

problem of unknown quantities outside the sample would be eliminated. Perhaps the study could involve only those elements which have finite qualities. It will be interesting to read from the author and others about further refinements in his method.

Philip Friedheim—*Tonality and Structure in the Early Works of Schoenberg*

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As the striking developments in music during the late 19th and early 20th centuries recede further in time, more and more musicians are returning to a close examination of the early works of Schoenberg, usually in an attempt to examine the historical processes involved and, perhaps, to separate those elements in modern music which can be seen as the result of a direct historical development from those that are distinctly special to the period. Philip Friedheim's dissertation deals with this problem.

The dissertation is laid out in three parts. Part One is entitled "The Relationship between Tonality and Structure"; Part Two, "The Early Works of Arnold Schoenberg," which examines compositions from 1893 to 1908, the time of the first atonal works. Part Three is a conclusion that briefly surveys Schoenberg's later development. Part One appears in condensed form with many of the examples eliminated in *The Music Review* (1966) 27: 44-53, and is, to my mind, one of the most interesting sections of the dissertation. It concerns itself with motivic transformation and melodically motivic sonorities in the works of Brahms, Wagner, and Strauss.

Friedheim's thesis is that *certain* methods of organizing musical material that can be found in tonal compositions begin to predominate in music written under the influence of declining tonality. Such devices are: motivic variation and transformation, and the combining of variously transformed motives into highly contrapuntal complexes; characteristic sonorities that give color to a work but do not represent a tonic in any classical sense; and harmonic devices, such as multiple interpretation of chords, including the variety of possible roots by supposition, enharmonic equivalents, and abbreviation of "functional" progressions by the omission of a typical chord, usually the dominant. All of the above go hand in hand with ambiguity and may be seen in relation to the classical tonal style as either contributors to, or results of, the weakening of the tonal system. The course

of the dissertation follows this development in a historic fashion, starting with predecessors of Schoenberg and continuing through his Opus 11.

In the discussion of Schoenberg's predecessors, Friedheim makes a useful distinction between thematic *development* and thematic *transformation* (pp. 13ff). The transformation concept is illustrated by examples from Brahms and includes an elaborated version of Schoenberg's observations on the Fourth Symphony in *Style and Idea*. (It might be worth mentioning that the "rhythmic alteration" method of transformation is old, being the essential technique of the Baroque variation suite.) There are also examples from Wagner, with some excellent demonstrations of motivic interrelatedness. The significance of these predecessors to Friedheim is evident from such statements as: "*Tristan und Isolde* represents the point in the history of tonality where the expressive element becomes so dominant that the harmony no longer supports the form . . . The structure of the music now lies more within the vast complex of interrelated themes than anywhere else" (p. 39). The relation of this view to Schoenberg's development is apparent; however, it remains to be shown where in Schoenberg's works this same principle operates on a basic level and where it does not—but where a form-creating tonic emphasis is still present.

In Part Two, at the beginning of each group of works examined, Friedheim carefully discusses chronology and suggests alternatives to Rufer's catalogue. This is welcome in that Rufer groups members of the same opus together, whereas Friedheim separates these members and balances dates on manuscripts against internal evidence to arrive at his ordering of the composition of the pieces. I hope that Friedheim might see fit to gather these chronological observations together into an article in order to make this information more generally available to interested readers.

Here and there in the course of the dissertation, Friedheim provides lists of errors he has found in various scores. All such lists are useful in helping to clear up the errors abounding in Schoenberg scores. One of his corrections, however, is probably a mere typographical error: "Op. 8, no. 1 . . . 5-2 1st vla., 2nd note should be a D" (p. 248); Friedheim must have meant to say it should be a C#. (An additional error in this opus that Friedheim failed to catch is in the vocal score of Op. 8, No. 2; m. 8, second beat, left hand: A# instead of A.)

The author traces the growth of certain techniques in Schoenberg's early works. An example is his discussion of the main chord in the prelude to *Gurrelieder*, E \flat -B \flat -C-E \flat -G-C. This chord acts as a non-standard tonic sonority. It is an indication that this piece will make free use of the whole step as a stable sonority. Friedheim is especially interested here, however, in the use of this chord to create a continuing aura of uncertainty, and as a source for both harmonic and melodic material. Another example of new technique is his citing of symmetrical, non-classically-tonal sonorities in *Pelleas und Melisande*, specifically, two augmented triads adding up to a whole-tone scale, and four-note chords in fourths.

The unerring path to atonality is traced through such operations, as that employed in *Traumleben*, Op. 6, No. 1, which is otherwise a rather straightforward song (p. 251): “The melodic movement of the E \sharp to B \sharp rather than to F \sharp produces the outline of an F-major triad A–F(E \sharp)–C(B \sharp), although this chord does not appear in the accompaniment. The melodic propensity to leap to and from nonharmonic notes characterizes the writing of this period and often imparts to certain passages the suggestion of bitonality.”

At one point Friedheim shows an interesting correspondence between Schoenberg’s speculation in his *Harmonielehre* and a composition written some years earlier, the song *Ghasel*, Op. 6, No. 5. The passage from *Harmonielehre* is entitled “*Bässe zum verminderten 7-Akkord*” and is concerned with Example 304. (I hesitate to use page numbers here, as my copy has this material beginning on page 411 while Friedheim lists page 444.) The original idea, that of “supposing” a series of different roots to a diminished-seventh chord, is extended in *Harmonielehre* to the process of outlining a diminished-seventh chord in scalar form by interpolating notes between the chord members in a consistent fashion so that the added notes themselves form a diminished-seventh chord. There are thus two scales for each “main” diminished-seventh chord. This is the so-called “octatonic” scale and is used extensively in Stravinsky’s *Fireworks*, composed at about the same time as the Schoenberg song. An earlier example is found in Tchaikovsky’s Sixth Symphony, first movement, mm. 271–74. Schoenberg, however, carries the idea yet further in *Harmonielehre* and in the song to include the accompanying of a diminished-seventh chord by the octatonic scale with which it shares no members; he thereby presents the entire chromatic scale in a well-defined way and in short order. This is one example of a distinctly modern approach, not derived from classical tradition or tendencies. It involves symmetrical relations between tone complexes and further includes the “tonal” concept of chord prolongation, but with a decidedly non-classical tonal procedure.

Friedheim contends that Schoenberg was continually facing the problem of structure in large works and attempting new solutions. He wonders whether a large structure “necessitated a conscious harmonic simplification” (p. 325). He indicates one solution as applied to the *Kammersymphonie*, Op. 9, in which Schoenberg employs the form-supporting devices of: (1) preservation of thematic character (contrast), (2) relative harmonic stability within an advanced chromatic style (whole-tone scale inside an E-major harmonic background), (3) sonority (chords in fourths as a type of punctuation), and (4) variation and contrapuntal combination of themes.

Eventually we are led to the situation occurring in the last movement of the Quartet, Op. 10, for which Friedheim refers to chords that “represent momentary harmonic oasis within an atonal desert. Thus it is not a specific tonality but a sonority or pitch sequence that appears at the recapitulation” (p. 393).

Some good and welcome observations about rhythm are made with refer-

ence to the atonal style. He says on page 431: "Tonal harmony, rooted in the functioning bass and the cadential progression, demands a rhythm based on patterned repetitions. Atonal music, freed from the forward motion of the bass and the harmonic drive toward resolution, loses the necessity for a downbeat. The downbeat is, after all, not so much the place for an accent as for a harmonic resolution."

The suggestion of rhythm as a primary formal element (thus serving a new role in atonal music) is indicated by Friedheim's discussion of the first part of Op. 11, No. 2. "If one views the passage as a single curve, moving first toward rhythmic clarification, and then away from it, the entire fifteen-bar unit becomes directed. Thus, one is not dealing with the development of rhythmic motives, i.e., with thematic material, but with the relative degree to which the patterns support or destroy a fundamental pulse" (p. 460). (In this connection, see Friedheim's article "Rhythmic Structure in Schoenberg's Atonal Compositions," *JAMS* [1966] 19: 59-72.)

Another rhythmic distinction is made when Friedheim indicates that the early works of Schoenberg are easily shown to be derived from the Romantic tradition. Serial music on the other hand "functions as a neo-classic element within Schoenberg's fundamentally Romantic *Weltanschauung*" (p. 56). It might be well to point out that this characteristic is reflected in the varied rhythmic complexity of the pieces. The "post-Romantic" and atonal works are in general more convoluted rhythmically, as though perhaps to counteract the disappearing subtlety of the rhythmic effect of harmonic progression in a classically tonal composition as compared to the generally undifferentiated flow of relatively dissonant harmonies in these works. But when Schoenberg enters the realm of twelve-tone composition, he is satisfied that he has discovered an alternative to tonality, one which, presumably, need not reflect the flow of traditional music but has its own unique type of motion, for Schoenberg's rhythm immediately reverts to simpler patterns contributing to the "motoristic" drive of a piece but not to the breathing effect of older music. The basic rhythms are universal, the flow is stylistic, and Schoenberg is no longer interested in preserving the rhythmic effect of a fundamentally different style.

The title of the dissertation is perhaps misleading in its emphasis on tonality, insofar as Friedheim's actual descriptions of pieces are more concerned with motivic analyses in the sense of repetition, transformations and inversion, etc., than with pitch structures *per se*. When harmonic points are described it is usually with reference to a peculiar detail outside the context of the phrase, much less the entire work, so that instead of considerations of tonality there are those of chord succession. Unless one considers the total environment of an interesting or peculiar detail, questions of tonality are inappropriate. And so Friedheim misses an opportunity to make some valuable distinctions of systematics in Schoenberg's early music. He is, therefore, also unable to delineate any essential trend or transformation technique in a sufficiently specific and thorough manner. This problem is, perhaps, the

result of attempting to deal with every composition of the most prolific period of the composer's life. More information might well have been gained through a total analysis of what Friedheim considers the most representative or significant works for demonstrating his thesis.

The question of tonality is, in fact, the weak point of the dissertation. Near the beginning the author quotes, and apparently endorses, a definition of tonality given by Delbert M. Beswick in his Ph.D. dissertation, "The Problem of Tonality in Seventeenth Century Music" (University of North Carolina, 1950): "Tonality is the organized relationship of musical sounds, as perceived and interpreted with respect to some central point of reference that seems to coordinate the separate items and events and to lend them meaning as component parts of a unified whole" (Beswick, p. 18; Friedheim, p. 4).

Despite its lack of affirmation this can be a workable description, if not a definition, of tonality in its broadest sense. But a fundamental distinction between "common practice" tonality and "expanded" tonality is not made in any systematic way, and this is the very rock upon which copious learned argument founders. A reference to "fundamental bass" as the primary constituent of classical tonality will not suffice, not only because of the inherently untheoretical, incomplete, and undefined nature of this Rameau-oriented theory, but because it is easily countered by examples which can be produced, nearly at will, from almost any arbitrary selection of pieces that are twelve-tone or generally admitted to be non-tonal in the classical sense, and which nevertheless contain fundamental-bass progressions of, for instance, perfect fifths. The derivation of these progressions is no less tortured than those common in this dissertation or in the "Extended Tonality" section of Piston's *Harmony*. An obvious example of this technique is found in the second song of Schoenberg's Opus 15, from its beginning to the downbeat of measure 5, wherein fundamental-bass progressions of an ascending series of perfect fifths can be discerned easily. Friedheim would surely agree that this piece had little in common technically with a piece of Beethoven, but the precise nature of the difference is not told, and it seems that this could properly be the main point of investigation of a dissertation bearing a title like this one.

The distinction between a broad and narrow definition of tonality must not, of course, be confused with the possibility of the presence in a piece of a characteristic sonority which cannot, for reasons of context and, perhaps, traditional knowledge, be taken as a non-triadic tonic. Such an example is the "Tristan" chord, and Friedheim discusses this problem on pages 42 and 43. Here he indicates that he recognizes a distinction between tonality in general and classical tonality in particular, but he fails to make use of this awareness for the balance of the dissertation. In Friedheim's assessment of a work's adherence to tonality, too much seems to depend on whether or not that work begins and ends in the same key. Tonality is a very complex set of possibilities and is not defined by the specific type of elements in a piece or by

any detail of connection of sonorities, but rather by what may be heard to lie behind the piece, that sound from which every other event can be shown to be derived, either directly (e.g., V), or through the medium of derivations from derivations (e.g., V of V). A piece may consist entirely of triads and not be tonal, or it may be tonal but not in the classical manner. The classical manner should have been defined tightly so that the non-classical could be distinguished more easily.

To be sure, the source for Friedheim in his harmonic terminology is Schoenberg himself, whose observations on the subject are found in *Harmonielehre* and in *The Structural Functions of Harmony*. These theories themselves grow out of a stream of 19th-century thought which derives from Rameau and includes the still pervasive influence of Riemann. Friedheim's analyses are thus well legitimized in that they follow the style used by Schoenberg in the analysis of his own works. But do Schoenberg's attitudes toward analysis reflect what is really needed in the field to enlighten and inform others in a way that, hopefully, relates to how people hear music or can learn to hear music?

An example of the pitfalls of this kind of theory crops up when Friedheim discusses the song *Erwartung*, Op. 2, No. 1. About the opening measure he writes: "This passage sometimes appears in textbooks as an example of a non-functioning appoggiatura chord. It can, however, be interpreted as an altered supertonic ninth without the root. The E♭ acts as a tonic pedal, and the other notes must be arranged in order (F)-A-C♭-E♭♭-G♭" (p. 98). This statement has a footnote appended: "Although this particular alteration of a II₉ chord appears extreme, it is listed in Schoenberg's *Harmonielehre* (Vienna 1911) p. 401 Ex. 298 last chord" (p. 98). Overlooking Schoenberg's failure to include an example of the use of this chord without the root, this writer presumes that Friedheim's preference for naming it an altered II₉ rather than an altered IV₇ depends on Schoenberg's omission of such a chord in his list of altered seventh chords. In any case, what information is supplied by such a label? And what can a non-functioning chord be in any case? It cannot mean that the piece would be essentially the same without it. Is not an appoggiatura a note which functions? Would an appoggiatura chord not be one in which all members *functioned* as appoggiaturas? Does the discovery of a functioning chord in Friedheim's sense mean that there is a change in the basic harmony from a chord to its resolution? If so, is that not counteracted, in this case, by the pedal tone and the absence of the root? And what is the difference, after all, between a II₇ chord and a IV chord, and, by extension, a II₉ and IV₇, if it is not that the specific presence of the root of the II chord bears a melodic association with both the tonic and mediant tones and supplies in advance a fifth for the dominant chord, a "function" unfulfillable by the IV chord? In fact, what does "dominant function" involve if not the contrapuntal operations of arpeggiating, passing, and/or neighbor tones? Does a listener hear "note names" regardless of chromatic disguises? If an analyst were primarily interested in vertical configurations

per se, would it not be wise for him to ponder the differences and similarities between chords of the same notes (by name) as well as of different notes?

Consistent with the problems created by Schoenberg's theoretical syntax is the by now comical issue of the fourth inversion of a ninth chord in *Verklärte Nacht*. Friedheim says (p. 119): "Despite Schoenberg's own analysis of this construction, the question still remains as to whether a ninth can be placed in the bass and still maintain its harmonic meaning?" What is its harmonic meaning when the ninth is *not* in the bass? Is it the same for all pieces? Suppose, for the sake of argument, that it retained its harmonic meaning in this case. Would either the construction of the piece or the hearing of it change? Would information be provided by that fact, or does the simple succession of four chords with each part moving unerringly by half step render the whole argument senseless?

Another basic consideration of this syntax, and one heavily employed by Friedheim, is the concept of supposition of roots to chords to form more conventional patterns than would appear from the notes actually present. Indeed, Friedheim reads a characteristic of the decline of the strength of the tonal system in the possibility of manifold root suppositions for a single chord. This characteristic is an essential point in his thesis in that it introduces ambiguity. "These two factors, the dissolution of the harmonic rhythm and the merging of separate root functions, ultimately deal the death blow to tonality" (p. 243).

This attitude is the basis for analyses like the following concerning Op. 8, No. 2: "The first diminished-seventh chord G-B \flat -D \flat (C \sharp)-F \flat (E) has an E \flat as the root actually sounding in the bass. Then, with the E \flat remaining, the chord becomes a V $_9$ on an implied F \sharp , i.e., (F \sharp)-A \sharp -C \sharp -E-G, and resolves to B-major. The E \flat in the bass has become a D \sharp , an anticipation of the major third of the B chord. Its continued presence in the first bar, however, considerably obscures the function of the implied F \sharp " (p. 249). Note how Friedheim, following Schoenberg's syntax, arrives at a solution to the passage that entails hearing an implied tone that the composer himself fights in the music. If an analysis is to have any relation to what is heard, why cannot the diminished-seventh chords be heard as the simple, symmetrical, chromatic structures that they are, capable, because of their likely appearance in multiple situations, of multiple resolutions? When such a chord is heard, the listener may have a guess as to where the tones might go, but it is an ambiguous sound until it actually moves. In a highly chromatic environment, it is unlikely that the listener will or should have very specific expectations as to the resolution of any chord. This is one of the reasons that such chromatic sonorities and their distant resolutions have so much more power in Classic than in Romantic music.

Another pitfall of the analyst is exemplified in a passage on *Gurrelieder* (p. 151) where Friedheim says: "The diminished-seventh chord functions as a V $_9$ without the root. The sustained note D can also be interpreted as the dominant of the Neapolitan, a progression established in the preceding song."

It can be, but why? The D in fact moves down a half step to become the first note of the tune. Why is the description “dominant of the Neapolitan” (which does not appear here) more informative than a connective motive of a descending half step? Function should refer to what the tones do, not to how they might be labeled irrespective of the music under scrutiny.

What develops here is the establishment of a classification system which purports to be analysis. Relationships are established between chord classes on a hypothetical basis. Notes that appear in a piece of music are then given names that correspond to the relations set forth in such tables as those by Erpf¹ or Schoenberg.² In this way the analyst is in fact describing his system of classification without reference to the composition.

One other harmonic feature that Friedheim leans on heavily is the abbreviated cadence, specifically proceeding from a pre-dominant-type chord directly to the tonic without the intervening dominant. Schoenberg discusses this procedure, “*Kurzung von Wendungen durch Weglassung des Wegs*,” on page 403 of the *Harmonielehre*. A particularly strong example is in *Die Aufgeregten*, Op. 3, No. 2: “The D₇ at the end becomes a V of II and the main body of the song follows in F minor, thus omitting *two* intervening chords, the supertonic and the dominant” (p. 239).

Schoenberg could well have been using this device consciously, precisely where and in the way that Friedheim points it out, but, again, the rather direct contrapuntal connection between the two chords is ignored. Yet, that this intention is a real fact of the hearing of such music is questionable, even given Friedheim’s warning that “any extreme use of this technique, however, will result in tonal obscurity” (p. 107).

Perhaps the point concerning the newness of procedures might have been better made by substituting the simple idea of counterpoint within chromatic rather than diatonic constraints for the concepts of conflicting implied roots and multiple interpretations, and of abbreviation. Thus, triads may move effectively to many other triads in the most unusual fashion. The composers of the first half of this century were deeply involved in a polyphonic style; thus one may readily expect fascination on their part with the varieties of movement of each individual voice in a chord. In such a case unusual progressions need not be viewed as abbreviations of conventional progressions but as examples of a fresh outlook on chords in their simplest contrapuntal associations. From this point of view, the music of the early 20th century has much in common with the experiments in intense chromaticism of the last part of the 16th century. In both cases, the chromatic scale is the primary assumption and the concept of chords related by consonance to the tonic as structural goals of motion is of no consideration. This attitude would also substitute minimal expectations for the conflicting multiple expectations of Friedheim’s approach. It should be noted that Friedheim himself seems willing to treat the sonorities this way when the chords are less frequently specific triads, as in the works described as “atonal” and parts of those immediately preceding.

The strengths of this dissertation lie, then, in the historically oriented survey of Schoenberg's predecessors and in the discussions of his own early music, especially with reference to questions of motivic manipulation contributing to clarity in a time of the clouding of tonality. What is weak is the style of harmonic analysis, which, though hoary, seems not to be particularly helpful in distinguishing the stages of tonal development from the classical tonal style to serialism and the utter dominance of the chromatic scale. Much of the blame belongs to Schoenberg himself, of course, as he seemed to be of that traditional breed of musicians who treat music theory as a mystical branch of knowledge concerned with divining relations that do not have much to do with what music sounds like or how it is composed. One is tempted to entertain the notion that Schoenberg was throwing up a smoke screen designed to cover the fact that he really was doing something new after all.

NOTES

¹ Hermann Erpf, *Studien zur Harmonie = und Klangtechnik der neueren Musik* (Leipzig, 1927), p. 32.

² Arnold Schoenberg, *Structural Functions of Harmony* (New York, 1954), p. 20.