the drawing of tonally functional chords and relationships from the diatonic major or minor scales, coupled with commitment to the time-honoured distinction between consonance and dissonance.

All these technical terms - tonal, atonal, twelve-tone technique - have musical connotations that are more direct than those relating to 'serialism', simply because the essential concept of 'tone' (as reflected in dictionary definitions) is musical where that of 'series' is not. It is also because from the outset twelve-tone technique depended on deriving the entire compositional texture from twelve pitch classes arranged in a fixed linear sequence, and any 'fixed linear sequence' in tonal composition was likely to be primarily motivic or thematic in character, and not directly reproduced in other strands of the texture. Such a fundamental difference began to be explored in technical writing like Hauer's and Eimert's more or less at the same time as composers were beginning to write serially. But it could never be taken for granted that 'composition with twelve tones' was also, by definition, atonal. Twelve-tone serial composition, like other kinds of modernist and often expressionist music, might be less securely tonal than much music written before 1900. But fundamental vestiges of tonal thinking and tonal procedure stubbornly resisted all avant-garde attempts to eradicate them.

As my initial reference to Hauer shows, Arnold Schoenberg was not the only musician in the early twentieth century to have intuitions about the need for, and nature of, an organising principle that would facilitate a properly modern character for the creation of compositions fit to stand alongside the greatest achievements of the past. Nevertheless, his preeminence during the early years of music's twelve-tone phase is entirely understandable, given the quality of his pre-serial works, and also his role as teacher and mentor to several of the first generation of twelve-tone composers, including Alban Berg and Anton Webern.

It was in July 1923 that Schoenberg, at the age of forty-eight, finished his first completely twelve-tone serial work, the Suite for Piano op. 25. Over the next twenty-eight years, most of the compositions he worked on were twelve-tone, and this body of music is striking, among much else, for the degree to which it compensates for his avoidance of such standard generic titles as string quartet and concerto during the fifteen years between 1908 and 1923. In the 1920s, many of Schoenberg's pupils followed his lead, not just into twelve-tone serialism, but in aiming to demonstrate that this new method of composition was not simply an intransigent, destructive avantgarde initiative. Rather, it offered an innovative approach to texture and design that grew organically out of the increasing chromaticism and intricate motivic processes of much nineteenth-century music. Above all, it could be felt to offer invigorating discipline at a time when use of traditional procedures was difficult to distinguish from dull and derivative recycling of jaded tonal clichés.

In the 1950s, it would become a familiar claim that the twelve-tone compositions of Schoenberg and his followers were less radical, less obliquely aphoristic, than such examples of post-tonal, pre-serial expressionism as Schoenberg's Erwartung (1909) and Pierrot lunaire (1912) or the various sets of miniatures written by Webern between 1908 and 1916. In addition, as historians have often observed, one should never underestimate the consequences of the fact that, although the basic language of music appeared to change radically between 1900 and 1930, and twelvetone compositions were at the forefront of such changes, the nature of voices and instruments, and of the institutions that preserved and promoted serious music within society, remained much as it had been since well before 1900. It was only after the middle of the twentieth century that new ways of making sound, especially recording on tape and the subsequent transformation of analogue into digital technology, began to influence not just the dissemination of music, but compositional methods as well. Yet the result, far from turning into a complete and unrelenting

rethinking of compositional principles, turned out rather to favour the kind of intensely heterogeneous range of styles and techniques that has characterised contemporary music over the past half century. The radical shifts and reshapings of the concept of serialism that can be detected during the early post-war years proved to be no more permanent or all-determining than any other innovative initiative of that time.

Serial Materials

Twelve-tone serial technique was multiple rather than singular from the beginning; it proposed basing pitch materials not simply on a single succession of all twelve semitones of the chromatic scale, but on the forty-eight such successions that become available when the principal or basic series form is transposed onto the other eleven pitch levels, and when its inversion, retrograde (reversion), and retrograde inversion are similarly transposed (see Figure 1.1). As a result, twelve-tone composition involved the constant shifting or transformation of the original twelve-tone series ordering, as various inversions and reversions of that ordering were deployed. There was nevertheless no prior expectation that a twelve-tone serial composition required the equal use of all these distinct series forms, and compositional practice soon brought another important matter to light: while equality - ensuring that the in-built pitch hierarchies of tonal scales and themes were avoided - might be a theoretical ideal, such absolute equality was difficult to achieve in practice and even more difficult to imbue with musical life. The later initiative to interpret serial multiplicity as applying the other elements beside pitch, as demonstrated with special consistency and resourcefulness by Milton Babbitt after 1940, has been widely studied but has not so far swayed the broad currents of compositional development in its direction. What amounts with Babbitt to a highly specialised kind of atonal athematicism remains a rarely acquired taste, and a rarely followed model.

In the formative years of pitch serialism, the 1920s and 1930s, using several ordered series forms at once, or combining vertical with linear presentations of series segments, also meant that there could be a considerable difference between the ordered successions of series forms visible in a printed collection of set tables or matrices and the pitch materials sounding in the actual score. With this fundamental distinction between theory and practice, twelve-tone serialism became a liberating rather than constraining principle; so (for Schoenberg in particular) the most immediate result of the method's formulation was to make it possible to conceive and complete works on a larger scale than he had managed between 1909 and 1923. Serial technique could be employed for vocal as well as instrumental music, for opera or oratorio as well as for Lieder and other smaller-scale texted pieces. Indeed, serial music was no more inherently anti-lyrical than it was anti-classical. At the same time, however, it could share with the other strands of musical modernism during the years between 1920 and 1950 an openness to expressionistic, late Romantic, and neoclassical expressive tendencies.

As noted earlier, twelve-tone serialism appeared by definition to be 'antitonal', requiring 'total' chromaticism and therefore the complete and unambiguous absence of consonant diatonicism. But just as the attraction of dividing the twelve notes up into smaller groups of six, four, or three to bring out possible thematic/motivic similarities between these subgroups soon became a common procedure for early serial compositions, so did approaches to harmony and counterpoint that stopped short of incontrovertible atonality. While the more folkloric melodic qualities found in the music of Janáček, Sibelius, or Vaughan Williams did not transfer naturally to serialism, it was perfectly possible to use a folk-like melody as the source for a set of twelve-tone variations on a simple tonal theme, as a movement from Schoenberg's Suite op. 29 (1924-6) showed (cf. Whittall 2008: 58-60). No less prescient, for the longer-term evolutionary history of serialism, was Alban Berg's quotation of a Styrian folk tune in the final stages of his Violin Concerto (1935), making audible the link between the tune's artless diatonicism and the triadic interval-content of the work's twelve-tone series without attempting to contrive a literal, unifying process of connection between folk tune and series form. Even more startling was Berg's incorporation of a complete chorale, 'Es ist genug', as harmonised by J. S. Bach, in the concerto's finale. The first four notes of the chorale melody - the wholetone ascent Bb, C, D, E – formed the last four notes of the work's twelvetone series. But the music makes abundantly clear that, as an exemplary modernist, Berg was more interested in the poignant disparity between Bach's original and his own twelve-tone fantasia on and around that original than he was in contriving an ideally integrated synthesis between the two.

Describing Serial Designs

Between 1945 and 1951, only the ageing, ailing Schoenberg survived from the original twelve-tone triumvirate, and to the end he remained as reluctant to contrive verbal justifications for his compositional decisions as he was to teach the 'rules' of serialism to his students. He was never likely to provide a triumphalist slice of autobiography, recalling the euphoria of the early 1920s when he moved so quickly from demonstrating the new method's ability to transform traditional smallscale dance forms in the Suite op. 25 to the fully symphonic scale of its immediate successor, the Wind Quintet op. 26 (1923-4), and then advancing further within the next four years not only to the elaborate orchestral textures of the Variations for Orchestra (1926-8) but also to making plans for very different operas - the mildly comic Von heute auf morgen (1928-9), the weightily tragic Moses und Aron (1930-2). Euphoria might also account for Schoenberg's confidence that the works he found so rewarding to conceive and complete would also excite audiences, that the urgent expressiveness consequent on transforming abstract serial materials into living sound would reinvigorate a musical world in serious danger of being lulled into apathy by what he saw as Stravinsky's effete neoclassicism, reaching its nadir in diversions with titles such as The Fairy's Kiss (1928/50) and The Card Game (1936-37).

Such concerns may explain the sense of urgency with which Schoenberg sought to move beyond the satisfying but restricted and not exactly un-neoclassical scope of that first completely twelve-tone composition, the Suite for Piano op. 25. There, the explicit associations between his own movement titles and textures and the movement titles and textures of Bach's keyboard suites seemed specifically intended to help performers and listeners comprehend this music as music, irrespective of its purely technical innovations. A Schoenberg twelve-tone canon would be more dissonant than a Bach canon, a Schoenberg Musette would have a rather different relation between a repeated pitch or interval in the bass and what sounded above it to a Bach Musette, but there could be a fundamental and audible identity between the textures and styles of twelve-tone and tonality-based forms. And despite the occasional tendency of critics to disparage Schoenberg's initiative as merely presenting 'wrong-note' versions of something that, in Bach, sounds both natural and right from beginning to end, Schoenberg persisted in his conviction that what serialism made possible was not a distortion of tradition but a valuable and inspiring transformation of tradition, a much-needed reinvigoration of an increasingly moribund musical language.

Reluctant though Schoenberg was to theorise verbally about things best left, in his view, to the aesthetic discrimination of the listening mind, his 1941 essay, 'Composition with Twelve Tones', discussed aspects of his first large-scale serial piece, the Wind Quintet op. 26 in ways that transparently build bridges between serial techniques and pre-serial formal and harmonic characteristics, such as modulation: 'while a piece usually begins with the basic set itself, the mirror forms and other derivatives, such as the eleven transpositions of all the four basic forms, are applied only later; the transpositions, like the modulations in former styles, serve to build subordinate ideas' (Schoenberg 1975a: 227). As the essay's accompanying music examples show, it was easy enough to see how the relevant series forms, represented as successions of integers or letter names, translated into the pitches of a polyphonic texture clearly stratified between melody and accompaniment. A decade earlier, Anton Webern had risked an even simpler and more direct explanation of similarities and differences between old and new musics. First, difference was focused on the extent to which traditional terminology, predicated on the hierarchic characters of the tonal system, no longer applied: 'considerations of symmetry, regularity are now to the fore, as against the emphasis formerly laid on the principal intervals - dominant, subdominant, mediant, etc. For this reason the middle of the octave - the diminished fifth - is now important.' Then came similarity: 'for the rest one works as before. The original form and pitch of the row occupy a position akin to that of the "main key" in earlier music, the recapitulation will naturally return to it. We end in the same key! The analogy with earlier formal construction is quite consciously fostered: here we find the path that will lead us again to extended forms' (Webern 1963: 54).

There have been many objections to Webern's breezy and artlessly oversimplifying assurances down the years, especially to his claim that the diminished fifth – despite lacking the foundational acoustic functions of those 'principal intervals' in the well-tempered harmonic series – could nevertheless have a comparable structural importance. But his basic instinct, to emphasise that a degree of 'invariance' – recurrences leading to the perception that some elements in the music are structurally more important than others – mattered in twelve-tone serial music as much as they did in tonal compositions. In both cases, comprehension by ear and mind was the result of musical thinking that was, in essence, hierarchic.

Nevertheless, by 1931–2, when Webern made these comments, he had already shown in his String Trio op. 20 (1927), Symphony op. 21 (1927–8), and Quartet op. 22 (1928–30) how difficult it was for highly contrapuntal instrumental compositions using the twelve-tone method to be heard in exactly the same way as compositions with key signatures and bass lines emphasising chordal roots and key notes. And whereas

Schoenberg's serial textures unusually involved thematic materials shaped melodically, so that developmental transformations and varied repetitions or recapitulations could still, with practice, be aurally distinguished from each other, Webern's much more concentrated motivic tapestries had a consistency whose potential for aural recognition involved a sense of constant focus around a few basic intervals, like the semitone and major third (and their compounds) in the first movement of the Concerto for Nine Instruments op. 24 (1931-4). Begun around the time of the lecture just quoted, the op. 24 Concerto could have been specifically designed to demonstrate how a serial composition could be coherent even if analogies 'with earlier formal constructions' dependent on the concept of 'key' are more metaphorical than literal. The earlier formal feature that remains present in Webern is the motive, the brief cell of pitches and intervals whose 'developing variation' proved crucial to the music's ability to communicate a tightly organised thematic discourse whose emphasis on easily audible motivic invariants compensated for the absence of prolonged tonal functioning (cf. Schoenberg 1995: 365).

'Developing variation' was a concept that Schoenberg-the-teacher deduced from the practice of tonal composers from (at least) Bach to Brahms, and it was flexible enough to fit Webern's short motivic cells as well as Schoenberg's own more expansively melodic ideas. It also provided the best guarantee that a serial composition would have a distinctive and engaging musical character, a 'personality' that might be in constant evolution but could convey a coherent and connected narrative, however much contrast and divergence might occur along the way. A case can be made for the argument that, from the 1970s onwards, developing variation of recognisable motivic elements, as found in Webern and Berg as well as Schoenberg, proved to be the principal legacy of earlier serial practice to continue within the diverse procedures of late modernism. However, for the Babbitts and Boulezs of the years in the immediate aftermath of their exposure to twelve-tone music's initial phase, developing variation was little more than evidence of neoclassical nostalgia, the desire to write old music in a different way rather than truly new music.

Method, System, Meanings

By the mid-1940s – obviously a time of seismic upheaval on the world stage – the possibility of serialising musical features such as duration, dynamic level, registral position, and mode of articulation were being explored not only by Milton Babbitt in the United States but also by Olivier Messiaen in France. Both believed that it was a positive step forward to extend the concept of serial multiplicity represented by the forty-eight possible versions of twelve-tone pitch-class series forms, as one way of achieving greater distance from what seemed to some the frankly regressive qualities of Berg's Violin Concerto or Schoenberg's *Ode to Napoleon* (1942). In his short piano piece, 'Mode de valeurs et d'intensités', Messiaen used three twelve-tone sequences (treated as unordered collections, or modes, rather than fixed series forms) projected with different (shorter) series of durations, dynamics, and articulation.

Messiaen worked on the piece during his visit to the Darmstadt New Music Courses in 1949, and Martin Iddon has provided a detailed study of that institution during the years when several younger composers and pupils of Messiaen, including Pierre Boulez, Michel Fano, Karel Goeyvaerts, and Karlheinz Stockhausen, tried out different ways of working with kinds of multiple serialism involving stricter ordering principles than Messiaen had employed (Iddon 2013). While these composers knew enough of Berg and Schoenberg to conclude that both had compromised the serial principle rather than developing its true potential, it was with Webern, as they gradually grew more familiar with scores not widely available in published form until the 1950s, that a genuinely inspiring 'path to the new music' was revealed. For Boulez, in particular, Webern's shunning of expressionistic flamboyance in his twelve-tone works, coupled with the avoidance of traditional harmonic allusions and (in certain contexts) strict control of relations between pitch, duration, dynamic, and register, was sufficient compensation for his retention of clearly defined motivic materials that could obey the precepts of Schoenberg's model for compositional coherence rooted in the developing variation of such motives.

In the second half of the 1940s, when he was in his early twenties, Pierre Boulez had written music that was not exactly anti-Schoenbergian or anti-Bergian in its allusions to sonata and other traditional forms and in its explosively expressionistic tone of voice. But by 1950, it would seem to Boulez and others that victory in the hard-fought battles of early modernism, which had seen diatonic tonality overthrown and thematicism itself called into question, had been betrayed by a failure of will, or imagination, on the part of the victors-turned-law-givers, with their serial sonatas, symphonies, and concertos. There is therefore a neat equivalence between the critical claim that the first phase of twelve-tone composition was insufficiently alive to the innovative potential of serialism as a principle to transform the character of compositional invention, and the no less familiar critical claim that the integral or multiple serialism represented by works like Stockhausen's *Kreuzspiel* (1951) or Boulez's *Structure Ia* (1951–2) imposed such elaborate mechanisms on composing that it deprived music of those communicative essentials that had sustained it during many centuries of continuous stylistic and technical evolution up to the present.

Opinion remains divided as to whether, from the 1970s onwards, Boulez and his contemporaries retreated into techniques closer to those of the original pitch-only serialists, or whether they advanced into a newly flexible kind of serial thinking that was nevertheless still more systematic in principle than that of the inter-war pioneers. Many composers were impressed by Stravinsky's boldness, during the 1950s, in transforming himself into the inheritor of a serialism inspired primarily by Webern's intense austerity yet finding a new degree of flexibility in building matrices of series forms on the principle of transformational rotation rather than simply transposition. This was a kind of multiplicity that Boulez would adopt after 1970, as Stravinsky's own career was coming to an end.

As seen earlier, Stravinsky had been nothing if not critical of both Schoenberg and Berg during his earlier neoclassical years, but knowledge of and enthusiasm for Webern, facilitated by the performances of his assistant Robert Craft, made possible the kind of commitment to twelvetone thinking shown in one of his earliest reported exchanges with Craft, first published in 1959.

- RC: Do you think that the masterpieces of the next decade will be composed in serial technique?
- 15: Nothing is likely about masterpieces, least of all whether there will be any. Nevertheless, a masterpiece is more likely to happen to the composer with the most highly developed language. This language is serial at present and though our contemporary development of it could be tangential to an evolution we do not yet see, this doesn't matter. Its resources have enlarged the present language and changed our perspective on it. Developments in language are not abandoned, and the composer who fails to take account of them may lose the mainstream. Masterpieces aside, it seems to me the new music will be serial.

(Stravinsky and Craft 1959: 131)

Stravinsky and Craft doubtless had the recent serial 'masterpieces' of the 1950s in mind here – they mention Boulez's *Le Marteau sans maître* (1953–5) and Stockhausen's *Gruppen* (1955–7). Today, such works are probably best thought of as signalling the transition from the purest possible

multiple serialism to something more like 'post-serialism' – music which both acknowledged and countered serial thinking, just as post-tonal music was both acknowledging and countering the rich heritage of tonality. The decade from 1956 to 1966, which marked Stravinsky's own most productive engagement with serialism, saw Boulez and Stockhausen loosening serial strictness further in response to new initiatives in electronics and Cageian experimentalism. Thereafter the inevitable serial polarity between ordered and 'unordered' elements would contribute to a phase of late modernism notable for its independence of Schoenbergian alignments with classical forms and textures.

For Babbitt, Schoenberg's retrograde stylistic tendencies in his twelvetone compositions mattered far less than his distinctive structuring method of combining pairs of transpositionally related twelve-tone series forms (most commonly P_0/I_5 – the Piano Piece op. 33a being a 'textbook' instance) in which each of the superimposed hexachords contained six different pitch classes, laid stimulating foundations for the aggregate constructions and other refinements of Babbitt's serial practice (cf. Babbitt 1987b: 63–84). For Boulez and his European colleagues, it was Webern's pointillistic foreshadowing of a kind of serialism in which individual pitches were given fixed registral positions and unique dynamics and modes of articulation, then disposed symmetrically above and below a central axis, as shown in the second movement of the Variations for Piano op. 27, that suggested the best way forward, into a new world in which the serial principle was all-pervasive, all-determining, and 'composing as before' was anathema.

With the caustic confidence of youth, Pierre Boulez accused the recently deceased Schoenberg of a desire 'to reconstitute tonal language within the dodecaphonic system. Witness the *Ode to Napoleon*, whose feebleness of thought and poverty of execution are completely typical' (Boulez 1991h: 199). To listen today to the opening of Boulez's *Structure Ia* for two pianos (1951–2) is to encounter pure musical intransigence: atonal, athematic, expressionistically assertive as it strides boldly across its predetermined space, the two instruments sharing in a fractured yet interdependent discourse, the sustained contrast between their initial dynamic extremes an early indication that divergence, resistance to integration, was central to the music's avant-garde aesthetic. This music embodied a no less intransigent critique of Boulez's principal teacher Messiaen, since it adopted one of the twelve-tone modes of 'Mode de valeurs et d'intensités' only to subject it to far more systematically ordered serial treatment than Messiaen himself had employed. For Boulez a 'yawning chasm had opened up' between the infrastructure of

tonality and a 'language whose organisational principles are as yet dimly perceived' (Boulez 1991f: 212). The problem for the would-be systematic, multiple (or integral) serialists would prove to be that 'organisational principles' in which not just pitch but as many different parameters of the music as possible were subject to serialisation would remain 'dimly perceived', and soon come to seem even less appealing, even less convincing, than what Schoenberg and Webern had offered.

Boulez would remain committed to the belief that serialism represented 'a complete reaction against classical thought'; that 'classical tonal thought is based on a universe defined by gravity and attraction, serial thought on a universe in continuous expansion' (Boulez 1991c: 236). Nevertheless, this polarity would be tempered by conceding the fundamental need for compositions to communicate, and therefore to contain 'recognisable musical objects', a 'new thematicism' that amounted to a retreat from avant-garde extremism to modernist moderation (cf. Goldman 2011: 56-79; Whittall 2008: 203-9). Only on the rare occasions when integral serial composers chose highly emotive subject matter rather than purely structural processes as their material might such a composition manage to attract an audience beyond the intrepid devotees of the most demanding kind of new music - Luigi Nono's Il canto sospeso (1955-6), with its eloquent treatment of texts from martyrs of the wartime Italian resistance, is a telling instance. In practice, therefore, the grandly comprehensive matrices or magic squares of mutually interdependent lines of up to twelve integers, whose numbers could be translated into ordered sets of different durations, dynamics, and modes of attack as well as pitch classes, tended to move further into the background of compositional process and decision-making - a source from which appropriate selections might be made rather than an inviolable and all-determining grid imposing its rigorous discipline on all aspects of the musical material, and on the resulting listening experience.

Critics and Composers

As an activity applicable to musical composition, criticism has a much longer history than serialism, implying as it does a considered, written response to composers and their works. Critical criteria are notoriously elusive, rooted in feelings and psychological predispositions as much as in consciously crafted intellectual convictions. Even the greatest composers have their detractors, although with the likes of Bach and Beethoven these will be a tiny minority, and for the majority who approve, the 'end' of compositional effect is likely to be of more immediate concern than the 'means' of compositional technique or method, despite the ease with which both qualities can be brought together under the capacious heading of 'style'.

By the time of twelve-tone serialism's compositional advent, barely a century ago, musicology had become an accepted, institutionalised scholarly discipline, and a cluster of concepts, both technical and historical, had emerged to provide a possible framework for collective viewpoints about how musical works and their materials might be defined and categorised. By 1920, terms like 'sonata' and 'rondo', 'consonant' and 'dissonant', 'tonality' and 'atonality', 'classical' and 'modern(ist)' were all available to be argued over, and between about 1920 and the end of the 'long' twentieth century – 2005, in my reckoning – a vast number of writers on music were bold or incautious enough to include the very recent past in their historical surveys, or even to focus their interpretative work entirely on the most recent years.

The year 2005 saw the publication of Richard Taruskin's monumental oneman, six-volume history of Western art music, and serialism takes its not especially prominent place there in the panoply of descriptive terms against which the author's critical responses to centuries of musical activity are projected. Unlike those critics and historians between 1920 and 1960 who attempted to get the measure of twelve-tone technique in its early years, Taruskin could take a longer view, and that required placing aesthetic and technical constructs like modernism and serialism in the political and cultural contexts contemporary with them. For example, writing of Webern, Taruskin characterises his twelve-tone works as 'dehumanized' and 'impersonal', exuding 'the atmosphere of a solitary alpine peak', and declaring that

it is not hard to connect Webern's artistic vision, in the context of the turbulent 1930s, with the Utopian or Arcadian (futuristic or nostalgic) cravings that dominated European social and political thought.... Webern's musical Utopias, the most orderly and disciplined worlds of music ever to have been conceived or realized by that time, seem in their tidy beauty of conception and their ruthlessly exacting realization to broach a theme that was on the mind of every artist then alive – ominous to some, inspiring to others – of art and totalitarianism. (Taruskin 2005a: 741)

With Webern, whose sympathy with right-wing political ideas paralleled his conservative Roman Catholic religious beliefs, it is perfectly legitimate to indicate how it might be possible to react to a perceived conjunction between life and (twelve-tone) work in the way Taruskin does. But with Schoenberg, who switched from his inherited Judaism to Christianity and back again during a lifetime in which he was forced to leave Europe for America, and for whom the conjunction of religion and politics was inevitably more fraught that was the case with the unpersecuted Webern, it is more difficult to presume the validity of claims about serialism's fetishising of strict, even repressive 'laws'. Might not Schoenberg's intransigent notions about politics and society after the founding of Israel and his response to invitations to move to that country in the late 1940s reflect the bruising experiences of himself and his family as victims of fascist antisemitism? Early twenty-first-century musicology has not always been willing to allow for this possibility; for instance, Klára Móricz - with clear echoes of Taruskin's claims about connections between serialism and totalitarianism - has been explicit in arguing that Schoenberg's apparent enthusiasm, late in life, for the newly founded state of Israel cannot be separated from the long-standing authoritarian tendencies of his personal political agenda: 'Schoenberg's stubborn, self-righteous political rhetoric overshadows his quasi-religious images and thus creates an unpleasant association between his psalms [that is, his final vocal compositions] and the ruthless political utopias of the twentieth century. ... Schoenberg had a strong dislike for "democracy", and, as 'a true utopian . . . considered any hint of disunity unacceptable' (Móricz 2008: 208 and 212).

As I have argued elsewhere, Móricz's line of reasoning risks undervaluing the modernist ambiguities and centrifugal tendencies in Schoenberg's twelve-tone compositions, or even of erasing their significance in pursuit of political and religious point-scoring (Whittall 2016). Nevertheless, the occurrence in recent years of such far-reaching critiques of Schoenberg and the serial principle, long after the technique itself had ceased to be used either with the relative strictness and comprehensiveness of its first phase or with the short-lived intensification of serial mechanics that immediately followed it, underlines the ambivalence and scepticism that have affected assessment of serial initiatives from the beginning. The suspicion that the true serialist is an unrealistic Utopian, obsessed with unity at all costs, and attaching more significance to what can be read on the page (in notes as well as words) than to what can be heard, has often been aired, but it always needs to be approached with proper critical caution.

Teaching the Tone Row

The first century of serial composition, and of critical-historical writing about serial music, has also been a time of burgeoning composition pedagogy. Schoenberg believed that students should focus on techniques deducible from the classic compositions of tonal tradition; there was no question

of him providing instruction in the twelve-tone method, even though in the 1920s he claimed to believe that the method would guarantee the supremacy of German music for the next century. (He might have done better with the vaguer suggestion that music to which serial principles makes fundamental contributions would dominate the next century.) But guides to twelve-tone compositional technique, often alongside analytical demonstrations of serial practice in short examples from Schoenberg and others, were not long in coming, and by the 1940s composer-teachers like Ernst Krenek, René Leibowitz, and Herbert Eimert were producing self-help introductions and manuals which achieved wide circulation (Krenek 1943; Leibowitz 1947; Eimert 1950). A little later, in 1966, Reginald Smith Brindle's Serial Composition was aimed no less directly at students. This copiously illustrated textbook came complete with exercises, and serialism's forty-year history was represented, in a text dedicated 'to my friend Luigi Dallapiccola', by examples ranging from the first generation of Schoenberg, Berg, and Webern to the post-war triumvirate of Boulez, Stockhausen, and Nono (Smith Brindle 1966).

Smith Brindle's references to real music, as well as to specially constructed examples of his own, acknowledged the increasing trend, by the mid-1960s, for critical discussions of serialism to concentrate on the historical process by way of analysis of extracts selected for specific scholarly purposes. In this respect, the American composer and academic George Perle's Serial Composition and Atonality was particularly significant (Perle 1963), with its emphasis on serialism's emergence from what Perle termed "free" atonality', the scare quotes around 'free' signalling that, in all instances of 'post-tonal music', 'freedom' was best conceived in terms of relations between collections of pitch classes grouped not so much according to their places within the many millions of different twelvetone series forms, but within the 200 or so pitch-class sets obeying a strict and uniform ordering principle analogous, as Milton Babbitt was one of the first composer-theorists to point out, to the mathematical concept of set theory. With the publication in 1973 of the first book-length introduction to pitch-class set theory (Forte 1973), the play between set and series, in music that might have little or nothing to do with 'orthodox' twelve-tone technique, introduced the more varied approaches to both compositional process and theoretical enquiry around and beyond serialism characteristic of the years since 1980. It is particularly appropriate, therefore, that around 1973 and 1974, the centenary of Schoenberg's birth provided a platform for musings about the status of serialism in its assumed context of atonality and modernist formal discontinuities - serialism as something uneasily

poised between respect for transformed tradition and principled rejection of outdated and oppressive hierarchies.

A Critical Centenary

In October and November 1973, the London Sinfonietta presented a series of twenty-six concerts, twelve in London, containing 'the complete chamber music of Arnold Schoenberg and Roberto Gerhard'. Gerhard, a Schoenberg pupil and twelve-tone composer long resident in England, had died in 1970, and the sense of a double commemoration was reflected in the substantial programme book that accompanied the series. Among the essays included was Hans Keller's 'Schoenberg and the Crisis of Communication', which among other things acted as a reminder that it was still possible, around that time, to believe that atonality and serialism might and perhaps should consign the extended tonality of Britten and Shostakovich (both very near the end of their careers in 1973) further to the margins. Maybe there are elements of such thinking in Keller's portrayal of Schoenberg as 'musical history's most tragic figure - its most uncompromising clarifier and its leading confuser at the same time'. Keller wrote that 'it must have been shortly after the fourth string quartet [of 1936] that the shock of atonality was at last totally assimilated, that twelve-note technique had become as instinctive to Schoenberg as tonal language had been' (Keller 1973). But what Keller does not say here is that the now 'instinctive' twelve-note music had not become incontrovertibly atonal: the fourth quartet has become a favoured example for music theorists attempting to demonstrate how that notoriously elusive Schoenbergian concept of 'suspended tonality' might have been manifesting itself in his twelve-tone works (cf. Whittall 2008: 110-11). Even Jack Boss, whose recent pair of books about Schoenberg fight a resourceful rearguard action in support of 'atonal' as a viable technical concept, has written of the first movement of the fourth quartet that 'D minor and B flat major serve as tonal-reference surrogates for the two principal motives of the piece' (Boss 2014: 328).

This circumstance lends even more force to Keller's claim that 'the ensuing, continued history of tonality' – between 1936 and 1973, that is – 'proved that Schoenberg had come too soon', thereby contributing decisively to 'the current crisis of communication' which, Keller says, 'is not merely, not even chiefly, produced by one musical language having split into several. The one language has also, over a considerable part of the contemporary scene,

evaporated into none' (Keller 1973: 48). In clarifying Schoenberg's persistent duality so cogently, Keller identified the cultural quality of a modernity, centred on serialism, that appeared to have better chances of productive survival if old and new were encouraged to converge, or at least coexist. This meant that Schoenberg and especially Berg provided more promising signals for the future of composition than Webern and the various followers of Webern who constituted the atonal-serial avant-garde of the 1950s and 1960s. Schoenberg and Berg could still provide technical stimulus to much later composers even if serialism and atonality as originally understood, have tended to merge with various alternatives - minimalism, spectralism, and working with interval cycles among them. In the musical world of the 2020s, where late modernism and post-modernism enact an uneasy but productive coexistence, there is still a sense of serial or set-based thinking as a useful component of compositional initiatives whose multivalence by no means ensures a sense of diluted progressiveness in its most prominent exemplars (cf. Whittall 2019).

The American George Rochberg, a near-contemporary of Hans Keller, is a particularly striking example of a composer who seemed to fall foul of what Keller diagnosed as Schoenberg's premature attempt to rethink the foundations of musical expression. Rochberg certainly cannot be accused of not taking serialism seriously. He emerged – traumatised, according to one recent narrative, from combat in the Second World War – in search of stylistic security and stability, and his diaries and other writings vividly trace the twists and turns of the consequent quest. Directly linking his life experiences with his compositional methods, Rochberg declared that

one of the most prominent impulses toward twelve-tone serialism ... was my reaction to my war experience. The darkness of that whole experience really has rooted itself.... I need to find a language with which I could say what I experienced, but obviously refracted, not brutalized by the nature of the experience itself. I had to make damn sure that what I composed ... would be as beautiful as I could make it. (Quoted in Wlodarski 2019: 51)

In 1952, the year after Schoenberg's death, Rochberg, at the age of thirtyfour, responded ecstatically to a first hearing of the String Trio – 'one wonders if this were written by a man or by an angel. Such a work reminds us that music is still a human art' – and lauded the 'new visions' that would surely come from recognising that 'it is past the time for tonality' (Wlodarski 2019: 50). Rochberg's contacts with Dallapiccola, composer of *Il prigioniero* (1944– 48), around this time clearly reinforced his convictions about the compassionate humanistic essence of using twelve-tone methods to control and direct a highly expressionistic emotional intensity, cogently confronting trauma rather than simply succumbing to its destructive force. But by the early 1960s, Rochberg was reacting negatively to what he now termed the "overwrought, expressionistic emotional palette" of Schoenberg's fourth quartet (1936). ... "The music sounded ugly and unbeautiful to my ears" (Wlodarski 2019: 50), and Rochberg would soon find a very different kind of expressiveness in the imitative evocations of Beethoven and Mahler that pervaded his later compositions.

Few today would rank Rochberg among the leading figures of later twentieth-century composition, but his turn against expressionism, and his need to musically embody consolation rather than melancholia, were fundamental within the aesthetic and expressive divergences that came to dominate the decades after 1960. Rochberg had no time for what he considered the arrant academicism of post-tonal theorists like George Perle. But it would be simplistic as well as insensitive to characterise Rochberg's flight into the consolatory as escapist. Many other composers whose early experiences matched Rochberg's to some extent were also likely to aspire to something transcendent, even if they continued to question it rather than embrace it wholeheartedly, thereby allowing some kind of residual sadness and insecurity to survive within their music's material manifestation.

Judgements in Perspective

In my *Introduction to Serialism*, written mainly between 2006 and 2008, I was clearly not disposed to concede that the serial principle has gone the way that diatonic tonality appeared to have gone between 1920 and 1960, becoming marginalised, a refuge only for unimaginative conservatives refusing to move with the times. Transformation rather than entropy was not merely serialism's strategy for survival. Rather, its self-renewing characteristics were the positive, practical consequence of the implicit and explicit critiques that had attended its invention and early evolution. As a result, post-tonal serialism, like tonality, takes its place as a compositional principle eternally available for access and adaptation as composers see fit. Serialism owes its own particular strengths to the critique of tonality and diatonic harmony that brought it into being, and which it has so far completely failed to erase from contemporary super-pluralistic musical consciousness. This paradox is the essence of serialism's power, and serialism was at its most potent between 1920 and 1970.