questions would have been both interesting and helpful. They would have given further significance to the tests themselves. Are we to assume that there are no answers?

David Kraehenbuehl

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RE: ANALYSIS AND ELEMENTARY HARMONY

By William D. Gettel

The article "Unity in Music" in the Journal of Music Theory, Vol. II, No. 1, pps. 97-104 was apparently a well-intentioned sketch of an ambitious approach to a difficult subject — elementary harmony. New insights into the problems of teaching this subject and new attempts to solve them are always welcome, particularly if directed toward closer correlation between theory and reality. There should be many eager readers of proposals claiming to show how elementary skills with chords can be acquired with less tedium and more value by combining their study with general analysis. Many teachers already will have found ways to deal with this; but they are likely to suspect, if modest, that there is always room for improvement. Unfortunately, this article is not very helpful and itself needs improving. Some may find it irritating. Professional competence and respect for the professional competence of the reader are to be expected even in informal comments offered "only as suggestions" (p. 98).

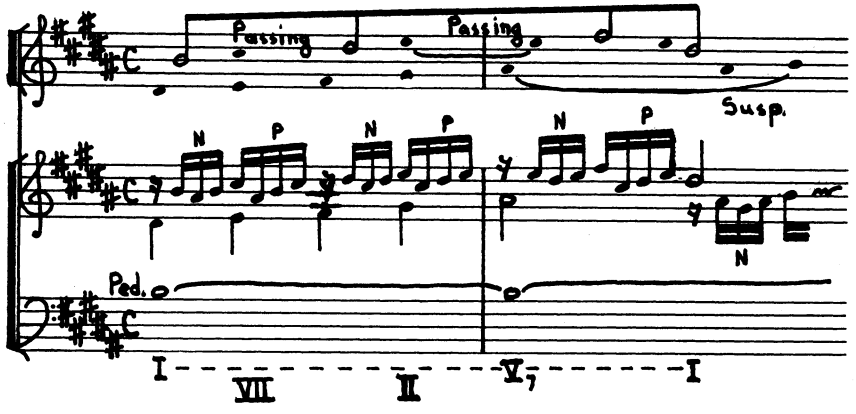
A number of statements are certainly malapropos, possibly even condescending. This is a minor criticism; but surely no reader of this journal needs to be told that "each ... composition of the common-practice style [uses] primarily similar ... details" (p. 98); or that "the harmonic context of a Chopin Prelude is quite different from that of a Bach Prelude" (p. 101); or that "meter ... sets up a ... pattern of successive accented and unaccented beats, representing the establishment of the strong and weak areas of the measure" (p. 102); or that "form is not to be considered the application of an external plan or building scheme but rather the logical outgrowth of the music itself" (p. 103). If lack of tact were the only flaw, one might be merely amused. It is more difficult to be tolerant of serious errors in substance.

In the generalization "satisfactory melodic movement in almost all cases reduces to a basic stepwise line" (p. 100) the evaluation is unwarranted and the proportions exaggerated. It should read: "melodic movement in many cases reduces to a stepwise line!" Bach shaped many quite "satisfactory" passages around completely or predominantly disjunct skeletal lines — the beginnings of the two-part Invention in F, and Preludes VII and XXI in WTC I, to cite only a few.

But even an amended statement would be pointless without some indication of what is to be gained from analysis by reduction. The article promises to provide this (p. 98), but does not do so. Only Ex. 6

compares the melodic reduction with the original, and it is more confusing than enlightening. The passage cited in Ex. 4 could have been used to demonstrate the utility of reduction in making significant distinctions and correlations between "foreground" and "background."

Example A: Meas. 1-2 of Prelude XXIII in Bach's WTC I.



If derived for this purpose, the skeletal remains are not equal in value, as Ex. 4 (with one exception) seems to imply. Disposing of the immediate foreground of sixteenth-note motion by reduction yields a stepwise line of quarter- and half-notes, which is clearly audible even without reduction. But the clear tonic chords in meas. 1, the tonic accent of the melody, and its resolution in meas. 2 pick out b, d#, f#, and d# as the cardinal points of the line. This triadic scheme is given mobility by dissonant, non-tonic, passing harmonies in meas. 1 and by both metric and durational emphasis on the dominant seventh chord. This broadening permits a neatly off-balance one-beat delay in reaching the top of the line. Similar lines are found, with overlapping inversions, at the end of the Prelude. The tenor, for example, stresses descending thirds — e, c#, a#, f#, (e), and d#. But here, preparing for the final cadence, the central harmony is dominant, with weaker tonics and tonic substitutes. In the last measure the delay of the a# by suspension parallels the delay of the f# in meas. 2, again in a precadential dominant stressed both durationally and metrically.

In the preceding analysis the correlation between rhythm and harmony seems fairly clear; in others it may be somewhat "elusive" (p. 102). However, the high purpose proposed for an analytical approach to the study of harmony is compromised at once if it be assumed that rhythm "deserves less definition" for the student of harmony than for the student of composition. Rather one could assume it requires more. The composer's impulsiveness, intuition, and inventiveness need be expressed only in music. The analyst's inquisitiveness, insight, and interpretation must be rationalized.

In considering rhythm as a unifying factor (p. 102f.) the article points out first that "unique rhythmic features ... which differ appreciably from the established norm of rhythmic movement" are "liable [meaning likely] to sound out of place or isolated from the ... context unless such unique movement is made to occur with sufficient frequency" [thus ceasing to be unique] to justify "its own existence as a unifying factor of elaboration." This is merely a roundabout way of stating that a characteristic rhythm can become motivic, and that if it actually is unique it may sound out of context — which is not necessarily the same thing as "out of place." Again, the a priori evaluation is unwarranted.

The chorale melody Ich bin ja, Herr, in deiner Macht was put forward in support (Ex. 7). Being probably by Bach himself, it is more highly unified than some earlier chorale tunes. The second phrase is almost an exact sequence of the first. The third phrase is composed mainly of motives from the first two, and its skeletal line resembles theirs. The contrasting fourth phrase uses a modified form of an earlier motive (the broken triad), and it has one motive peculiar to itself (the four eighth-notes); but the line ends at its high point instead of falling to the cadence as in the first three phrases. The expectancy thus generated is fulfilled in the last phrase, which inverts the line of the fourth and comes out on the only tonic full cadence. In addition, the last phrase is related motivically to the first two, and rhythmically (in its first measure) to the third.

What connection this melody has with the points it apparently was supposed to illustrate is not clear. Actually it does contain one "unique" rhythmic configuration, the cadential measure before the double bar; but this doesn't sound at all out of place. And to say that so highly integrated an organism is an example of "melodic unification through sixteenth-note elaboration" is like saying that two people resemble one another because they have unusually blue eyes when as a matter of fact they are twins.

Perhaps a better example of consistent but not always motivic elaboration would be something more rhapsodic — the 2nd movement of Bach's Italian Concerto, or Les agréments for the Sarabande in his English Suite No. 3. An obvious example of something out of context is the famous chord in the theme of the second movement of Haydn's Symphony No. 94, which surprises the listener less by its occurrence than by its uniqueness. A less hackneyed example would be the "Interruption Motive," as it might be called, shortly before the one-measure G. P. near the end of the Love Scene in Berlioz' Romeo and Juliet.

The article also tries to find some correlation between harmony and metric placement. "The unity between meter and harmony that is desirable" can be established, it claims, "by causing strong harmonic progressions to be associated with the stronger portions of the measure, using ... weak progressions ... with the weaker portions." It is very difficult to assay this dictum on its own terms because those terms are not defined. There is no explanation of "strong" and "weak" as they are applied here to harmonic progressions. Nor can it be supposed

that definitions of such vague terms (evaluations?) are matters of common, hard-and-fast knowledge. Some texts do not use them. Others do, but apply them differently, not without some haggling over their meaning, e.g., Schönberg. But even if it were possible to find a consensus it would be pointless in this context. Whether one progression is "weaker" or "stronger" than another has nothing to do with how either of them may be used metrically. Composers certainly have not felt constrained to use certain chords (or even certain kinds of chords) only in weak parts of the measure, or to reserve certain others only for accents.

The most direct way to discover that "unity between meter and harmony" prevails in both parts of Ex. 8 is simply to perform them. One is as clearly 4/4 as the other. Nor does the harmony prevent performance even in another meter, as shown in Ex. B, p. 245. The cadence, but not necessarily this harmony, would be awkward in other meters. The real relationship between chord progressions and meter can be examined under the heading of "harmonic rhythm," that aspect of the total rhythm which is marked by changes from one chord to another and measured by the durations of chords. Chord changes occur on metric accents much more consistently than anywhere else. From the extreme variety of progressions involved, one would conclude that in this connection any distinction in relative "strength" is specious. Rhythmically, it is the change that is effective, not the identities of the chords. In the Bach chorale referred to previously each of the 20 metric accents is marked by a chord change. In terms of Roman numerals and inversions sixteen essentially different progressions are involved. Other examples of such regularly metric harmonic rhythm can be found almost at random. Preludes VII, XXI, and XXIII come readily to hand, having been cited before.

Not all metric accents are marked by a change of chord. A chord may begin at a bar line (with or without upbeat) and continue through more than one measure, e.g., the first 5 measures of Bach's two part Invention in F, the first 8 measures of the third movement in Haydn's Symphony No. 94, and the second theme (in $E^{\flat}$ minor) in the first movement of Beethoven's Sonata No. 8. Melodic movement in the bass or in the upper voices during the duration of a chord logically does not make a harmonic progression and so does not affect harmonic rhythm. It does of course permit metric and other accents. Rhythms involving repeated tones can perform the same function, also without affecting harmonic rhythm. None of these intra-chordal rhythms is as incisive as phrasing. Rhythmically, the second part of a chord divided by phrasing can be regarded as a "new" chord, the first in the next phase of the harmonic rhythm, e.g., meas. 2 & 6-7 in the Bach chorale already mentioned and meas. 4-5 in the Haydn excerpt just cited.

Some metric accents are not marked by a chord change due to syncopated harmonic rhythm. Whether with or without intra-chordal rhythm, a chord may begin in any kind of meter on a weak part of the measure (including, possibly, the secondary accent of quadruple meters) and continue through the next accent; or, in triple meters, the chord may occupy the weak two-thirds of the measure. There is no necessary

lack of unity between the meter and the harmonic rhythm in such cases. Literally syncopated chords occur in meas. 31 & 32 of the first movement in Beethoven's Symphony No. 9, and elsewhere in that work, including the famous opening chord of the Finale. The original article itself provides, on a smaller scale, examples of the more common kind of syncopated harmonic rhythm, in which intra-chordal rhythm permits the metric accent to be made explicit, e.g., meas. 4-5 of Example 6, which is by Bach, and the first part of Ex. 8, which is not.

The melody of the latter, however, is harmonized three times in actual chorales. O Herre Gott, dein göttlich Wort has all quarter-note harmonic rhythm. Being very like the second part of Ex. 8, it is not shown here. Herr Gott, dich loben alle wir has syncopated harmonic rhythm at the beginning of the phrase; Nun lob', mein' Seel', den Herren uses it in mid-phrase. (See Ex. C). There are three versions of each of the latter two titles in triple meter. One has syncopated harmonic rhythm at the beginning, another in mid-phrase.

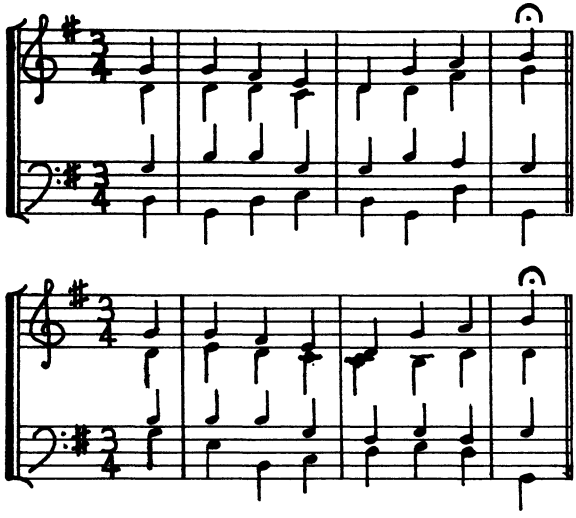
This kind of harmonic rhythm for the first upbeat is a commonplace in the Bach chorales, and is used also for upbeats in many interior phrases. In Bach's own Dir, dir, Jehova there are prosodic reasons for it. His version of Du, o schönes Weltgebäude in C minor uses it for expressive reasons. In many other chorales he used it apparently as a matter of choice. It occurs in 11 measures of the invention already cited. In Fugue V of WTC I the very short parts of the syncopated chords sound merely anticipatory, as in meas. 10-11. In Fugue VII the metrically strong portions of the syncopated chords are short and so feel suspended, as in meas. 3-4. See also the Trio of the 3rd movement in Beethoven's Sonata No. 7, measures 5-6 of Chopin's Prelude No. 4, several places in Schumann's song Nachtlied (Op. 96, No. 1) and in the first movement of his Symphony No. 1.

The article was needlessly derogatory, then, in labeling the first part of Ex. 8 a "poor" example of the "establishment of unity between meter and harmony"; although possibly it is somewhat exceptional. Single phrases in the Bach chorales seldom contain two similar instances of syncopated harmonic rhythm; and moving from first inversion to root position is the least common means of articulating the chord to prevent it from being literally syncopated. However, the bass line is "poor" — it uses the low g too many times.

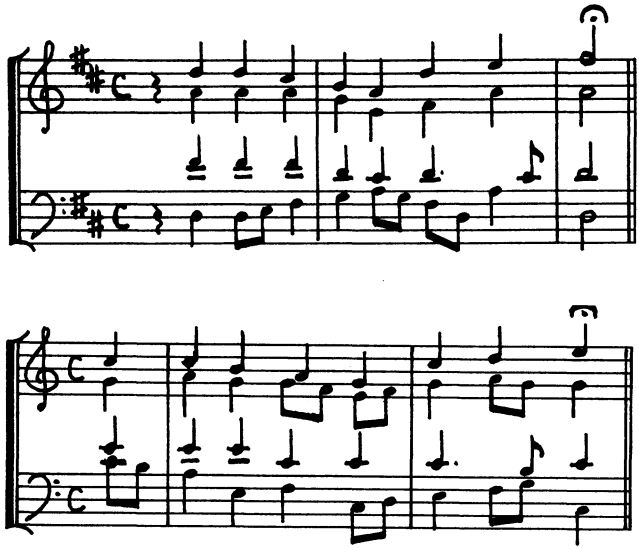
Estimates will vary as to how soon syncopated harmonic rhythm should be introduced in elementary studies, particularly for examples associated with complexities and subtleties of form, rhythm, expression, and motivic usage. But if analysis is part of the study, then the students themselves will begin to use it unbidden and early for phrase-beginnings and in triple meter, imitating the Bach chorales and obvious stylistic traits of such dances as minuet, polonaise, and sarabande.

In its coda the article states that "the elements which constantly seek unification in a piece of music cannot be set down in any complete list" (p. 103). Perhaps not, but one would suppose that even a rudimentary list would include motivic organization and counterpoint. Since

Example B: cf. Ex. 8.



Example C:



the statement continues by pointing out that "each piece is a law unto itself," it becomes even more difficult to understand why elements so responsible for character were omitted. Furthermore, these are unifying forces which lend themselves to generalization, and so to illuminating comparisons between pieces and styles.

Even a chorale as simple as the one in Ex. 6 could have been used to demonstrate the utility of these two avenues of analytical exploration and their effect upon harmony. Instead, this example illustrates merely another vague distinction between "strong" and "weak" harmony (this time applied to single chords, e.g., root position vs. inversion), and relies upon principles for determining structure by reduction for which previous examples are hardly sufficient preparation.

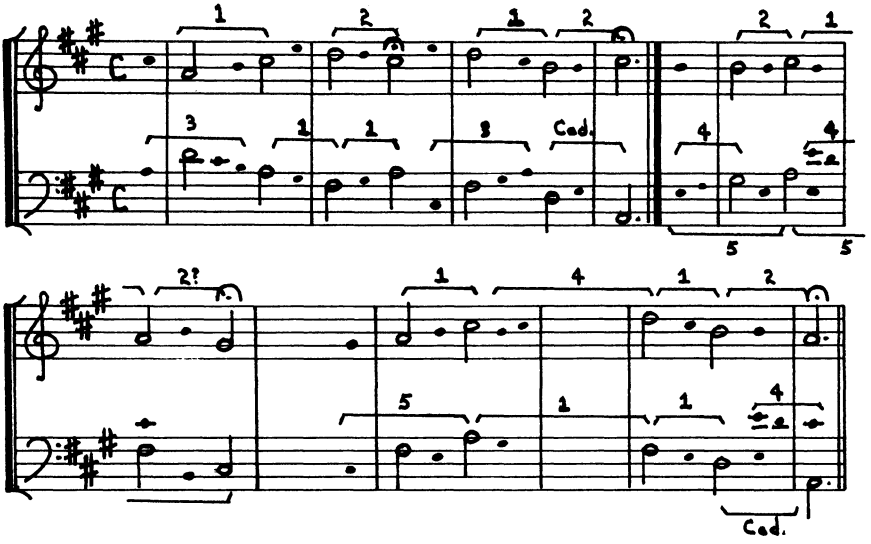
The article describes reduction as a process of removing "surface ornamentation and non-essential movement" (p. 100). The former is not exactly a conspicuous feature of the chorales, so in this respect their reduction is no problem. The same leanness, however, often makes it difficult to determine what movement, if any, is non-essential. Since the lower voices frequently are shaping forces as significant as the chorale melody, and since its rhythm often is matched almost note-for-note by the harmonic rhythm, the difficulties cannot always be resolved on harmonic grounds. Under these circumstances, in order to avoid tedious haggling over which subtlety of interpretation is most convincing, it sometimes is convenient simply to apply an arbitrary structural formula evenly throughout the piece, matching the phrase-structure exactly and moving more broadly but in as regularly metric a manner as the melody generally does. For chorales in quadruple meter it frequently is effective to assume that a structure in half-notes will permit as deep a probing into the essentials of the harmonization as necessary. A case in point is the setting by Bach of Du Friedefurst used in Ex. 6. It has the added advantage of being so consistently diatonic that it can be examined with profit by elementary harmony students.

Outlining this soprano in half-note proportions (See Ex. D) yields a closely-knit, coherent line which audibly summarizes the formal and tonal traits of the actual melody. Even in purely skeletal form the second phrase modifies and intensifies the ending of the first. The third phrase is contrasting to a degree but is clearly related to the others; and the fourth telescopes the first two, as indicated by the lay-out of the example.

The bass confirms these relationships and provides deft, organic, contrapuntal support throughout. In structural contour it is clearly responsive to the basic line of the soprano. It is in contrary motion in phrase 1, although the harmony prevents it from being an exact reflection. Elsewhere it moves in parallel 13ths and parallel 10ths, of course with necessary adjustments at cadences. With the addition of a few well-placed foreign tones, the chords used to connect the structural elements permit a high degree of motivic coherence within the bass line itself as well as tangible relationships with the chorale melody and to some extent even with the inner voices, as in-

dicated by the numbered brackets.

Example D.



With such tight unity in so many respects, no part of either bass or soprano really can be considered "non-essential." The skeletal and connecting chords are functionally inter-dependent, and each combination makes its particular contribution to the particular character of this particular piece. The "reduction" is an abstraction, a more-or-less arbitrary construct, intended mainly to provide a convenient means of outlining the general character and exposing the specific details which give the piece both its unity and its uniqueness.

The weight of evidence as to motivic and contrapuntal rapport between this soprano and bass decreases the likelihood that choices between root position and inversion could have been made on "structural" grounds, except possibly for the former in cadence formulae. For example, there does not seem to be anything inherently structural about the root position tonic chord in meas. 3, as set forth in Ex. 6, particularly since a tonic six-four was used in the comparable place in meas. 8, which was omitted from that example.[1] In his other harmonization of this chorale Bach used the six-four in meas. 3 and found still another setting, among several obvious possibilities, for meas. 8. None of these differences is surprising in view of Bach's well-known compulsion to find different, but equally organic, harmonizations for

1. It should be noted that the structural analysis of phrases 1 and 2 in the original article agrees, more-or-less, with the interpretation published in Salzer's Structural Hearing (I:115 & II:49). Schenker's school, however, also tends to account for the significance of inversion and root position on contrapuntal rather than on vertical grounds.

the same or similar melodic segments, whether in the same or in different chorales. It is surprising that any particular one of his versions could have been singled out, for almost purely vertical reasons, as more "logical" or more productive of "proper unity" (p. 101) than another.

Emphasis upon the horizontal is not intended to suggest that the vertical can be ignored, least of all by beginners; but even this aspect of harmony is not without contrapuntal significance. Generalizations about the intervals created, or exploited, are a necessary concomitant of linear principles in any system of counterpoint. In an amphonic style the soprano-bass intervals of course are particularly important, even though their sound may be modified by the inner voices. Criteria along these lines [!] generally are more precise than descriptions of desirable linear characteristics.

In the chorale style 3rds, 6ths, and perfect 5ths are the predominant soprano-bass intervals, particularly at points of metric stress in mid-phrase. Doublings of these two voices in mid-phrase generally are ameliorated by rhythmic de-emphasis, predominantly conjunct voice-leading, dissonance in an inner voice, or all three. Dissonant intervals are likely to be in a minority but may be prominent in chromatic progressions and in moments of expressive importance. This chorale is not markedly chromatic or dissonant, but in other respects it is typical. Most of the soprano-bass intervals are 3rds, perfect 5ths, or 6ths, one of which occurs on each metric accent except the last. This is the doubling of soprano and bass on the tonic which is necessary to make a full cadence. The other two octaves are in diminished triads on unaccented beats, one with completely conjunct voice-leading, the other with half. The few dissonant intervals are on unaccented beats or weak fractions of beats. Either the advisability of maintaining a particular kind of sonority or a necessary change in expression may influence chord choice, although this one factor is not likely to be conclusive in any one specific instance.

In summary, all analysis of this chorale tends to show that motivic organization and both the horizontal and the vertical aspects of counterpoint dominate harmony, particularly choices between root position and inversion. Which is used at a particular point depends to some extent upon which tone of the chord is preempted by the melody, to some extent upon which bass tone is most apt motivically, and to some extent upon how the line of the bass is shaped to that of the soprano. It is trivial, specious, or both to maintain that musically effective choices can be made upon the basis of nebulous assumptions about the intrinsic "strength" of various chords and their presumed relationship to "structure." Again, these are static, hypothetical strictures not likely to be binding upon any composer, least of all Bach. His works show rather that a higher value should be placed upon sonorous and horizontal elements, or, to put it the other way around, that submission to demands made by sound quality and by the motivic and contrapuntal flow of the piece at hand is more likely to produce "proper unity" with aesthetically sound results than factitious vertical criteria.

This typical analysis has been developed in some detail in order to show what definite advantages this approach can have for students of elementary harmony. It can be profitable even if their knowledge extends only to the identification of intervals and the distinction of root position and inversion. It can help develop a feeling for good harmony and counterpoint well before they can identify all chords or trace the lines of force in complex structures. However, they are not likely to be able to derive all their own precepts from such analysis, for sheer lack of time if not for lack of knowledge and maturity. General guidance and concrete advice still will be necessary; but it is obvious, I believe, that the students will profit much more from being guided toward, advised about, and led to imitate these functional and audible aspects of harmonization and composition than from being spoon-fed deceptively facile, conclusive generalizations based upon isolated factors which in reality are not even particularly efficient in producing the results claimed for them. In conclusion, the main thesis of the original article — that general analysis be made a part of elementary courses in musicianship — represents a laudable ambition. On the face of it one might suppose the principle needs no defense. Perhaps not, but there are attendant risks which evidently do need to be pointed out.

Elementary courses already are crammed with theory, keyboard practice, ear-training, sight-singing, and the traditional kind of "spot" analysis the article refers to as "dull" (p. 97). Even if the latter be left out, the addition of more searching analysis is not a short cut. Not less but more written work becomes necessary, both in analytical and in creative categories. The general tone of lecture and discussion— both of which will be considerably lengthened, incidentally— may seem to anticipate that of traditional courses in "form and analysis" usually reserved for later in the curriculum; but premature, if not immature, contemplation of so much richness and flexibility of material can lead all too easily to superficiality toward the mechanics of craftsmanship which no apprentice should take for granted. Intended to enhance the students' musical experience, such an approach may merely clutter and confuse it.

Intended to hasten the maturity of the students, an analytical approach imposes severe demands upon the maturity of the instructor. He needs an unerring aim not only for those things ultimately most significant in the passages analyzed but also for those things which can be realistically and immediately useful as guides for students struggling with the "reverse process of ... synthesis" (p. 98). He needs an ability to devise exercises for this process which permit early, fruitful, and encouraging comparison with real music. Above all he must avoid superficial, shoddy, or specious generalizations and dogmatically black-and-white evaluations which will be flatly contradicted, revealed as trivial, or riddled with exceptions as soon as his students begin to analyze the works from which such "rules" presumably were abstracted. In short, he must become himself a highly competent and mature, if not brilliantly original, analyst and synthesist. He cannot afford to be merely an anthologist of sterile formulae and a poseur of problems culled from a miscellany of handbooks on harmony and analysis.