

HENRY BURNETT AND ROY NITZBERG, *COMPOSITION, CHROMATICISM AND THE DEVELOPMENTAL PROCESS: A NEW THEORY OF TONALITY* (Aldershot: Ashgate, 2007), ISBN 978-0-7546-5162-8, xxvii + 402 pp, £55/\$99.95

In attempting to talk about historical repertoires, we seem to be presented with two contradictory paths: we can formulate more general, descriptive categories, and perhaps head towards more interesting diachronic connections between pieces and repertoires, or we can direct our theorizing towards more limited, nearly synchronic repertoires. This second path, not surprisingly, can give rise to theories of greater specificity, complexity and explanatory power—but often at a loss of the diachronic connections. American Music Theory since the Second World War has concentrated on this latter path. Perhaps the best-known (and the last) American work of music theory and analysis that took the first path was Felix Salzer's *Structural Hearing*, which attempted to draw together all of Western Music from organum to selected works from the twentieth century. The negative critical reaction to Salzer is one important cause of the great growth in 'special' theories thereafter.¹ It turns out, however, that Salzer's dream of demonstrating historical continuity through theory and analysis is not dead after all, for one of his students, Henry Burnett, is attempting to revive it with a new general theory, while at the same time not rejecting the special theories (a wise course of action). Indeed, Burnett views his work not as replacing other analytical approaches, but as capable of coexistence with them, especially with Schenkerian analysis, which both he and his co-author have studied (xx). However, their work takes quite a different approach, as we shall see.

Burnett apparently has been developing what he calls his 'unified field theory' (xxvi, 3, 13; always in quotation marks, I note) for over thirty years at Queens College in New York (CUNY), where Salzer taught for some twenty years. He has expounded the theory in several published articles, but his most developed application of it is to be found in chapters 3–7 in the present work (from the mid-sixteenth to the nineteenth

¹ *Structural Hearing; Tonal Coherence in Music*, 2 volumes (New York: Charles Boni, 1952; Dover Publications, 1962). Allen Forte's first book, *Contemporary Tone Structures* (New York: Teachers College of Columbia, 1955) shows some influence of Salzer, but while Salzer's student Roy Travis continued to publish analyses of twentieth-century pieces in the tradition of *Structural Hearing* well into the 1980s, Forte changed his approach to what he called 'atonal music' almost immediately after *Contemporary Tone Structures*, concentrating instead on a detailed examination of note-to-note relationships that culminated initially in *The Structure of Atonal Music* (New Haven: Yale University Press, 1973). At the same time, proponents of Schenkerian analysis reacted to the gathering criticism of Salzer by focusing more narrowly on the Bach-to-Brahms repertoire. A distinct loser in this development was Early Music: few followed Salzer's student Saul Novak in his Salzerian work in this area.

centuries). Burnett's co-author, Roy Nitzberg, is the primary author of the first two 'introductory' chapters, as well as the last chapter, which reaches tentatively into the early twentieth century. He is also Burnett's former student and the most enthusiastic advocate of the theory that any teacher could wish for: 'Henry's theory is the most important contribution to Western music theory since Schenker's *Die freie Satz* [sic] and may be far more revolutionary since it is based on a new understanding of the role played by chromaticism in composition...' (Nitzberg's 'Prologue', xxvii). Talk about high praise!

The 'role played by chromaticism', it turns out, is significant indeed, for the authors claim that their theory is essentially one of 'eleven-pitch-class composition'.² Nitzberg neatly states what he calls the five 'postulates of the theory' in fewer than two pages (10–11). In their most compressed form, these postulates are:

1. 'Any tonal or modal composition past the middle of the sixteenth century will seek to unfold both a chromatic and a diatonic octave from the final or tonic of the mode or key over the course of the composition...the tendency of the chromatic is to ascend by half step until the octave is completed at *ti-do*, while the tendency of the diatonic is to descend by scale degree until the octave is completed at *re-do*.' (10) The former is termed the *Primary Chromatic Array* (PCA), the latter the *Primary Diatonic Array* (PDA).
2. Clearly, composition in either modes or keys necessitates the existence of more than seven diatonic pitches. 'However, no mode or tonality ("key") may have more than eleven diatonic and chromatic pitch classes.' The 'missing pitch' signals a modulation, and is termed the 'system-shift motivator'. 'It is invariably the minor third or augmented second above either the central hexachord of the modal gamut (usually *naturalis* or *mollis*) or of the tonic system of the key (if the tonic system is minor, then the missing pitch is derived from the system of the relative major).' (10f)
3. 'In common practice tonality, any eleven-pitch-class system is defined by its "consonant tritone"; meaning the tritone that is based on the tonic pitch class of the key and its octave divider (always spelled as a sharp).' (Again, if in minor, go to the relative major.) The 'missing pitch' and its 'divider' form the 'dissonant tritone', a 'symmetrical complement' to the consonant tritone, together called a 'systems matrix'. 'No composition that maintains a background key can modulate

² This aspect of the theory seems also to have been influenced by work by Burnett's colleague, the composer Henry Weinberg, available in dissertations by his students that the authors cite.

outside its systems matrix; all modulations relate to the tonic consonant tritone and its complement.’ (11)

4. ‘...each gamut [i.e., ‘modal’] system or tonality is harmonically governed by its central hexachord ordered in fifths.’ Thus C major is expressed as F–C–G–d–a–e. The stronger chords and harmonic areas are at the beginning, the weaker ones at the end. In minor, go to the relative major (since there is no ‘minor hexachord’), where the strong-to-weak range is reversed (i.e., read the previous string of fifths in reverse when valuing them in A minor).
5. ‘Each of the above postulates may be understood ultimately under the control of a background that is organized by the strictest rules of counterpoint. Any valid analytical system must approach a composition within the framework of its basic contrapuntal structure...the developmental process, with all its diatonic and chromatic adjuncts in the form of its various arrays, is bound by the laws of counterpoint.’ (11)

The fifth postulate comes as something of a surprise, though in retrospect the diatonic focus of the fourth offers some preparation. Though neither 4 nor 5 seems closely related to the first three, the detailed discussion in succeeding chapters actually *begins* by emphasizing Postulate 4, gradually integrating it with the first three. The last postulate, from what I can tell, only emerges in the PCA/PDA ‘counterpoint’ of the authors’ analyses throughout the book. (Or perhaps it is there to provide for co-existence with the theory that is not really part of the system, Schenkerian Theory.) In any case, I can only wonder at the status of the Postulate 5 when I read, ‘...since this is not a theory of diatonicism, it is also not, nor can it be, a theory informed by voice-leading principles’ (16f). What exactly are the ‘laws’ of this counterpoint? The book never really makes that clear.

The sceptic may object at this point that the authors seem to be elevating Webern’s famous remark about chromatic closure to a much larger historical principle.³ Certainly the authors’ attempt to expand the notion of ‘compositional development’ to include a consistent exploration of all (newly) available tonal material is more than plausible, but doesn’t this amount to a ‘theory of chromaticism’ (as the title of the book promises) which through a gradual coalescence of originally diffuse phenomena

³ Anton Webern, *The Path to the New Music*, ed. Willi Reich, trans. Leo Black (Bryn Mawr, Pennsylvania: Theodore Presser, 1963; and London: Universal Edition 1963), 51; originally Anton Webern, *Der Weg zur neuen Musik*, ed. Willi Reich (Vienna: Universal Edition, 1960).

eventually leads to the notion of pitch class?⁴ There's a long historical road to travel before one can assert the kind of 'boiling down' that leads to a 'consciousness of the aggregate'. The 'leading tones' that were still relative newborns in the sixteenth century arose in various intonations, depending upon both tuning-systematic and performance-practical constraints, one expert on keyboard tunings even contending that among fixed tunings 'well temperaments' prevailed until the beginning of the twentieth century.⁵ Such temperaments (of which the one intended by Bach for his *Das wohltempierte Klavier* appears to have been one) contain *irregular* distances between semitones, thus making even literal transposition problematic. The authors try to gloss over all of this by writing that 'even though there is an interesting area of crossover between this theory and meantone tuning, this is not a theory of acoustics, and this area of inquiry will not be addressed in this volume' (7). What the authors seem to regard as an arcane matter of 'acoustics' is part of the actual practice of earlier repertoires, and an important subject to consider in defining just what this theory is about.

In fact, this reader was never able to pin down exactly what the authors' conception of 'pitch class' is; they never provide a definition, and further reading did not clarify. Given their use of 'movable do', 0–11 integer notation to represent the elements of their PCA *throughout* the book, I assumed from the outset that there were twelve pitch classes.⁶ Yet the authors write: 'We shall see later that the enharmonic

⁴ Here it is important to remark that the problem is not one of 'teleology' but of possible anachronism. Thus the authors' polemical argument in support of 'teleological histories' (3) seems unnecessary to me. But in such a wide-ranging study as the present one it is all the more important that key concepts be presented with the utmost sensitivity to the *distinctions* between their status at various points on the evolutionary continuum.

⁵ Owen Jorgensen, *Tuning* (East Lansing, MI: Michigan State University Press, 1991), 3: 'The temperament practice of the late nineteenth century was so different from that of today that it no longer can be called equal temperament. Nineteenth-century temperament contained various degrees of "key-coloration," which preserved the "character of the keys".'

⁶ Certain reference works (e.g., the *Harvard Dictionary* and the *Oxford Companion*) are not particularly helpful in this regard when they define 'pitch class' as determined by octave equivalence alone, never mentioning enharmonic equivalence even to reject it. Babbitt, the inventor of the term, was quite clear that there were, for his purposes, twelve pitch classes (see *The Collected Essays of Milton Babbitt* (Princeton: Princeton University Press, 2003), 56). Allen Forte is unequivocal: 'As a consequence of octave equivalence and enharmonic equivalence any notated pitch belongs to one and only one of 12 distinct pitch classes.' (*The Structure of Atonal Music* (New Haven: Yale University Press, 1973), 2.) John Roeder ('pitch class' in the second edition (2001) of the *New Grove Dictionary*) takes an ecumenical approach, describing various 'equivalence relations' with clarity and precision ('octave-equivalence pitch class', 'enharmonic-equivalence pitch class'), but the fact remains that an

choice within a compositional context for pc 3 determines the role of the missing pitch and the determination of the motion from one eleven-pitch-class system to another. Therefore, enharmonic equivalence has no place in this theory.' (16) Evidently, the authors are convinced that 'enharmonic equivalence' does away completely with the possibility of different spellings (and different allied functions and tonal contexts) of a pitch.⁷ For them, it seems that non-equivalent pairs may even constitute separate pitch classes: 'Likewise in boldface is pc 3, in both enharmonic spellings, since *both pitch classes* [my italics] will play important roles in the chromatic development...' (194). Are we to read this literally as 'pc 3' somehow splitting into two pitch classes, or does this refer to two notational instantiations of the same pitch class? If the former, I am left wondering just how many 'pitch classes' the authors actually envision, and how these square with their use of 0–11 notation.

The 'introductory' analysis of the Bach 'Two-Part Inventions' (18–22) provides an analytical illustration of the problem with this vague notion of 'pc 3,' and the kinds of questions it prompts. The authors write:

'In each of the five inventions in C, D, E \flat , F and B \flat , basically short, diatonic, single-issue compositions, the same eleven notes are used, in the movable-*do* sense...pc 3 is missing from each of those five. The questions may therefore be raised: does this indicate Bach's sensitivity to an obscure chromatic issue, or is it just coincidental?' (18–19)

The sceptic immediately asks, what about the other three major-mode pieces (E, G, A)? Moreover, we don't *have* to conclude that the presence of the eleven 'pitch classes' in these five inventions is 'coincidental' just because we may not believe that Bach is ticking them off: isn't it just as likely that the non-diatonic tones result from the usual secondary dominants (as Schoenberg pointed out), and thus their *limitations* or even their *ordering* may result from the process of tonicization? The G-major Invention (not discussed) is particularly interesting in this regard. Bach seems to have limited himself to the smallest repertoire of tonal material possible for a 32-bar work: its only non-diatonic tones are F \sharp and C \sharp (the first two fifths on either side of the primary diatonic set); F appears fleetingly in a quick tonicization of IV, while C \sharp replaces C in a modulation to V that lasts for eight bars near the middle of the piece. This certainly seems to indicate that the standard scheme of 'closely related keys' might offer a

unqualified use of the term 'pitch class' will bring with it the assumption of enharmonic equivalence for many is not most readers.

⁷ Here it is worth pointing out that the traditional notion that a 'German Sixth Chord' is 'enharmonically equivalent' to a dominant seventh chord assumes 'sonic equivalence' *plus* functional change. It is worth defining 'equivalence' more precisely.

model for the order and/or frequency of keys tonicized or modulated to, and thus the accidentals that bring about these processes. This is consistent with the tonal context of 'pc 3' in the only two inventions in which it occurs (E and A): $\sharp\hat{2}$ acts as a leading tone to iii, the most distant key on the circle of fifths. Yet the authors maintain that 'We can only speculate as to Bach's motivation for exclusively using the "sharp" spellings of pc 3 in the major-mode inventions' (22). It seemed quite obvious to me that the circle-of-fifths model (reinvented as Postulate 4) was sufficient. Moreover, all of the inventions were composed in 1722–3 as didactic pieces for young musicians, and to my knowledge, Bach only turned to the more gallant technique of modal mixture in his later work. To test the latter hypotheses, we might look at the spelling of $\sharp\hat{5}$, which occurs in *all* the major-mode inventions, save the purposely limited G major: in *all* cases it is spelled $\sharp\hat{5}$, and *never* as $\flat\hat{6}$, its tonal context justifying the spelling (likewise, $\sharp\hat{1}$ shows up in all but the G major invention, and is never spelled as $\flat\hat{2}$). This prompts another speculation about the nature of the chromatic pitches: while three of the five consist of enharmonic pairs (resulting from tonicization or modal mixture), the two that are the closest to the central diatonic fifths have only *one* spelling (F \sharp and B \flat in the key of C).⁸

It should be remarked that the authors *eventually* reach similar conclusions, but only much later. An adumbrated 'parallel minor' appears first in a transitional modal/tonal context (118); this necessitates a 'system shift,' due to Postulate 2 (this in turn brings up the controversial status of the parallel minor, which cannot be pursued here). The authors' statement that 'our approach to sonata form is basically harmonic [as opposed to thematic], since form generally relies upon the construction of harmonic periods whose thematic content may or may not be of structural significance' (181) is an indication that they are often addressing the flipside of the very same phenomena I referred to above with regard to the Bach Inventions. This can be a healthy corrective, as anyone who has taught modulation to undergraduates and overemphasized the 'pivot chord'—only to collect assignments in which students neglected to include the 'new note'—knows. The authors' emphasis on the 'new notes' offers a new perspective, and one that I may have underappreciated. However, when chromaticism really comes into its own with the PCA, I am afraid I remain unconvinced. The PCA/PDA analyses strike me as beset with a similar arbitrariness characteristic of so many 'quasi-Schenkerian' analyses: just *why* do the authors select

⁸ It is interesting that Moritz Hauptmann recognized this with his 'übergreifendes System', in which the diatonic set 'reaches over' one fifth to the right or the left. Heathcote translates this as the 'system stretching out, or in transit...'. See *The Nature of Harmony and Metre* (New York: Da Capo, 1991), 28f.

certain pitches as structural (other than the fact that they are consistent with their postulates), and not others? Duration, harmonic support, or other features of what I would normally take to indicate salience seldom seem to be called upon in this regard. One of the lessons learned from Salzer reception is that we venture into dangerous territory as soon as we try to draw connections between non-contiguous events in pieces when the systematic criteria for doing so are unclear. I for one am always ready to consider such connections, but convincing musical evidence has to be adduced in their support.

As a strategy for approaching this book I would urge the reader to ‘suspend disbelief’ and heed Burnett’s opening instruction that ‘the book is intended to be cumulative; that is, it is meant to be read from beginning to end, as various aspects of the theory are revealed along the way in conjunction with the evolving historical landscape’ (xix). Though reading nearly four hundred pages of very close analyses (which deal with an extraordinary number of pieces, only some of which are presented in complete score) is a tall order, a fruitful approach might be to start with chapter 3 (‘The Modal Gamut in the Sixteenth Century’). Here, Burnett begins his tour of the ‘historical landscape’ and proves himself to be an able and experienced guide. Indeed, the detailed chapters (chapters 3–8) contain observations that are so wide-ranging and rich in context, the apparently ‘off-topic’ digressions so interesting, that there is much to be gained from the discussion. Whether or not readers adjudge the theory to be ‘proven’, they will be treated to what is often an impressive analytical tour through a vast range of literature. And even if readers are unable to complete the straight-through reading, the book will still be useful as a ‘resource book’, to be consulted in the future when their repertoire interests cross those of the authors, as well they must, given the breadth of the authors’ landscape.

In closing, I simply must return to Nitzberg’s claim, cited above. It must be remembered that one of the most important aspects of Schenker’s work that has caused such a stir since English-language discussion started in the late fifties is not just its originality, but its comprehensiveness and synthesis of traditionally separate disciplines: for the first time, it promised a way to tie together counterpoint, harmony, melody (and with more research, we can now include rhythm) in ways that had never been done before, though the separate strands were there. Thus it prompted responses from composers, performing musicians, music theorists and pedagogues, and even linguists, among others. In the case of the Burnett/Nitzberg theory, I have yet to be convinced that it approaches that league, though I hope that their continued work on it may yet prove me wrong. We certainly do need to keep looking for that ‘unified field theory’.

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