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# THE PROBLEM OF TONALITY IN PRE-BAROQUE AND PRIMITIVE MUSIC

by

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Within the first half of our century, the term "tonality" has become imprecise to the point of acting more as an emotional stimulus than an accurate description of musical events. In one case it functions as a vague expression for musical coherence; in another context it implies non-progressiveness or pedantry. Once such a useful term becomes established in a professional vocabulary, each person who utters it tucks his own set of meanings behind it without systematically considering the implications which follow from his personal interpretation. I do not propose that this be considered a particularly dangerous linguistic vice. It is the normal evolution of any word so pressed into the front-center of musical polemics during our experimental half-century. However, it seems reasonable to wish for a more precise understanding of any word so firmly imbedded within our understanding of music. In at least one way, I believe that this loose understanding of tonality has led to a perversion of historical fact. It is this problem which I hope to reveal here and, ideally, to resolve. I refer to the widespread opinion that tonality is a phenomenon characteristic only of polyphonic music or, as is sometimes urged, only of music that appeared concurrently with what we often call "the harmonic consciousness."

Two schools of musicians have been particularly outspoken in their insistence that tonality is not a universal quality. A number of twelve-tone composers have denied the psychological necessity of tonality, claiming that the relating of tonal events to a central tone (or chord) was a stylistic peculiarity of the period extending, roughly, from 1600 through some works of our present day. Similarly, a number of important historical musicologists have denied the universality of tonality in claiming that modality and tonality are mutually exclusive terms. The historical musicologist's arguments have in turn enjoyed occasional support from a few anthropological musicologists who have concluded that tonality is not present in primitive man's songs. The attitudes which stem from these two points of view are significant, for an understanding of our musical scene turns, to a great extent, upon our understanding of the music of our past and the general role played by tonality in that music.

A clear example of a somewhat narrow view of what is meant by the term "tonality" is revealed in a statement made by Stravinsky.

We thus no longer find ourselves in the framework of classic tonality in the scholastic sense of the word. . . Having

reached this point, it is no less indispensable to obey, not new idols, but the eternal necessity of affirming the axis of our music and to recognize the existence of certain poles of attraction. Diatonic tonality is only one means of orienting music toward these poles. The function of tonality is completely subordinated to the force of attraction of the pole of sonority. All music is nothing more than a succession of impulses that converge toward a definite point of repose. That is as true of Gregorian chant as it is of a Bach fugue, as true of Brahms' music as it is of Debussy's. The general law of attraction is satisfied in only a limited way by the traditional diatonic system, for that system possesses no absolute value.<sup>1</sup>

It is difficult to understand why tonality cannot mean what Stravinsky here prefers to call "pole of attraction, point of repose." The term evidently means for him only a system of tonal relations which result from the diatonic systems of major and minor or the general bass practice of the early eighteenth century. Since poles of attraction and points of repose can be found in the music of any era, any culture, it seems unnecessarily delimiting to demand such a narrow understanding of what tonality is and means in the musical experience.

But there are other examples of this narrow interpretation. Manfred Bukofzer, for example, presents the adoption of tonality as one of the most salient features of the musical change from medieval and renaissance styles to that of the Baroque. With Bukofzer, tonality seems to be a limited harmonic principle by which chords are related in progressions derived from the diatonic scale system.

Tonality may be defined as a system of chordal relations based on the attraction of a tonal center. This tonic formed the center of gravitation for the other chords. It is no mere metaphor if tonality is explained in terms of gravitation. Both tonality and gravitation were discoveries of the baroque period made at exactly the same time.<sup>2</sup>

We could interpret this statement as the recognition of man's awakened consciousness of tonality during the Baroque. Bukofzer certainly did not mean to imply that gravity did not exist before its laws were unraveled. Perhaps he meant that tonality, then, merely gained recognition as a structural force at this time. But this interpretation

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1. I. Stravinsky, The Poetics of Music (1947), pp. 35-36.

2. M. Bukofzer, Music in the Baroque Era (1947), p. 12.

is closed to us when later we are told that

[Tonality] emerged at approximately the same time in the Neapolitan opera and in the instrumental music of the Bologna school and was codified by Rameau more than a generation after its first appearance in music . . . The technical means of achieving key-feeling were, aside from the cadence itself, diatonic sequences of chords that gravitated toward the tonal center.<sup>3</sup>

Implicit within such a concept of tonality is the assumption that tonality and modality are necessarily separate, mutually exclusive ordering forces. Modality is a melodic principle; tonality is inextricably bound up within a system of chords. In support of this assumption we find also that in renaissance music

The progressions from any one combination to any other . . . were dictated not by a tonal or harmonic principle, but by the melodic laws of part-writing . . . The intervallic harmony of renaissance music was directed by modality, the chordal harmony of the late baroque by tonality.<sup>4</sup>

It would seem that Willi Apel concurs with this view.

In Gregorian chant and similar bodies of monophonic music the relationships are of a purely melodic character . . . whereas a much more complex situation is encountered in the field of harmonized music.<sup>5</sup>

But what are the "laws" or "relationships" that are "purely melodic"? And what is the "attraction," as Bukofzer calls it, exerted by a tonic? In other words, within a series of chords, what causes one chord to dominate its associates and, thereby, become a center of aural focus? Could the laws which control the monophonic situation likely be the same which control the signification of a tonic in a chordal texture?

One aspect of Rameau's theory of the natural bass was the recognition that certain intervallic (melodic) relations formed between chord roots create pleasant and decisive harmonic progress. In other words, even in the historical period singled out by Bukofzer, tonality is not

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3. Ibid., pp. 219-220.

4. Ibid., p. 12.

5. Harvard Dictionary of Music (1944), "Tonality."

recognized as a product only of a "chordal" principle. Rather, it is a "melodic" pattern created by chord roots that reinforces a particular tonal point and its accompanying triad. It seems clear that tonality could be present then without triads, for the chordal roots alone could establish a pattern conducive to a tonic effect.

Another concept of tonality similar in many respects to the above, can be found in the writings of Schoenberg. He believed that the music we call "modal" does not possess the attribute of tonality. He said that "on the contrary, we must concede that the church modes do not at all conform to the law of tonality."<sup>6</sup> It was on this basis that he developed a triangular historical perspective that admitted of a rise, a period of floruation, and a subsequent period of decline and abandonment for tonality. And Ernst Krenek joins Schoenberg in his belief that tonality was a late-comer to the music of the Western world, though his date does not agree with Bukofzer's.

Tonality arose into the foreground during the late medieval period . . . To us, tonality undoubtedly means that it is possible to establish a system of relationships and interdependencies between the harmonies that inhabit the area of a sound language. Tonality is in this sense a harmonic principle and therefore has no legitimate place in the development of music as we have considered it so far. [He refers to a previous discussion of medieval monody.]<sup>7</sup>

Krenek's statement gives rise to the same problem we encountered before; we are not told how chords create tonics. And there are at least two other points which beg for clarification. We know, for instance, that musica ficta practices in the church frequently transformed modal chant into something quite removed from modal theory, often simple major-minor systems. We also know that the Greek modal system was overhauled (with devastating results) and applied to chant considerably after this body of melody was collected and codified. These two considerations necessarily kindle a certain skepticism in regard to any thoroughgoing relation we might try to establish between modal theory and modal practice.

A comment made by George Herzog seems applicable here: "In the study of folk music there has been perhaps a little too much preoccupation with scales and intervals, which are merely the raw materials of melody, at the expense of tonality."<sup>8</sup> The origins of chant certainly do not exlude it from this opinion. The entire theoretical, as well as

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6. In "Problems of Harmony," Schoenberg (1937), ed. M. Armitage, pp. 265-306.

7. E. Krenek, Music Here and Now (1939), pp. 108, 109.

8. Standard Dictionary of Folklore, Mythology and Legend (1950), "Song: folk song and the music of folk song."

common-sense, basis for music-making in the Western world has been grounded upon the assumption that structural relationships do exist between pitches, unadorned by harmonic, i.e. chordal, support. It even smacks of contradiction to speak of pitches in a melody without the prior assumption that those pitches, in the listening experience, arrange themselves into patterns which support tones of dominance as points of aural attention or focus. But Krenek, and we may assume Bukofzer and Apel as well, would not accept an analysis of chant based on tonality. He believes that to examine plain-song in terms of tonality is a "vain enterprise." He elaborates by saying that

Doubtless, repetition of the pattern involved in the iteration principle, would show the predominance of certain tones in the melodic line over others; but this would not necessarily give them the character of fundamental tones carrying certain chords, for the reason that no chords were as yet involved. To my mind, it is not the fact that a particular tone happens to be the first in a scale which makes it the basic tone of that scale; for that matter, it might as well have been the fifth or the last tone. A tone becomes the tonic only when the central triad is built over it.<sup>9</sup>

Perhaps Krenek is unaware that he has switched his gaze from Gregorian chant to a scale. But music is not made from scales; rather, scales are, as Hindemith has aptly put it, the "sterilized derivative of melody."<sup>10</sup>

Krenek is right in maintaining that the initial tone of a scale possesses no metaphysical quality whereby it is rendered fundamental to its gamut. That is why the scale, abstracted as it is from the real musical substance, is valueless for the determination of a structurally fundamental tone. The tonality of a piece of music is not discovered by an analysis of a pitch series that has been culled from it. Only relations in musical contexts can determine the signification of one tone as a tonic.

But the most questionable facet of Krenek's denial of tonality in melody has not yet been touched. We again are not told how a "central triad" in a chordal texture becomes "central." Inherent in this oversight lies the primary fault of many who admit tonality only to the domain of "post-chordal" music. Krenek cannot hold that a tone becomes a tonality center only because of the presence of a triad above it, for this would be tantamount to saying that every root of every triad within a texture is a tonic. Though in a certain sense this is logically undeni-

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9. Krenek, op.cit., p.110.

10. P. Hindemith, "Methods of Music Theory," The Musical Quarterly, 30:25.

able, experience still forces us to regard one of these triads as predominant.

To recognize harmonic implications or tonality in primitive music is generally frowned upon by musicologists most acquainted with studies of primitive man's songs. Hornbostel expressed his disbelief that pure melody was related to melody born of a "harmonic" environment such as ours in the following:

Pure melody — unlike ours — is not conceived harmonically; and so long as we cannot divest ourselves of the idea — so natural to our way of thinking — that it is based on harmony and interpret it in this sense, we arbitrarily change its meaning and cannot arrive at a proper understanding of it.<sup>11</sup>

In one respect Hornbostel's statement is justified, but in another it is misleading. The difficulty revolves about what is here meant by the term "harmony." If he understands by that term the traditional concept of harmonic relations, his dictum is compelling. On the other hand, if he means to deny that certain peculiarities of tone relations tend to establish a framework of harmonic reference — in the sense of establishing a pattern of primary relationships to one tone — then he denies the very basic quality of melodic perception.

But I believe that Hornbostel was merely cautious, for we find a softening of his view in the following:

On the other hand, pure melody does contain elements related probably to those which, in our music, have contributed to form harmony. As the compass of the melody, in most cases, is small, fourths and fifths are more important and more frequent than octaves. But even then they are too wide to be used in melodic sequence. . . . They are rather used as constructive elements determining the distance between predominant notes, the compass of melodic phrases, and the rise or fall of a melody when its position is changed (transposed). In this way they mark out the field where melody is at play. We can say, therefore, that pure melody, too, has "tonality," its tonality being established by the functions and the mutual relations of the notes.<sup>12</sup>

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11. E. M. Hornbostel, "African Negro Music," Africa, 1:30.

12. *Ibid.*, pp. 35-36.

The framework function performed by certain intervals, especially by fifths and fourths, sometimes major thirds, apparently exerts some effect upon the extreme pitch ranges of a melody. This has been revealed in the music of at least one culture by Herzog. In generalizing about the character of Yuman songs, he says

The tonal range of most songs falls within the interval of the fifth and the tenth. As a rule, one of the tones can be established as "tonic" on the ground that it carries the most melodic weight. . . The tonic is often the lowest tone of the melody, usually also the final tone. Tones next in melodic importance can be found at various points. In general, they appear above the tonic, seldom below.<sup>13</sup>

These structural facts about certain species of primitive music indicate a kind of deployed harmonic field created by melody similar to that discussed by Hindemith in Book I of his Craft of Musical Composition. The use of intervals such as fourths and fifths (the range of the particular song permitting) as structural points of emphasis implies an harmonic relation essentially no different from that to be found in any theme by Mozart or Haydn.

This "harmonic field" is no recent discovery, of course, for as early as the turn of the century George Santayana (certainly not an acute musical theorist) stated that

What a rich note is to a pure and thin one, that a chord is to a note; nor is melody wholly different in principle, for it is a chord rendered piecemeal. Time intervenes, and the harmony is deployed; so that in melody rhythm is added, with its immense appeal, to the cumulative effect secured by rendering many notes together.<sup>14</sup>

It seems that a real basis for denying tonality — even a harmonic structure — for pre-baroque monody or polyphony is elusive. Melodies, no matter how naive or "unharmonic" cannot represent pure states of pitch-to-pitch motion. The human perceptual mechanism exhibits a tendency — even a necessity — to group tones into patterns whose parts possess a simultaneous or contiguous existence.

There are powerful objections to the belief that Gregorian chant, or any other monodic music of man's history does not, or did not, during the time of that music's inception, incorporate tonality as a struc-

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13. G. Herzog, "The Yuman Musical Style," Journal of American Folklore, 41:192.

14. G. Santayana, Reason in Art (1906), p. 49.



tural feature. A precise and thorough analysis of the causes of tonality in the music of the late baroque and classical periods would reveal features which are just as solidly present (though perhaps not as obviously so) in monody, primitive song, or renaissance polyphony.

Any musical experience presents a fundamental situation of perception. A cognitive process takes place which is basically no different from any other of man's experiential processes. The creation or recognition of a hierarchy of musical relations within which musical tones are cognitively transformed into organized patterns is a result of the need for simplicity in human experience. In regard to the necessity of such an attitude, the words of the late Andrew Ushenko are relevant.

Cognitive transformation is unavoidable because superfluous and obstructing tendencies are always left out of account; but the resultant picture brings out a consistent character of the original the more clearly.<sup>15</sup>

And Wolfgang Koehler has made clear the psychological basis for what we might call the "tonal patterning" that leads to a tonality experience.

If all the content of the sensory field were indifferent grains of sensory stuff, it would be a hard task to orientate ourselves in and to react to such a world.<sup>16</sup>

Tonality represents the musical result of this cognitive transformation. As listeners, we do not soak in musical tones as though we were indifferent sponges, each tone particle related equally and balanced with all others. Just as in visual perception, we create a hierarchy of elements from physically undifferentiated matter.

This is not to say that the role of the composer is not considerable in such a scheme of things, whether he be a twentieth-century American or an aboriginal Indian. On the contrary, the composer's function, crudely speaking, is to arrange musical tones according to basic laws of perception which make the tonality process interesting, as well as possible. If this were not true, the composer would assume the legitimate role of *chef de système*, his sole problem that of tracking down ever-different schemes for arranging notational patterns on the lined page. In spite of our experimental century, I cannot believe that future knowledge of human psychology or the history of musical style will support such a view.

A number of responsible persons have expressed the belief that music is constantly in a state of stylistic flux — each sociological mutation giving rise to a corresponding alteration in musical ideals and systems. Related to this notion is the opinion that there are no uni-

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15. A. P. Ushenko, *Power and Events* (1946), p. 50.

16. W. Koehler, *Gestalt Psychology* (1947), p. 177.

versal laws operative within the historical record of music. The conclusion is that tonality and related matters are mere results of socio-cultural conditioning. I cannot fully concur with such an opinion, nor do I believe that our present knowledge of past eras and man's unchanged psychological makeup bear out such a view. We are compelled to agree with Max Schoen that there are certainly elements within the musical experience that are "not dependent on experience and training alone."<sup>17</sup>

Suppose that we consider our experience of tonal relations to those of one man of the past. For this purpose we have the introspective testimony of the octave effect from one who wrote many hundred years ago.

Why is it that in the octave the concord of the upper note exists in the lower, but not *vice versa*? Is it because, speaking generally, the sound of both exists in both, but if not so it exists in the lower note; for it is the greater?<sup>18</sup>

And further:

Why is it that the difference of an octave may be undetected and appear to be in unison as in the Phoenician lyre and in the human voice. For the sound contained in the upper note is not in unison, but the interval of the octave has notes analogous to each other.<sup>19</sup>

Even the current recognition of "tonal volume" can be found paralleled in the following query:

Why does the low note contain the sound of the high note? Is it because the low note is heavier? It is like an obtuse angle, whereas the high note is like an acute angle.<sup>20</sup>

These comments are not just relevant historical curios. Rather, they pose a serious threat to any denial of common perceptual modes throughout the history of our musical culture. It is justified to believe that if a pseudo-Aristotle recognized in the octave much the same properties we take for granted today, his conceptualization of other intervals known to him would not be far from our own.

But tonality does not have to be understood in a purely "harmonic"

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17. M. Schoen, The Psychology of Music (1940), p. 46.

18. Aristotle(?), Musical Problems I, XIX. 13.

19. Ibid., XIX. 8.

20. Ibid., XIX. 14.

sense, as some theories of tonality imply.<sup>21</sup> The melodic framing action mentioned before, whereby certain intervals act as tonal reference points, is not the sole determinant for creating reference points within musical textures. A great number of primitive songs do not extend over a range that permits such forces to act. As a matter of fact, some evidence indicates that the earliest forms of melody made use of only two tones, usually those tones neighboring each other in the potential pitch series.<sup>22</sup> There are definite (though flexible) laws which govern such tonal sequences, but analyses of those here would go far beyond the scope of this paper. Since my purpose here is only to reveal the inadequacies of a too narrow understanding of tonality, it seems sufficient to emphasize here that a particular range does not have to be spanned for a tonic effect to result. In the absence of intervals serving the "framing" function, such matters as contextual location, rhythmic stress, duration, repetition and dynamic emphasis, as well as such general factors as rising or falling inflection, enter into the matter of pitch-focus.

It seems that we are justified in allowing tonality a wider berth within the history of music. There is no reason to perpetuate the unnecessary marriage of tonality and harmony (in its connotation of chordal texture). Such a conception has impeded the formation of an all-embracing theory of music that would eliminate the superficial but retain the universal, the necessary.

The conceptualization of tones into patterns more readily "understood" lies as the very foundation for the meaningful, the comprehensible musical experience. This perceptual transformation, which merely follows the lead given in music by the composer or improviser, governs any combination of tones, whether they assume melodic or chordal forms. It is this "path of least resistance" which the listener is offered by his very nature that permits him to realize "music" from disparate sensations of sound. This is true whether these sounds be formed into what we might call "Gregorian chant" or "progressive jazz."

Perhaps the meaning of tonality has been perverted only because of its notoriety during the early part of this century. After the dramatic ramblings of Wagner from one tonal field to another the abandonment of tonality in its diatonic meaning appeared plausible. It most likely appeared necessary and good to a culture that saw in mere change the ethical trappings of "progress."

I suspect that the simplicity in which tonality is cloaked in the music of the late baroque, the pre-classic, and the classic periods was so overwhelming that music of other, less "direct," eras appeared to be devoid of this quality. When an object or idea is overbearing in its effect, we sometimes are blinded to the presence of like qualities which reside in related objects or ideas. The wholesale exploitation of

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21. For example, those of Hindemith and Schenker.

22. See Curt Sachs, The Rise of Music in the Ancient World (1943), p. 32.

the major and minor scales, key as an element of form, and preponderantly consonant triadic harmony all combine to magnify the sense of tonality in the music of the period 1700-1850.

And the case of primitive music, perhaps is not more complex. Anthropology, like psychology, is an infant science. There has been a tendency to emphasize difference more than similarity in studies of cultures removed from our Western sphere of influence. The result has been unfortunate, for emphasis on stylistic change has hidden elemental qualities, emphasizing musical differences at the expense of the basic fabric of the musical experience.