

THE TWELVE-TONE EVOLUTION: 1930-1960

by Lothar Klein

... music is neither purely mathematical nor purely natural in its essence; it is partly both, and may consequently be said to be a medium between the one and the other.

Sopplimenti Musicali (1588)
Zarlino

... whatever progress the art of music may have made amongst us, it would appear that the more the ear becomes sensible to its marvellous effects, the less is the desire manifested to understand its true principles, so that one may say that reason has lost its rights, while experience alone has acquired any authority.

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Yes, the Twelve Tone Millenium has come -- or so we thought. The dangerously regarded row-carrying composer of a few years ago has been respectfully retired. Yet no sooner had this long sought after paradise established itself when the "Weberian revolution" assumed control; though often devouring its own, it nevertheless emphasized the composer's need for historical awareness. Not that the Darmstadt Edict -- before or after Webern -- is not descriptively or esthetically valid, posing definite problems for music wishing to call itself contemporary, yet matters do become a bit hazy.

Music renouncing 12-tone writing to become serially converted was termed "progressive" usually meaning better. Naturally, there were

also a few peripheral alternatives; if total serialization is not *the* answer, improvisation or "Graphische Darstellung" obviously were. Further enlightenment came from Herrn Eimert who pontifically pronounced electronic music -- "the genuine article ... the genuine musical order."¹

Realizing that there will always be martyrs for the derriere-garde as well as for the avant-garde and wishing to be neither, the following will be more a modest summary of changing 12-tone practice than a study.

By way of approaching this survey, articles by Ernst Krenek, an authoritative if chameleon-

like spokesman for the dodecaphonic cause will be consulted. However, one of the earliest and most penetrating scholars in the field was R. S. Hill, whose study, *Schoenberg's Tone Rows and the Tonal System of the Future*, sheds definitive light on what were then considered problems inherent in 12-tone composition.²

As late as 1936, Hill found himself facing such misunderstanding concerning Schoenberg's promulgations that the German critic Leonhard Deutsch attempted to prove the false justifications for 12-tone music by maintaining that all possible dodecaphonic manipulations could be identified with altered diatonic chords.³ The orientation of the times was clearly a harmonic one and Hill was quite right in stressing the motival nature of row working which was much more akin to polyphonic procedure than the music of the last 200 years admitted. If nineteenth century music was also motival in construction, it was so within the confines of a melodic-harmonic duality, and it was precisely this which had vanished. Cognizant of this and being a discerning analyst, Hill saw that in Schoenberg's music the 12-tone principle had passed through enough stages to give us a clue to its development.⁴

Hill correspondingly classified three types of rows, placing them all within the scope of Schoenberg's work.⁵

(1) Simple series without any interior complication. Op. 23 #5; op. 24 #4; op. 28 #9 and op. 30.

(2) Rows divided into segments appearing as groups, frequently in harmonic forms. Op. 25; op. 33a and op. 35 #7.

(3) Rows where intervals are so arranged that the notes of different sections are somehow allied.

a) Pieces in which the sections of the row have either the same series of intervals (or the same series inverted) so that the parallel series of notes may be found within the row itself or else identical series between two transpositions or between a direct and crab form of the row. Op. 26; op. 27 #4; op. 28 #3; op. 29; op. 32 and op. 35 #1.

b) Pieces in which the row is divided into two six-note groups, the first of which in the prime contains the same notes as the second half of the mirror but in a different order, the other halves being necessarily related similarly. Op. 27 #1-3; op. 28 #3; op. 29; op. 31; op. 32; op. 33b; op. 34 and op. 35 #2,3,5.

Hill adds a complementary table of contrapuntal and harmonic practices as found in Schoenberg's work and concludes:

1. The row must be used as a complete unit and parts of it cannot be repeated until all other parts have been used.
2. No matter how oblique used or stated, the row maintains its validity.

Both points constitute the basic tenets of the 12-tone composition as understood at that time.

While the first point was quickly appropriated as a critical bludgeon by guardians of musical culture, the second was a source of much enlightened confusion.

Though Hill senses the row's validity, he does not fully investigate the factor determining its validity. Strictness of handling was the crucial point defining the row, and definition entails identification. The evaluative and theoretical studies of the 1930s were concerned with aural row identification, believing an analogy *had* to be drawn with tonal hearing. Witnessing the theme-like character of this period's 12-tone music, ever watchful of athematicism, reviewers cannot be wholly blamed for lack of perspicacity. Perhaps today's theorists also show too much concern for set identity, failing to note that Agon's row is an exact replica of Webern's opus 24 row.

In his concern for the "why" of set transpositions, Hill betrays a harking back to traditional harmonic thinking. Considered paramount, the matter seemed insoluble and even today will most likely only be solved in the composer's ear. Yet as the set was treated to melodic and developmental methods of nineteenth century German music, tradition proved reassuring. However, a more important fact equally weighted

in tradition was not grasped. For all his supposed extremity, the 12-tone composer still relied on "Einfall," an inner vision of a row which was speculatively absolute, absolute in so far as the row was inviolate through "Einfall" and speculative as regards manipulation.

By 1943, the rewards of motivial row working became suspect. "Music written in the 12-tone technique during the last years shows an important trend toward exploring the province of extra-motivial function of the series, as it is obvious that the essential potentialities for further evolution lie in that field."⁶ Krenek distinguishes between *two* types of 12-tone music: -- motivial and extra-motivial. While he defines the first as music whose structures are made up of melodic elements extracted immediately from the row, his definition of extra-motivial as music not making use of motivic operations proves that purposeful "mis-manipulation" had crept into 12-tone composition. In its departure from strict row order, the Schoenberg *Violin Concerto* is cited as an example of extra-motivial construction. It is also admitted that the series' motivic function is obliterated and it loses "its initial power as an organizing principle."⁷

If this is true, then what is the power of row-conceived music? Today the very fact that a work is serial seems to guarantee some composers peace of mind regarding organization. This denotes a fundamental difference of attitude towards the row in general and music in particular. If there are to be deviations from the row's *in-toto* use (and we all know there are) is it not possible to set up tonic functions by repetition or omission of particular segments?⁸

Krenek also mentions several new techniques to be added to the 12-tone arsenal. While only one will be mentioned, it should be understood that the method is not as important as the type of thinking and concern expressed behind the method, namely, *the importance attached to the very act of finding an individual solution.*

When some tones are repeated frequently after more of the subsequent tones have been sounded, points of contact are established. If chords are built comprising these contact or axis tones, a systematic series of chord relations is formed. This method implying harmonic thinking is not

to be found in early dodecaphonic scores. Today it is difficult to speak of 12-tone composition exploiting either harmonic or polyphonic paths, a concern for density or texture seemingly being the crucial point. Furthermore, when Krenek speaks of his music written then as "tending to break down the integrity of the series ... however, stressing its power of generating motivic elements," the dichotomy becomes even more acute.⁹ Today's avant-garde seldom speaks of "motivic" yet are concerned with the integrity of the series; the result has been music of super-restrained conception which might be described as sounding like athematic impressionism. Such a description is not facetiously intended. Music history recounts the exploration and development of music's linguistic and physical resources and in all epochs one musical element is slighted while another gains ascendancy. In all phases of musical evolution, this may prove a simple truth not to be forgotten. Evidently the 12-tone stand of 1943 was not simply concerned with 12-tones related *only to one another.*

In 1953, Krenek inquires: "Is the Twelve Tone Technique on the Decline?"¹⁰ He concludes that as orthodoxy in 12-tone composition collapsed, new facets of dodecaphonic procedure were probed. The results of this probing are now with us. Certainly the 12-tone idea had come a long way. While Krenek notes the row being divided into ever smaller groups extended to the length of a composition through permutative principles, total serialization is not considered valuable. Correlating pitch sets with rhythmic rows is thought a dead end.

In 1950, Boris Blacher, seeking a relationship between the two, writes: "Perhaps the position is like this: one can imagine a co-ordinate system in which the metrical values are marked on the X-axis and the tonal values on the Y-axis. The result of these would emerge as living music."¹¹ To this suggestion Krenek answers: "We should not be surprised if he would eventually discover that there is none."¹²

From Blacher's "Summationsreihe", Stravinsky's isorhythmic schemes in *Movements* to Messiaen's modes, we may take heart that the solutions have been individual. Messiaen's piano piece, *Mode de Valeurs et de Intensités*,

(dated Darmstadt 1949) may well be the most influential single work of the last decade, yet its influence has not been individualistic. In its categorization of tones, values, dynamics and even manner of attack, it provided the spur for the Darmstadt school. When the structure of a piece is determined from one aspect, an inner plan or process supporting the whole, this carries with it the core of a new argument and logic.

Whereas Schoenberg always spoke of the row's conception in terms of "Einfall" which meant that the inner "urge" or movement projects the music toward reality, the Darmstadt circle views the matter in a different light. If a row is to become a nucleus, containing within itself *all elements* for its own form, this, naturally, led to total organization. Two radical departures involving the row are essential and must be distinguished.

Formerly, twelve tone composition stressed motivic permeation to create not only development, but form based on motivic repetition. The Darmstadt school reasons that where all is thematic nothing is thematic. This fact alone is sufficient to maintain that present day serial composition has severed all relation with the original 12-tone principle. Secondly, by transposing linear units on to one another, the idea of twelve tones related only to one another disappears and an entirely new concept emerges, the results of which have not been fully explored. Nevertheless, a re-definition of tonality not prompted solely by historical necessarianism has been practiced by some composers. Since the Fifties, Stravinsky's music has emphasized that tonal music (Stravinsky prefers "anti-tonal") does not stand in equal relationship to "atonal" twelve tone, the principle of transposing units creating new relationships within an older framework.

With Krenek's chronicles of the 1959 Princeton Seminar for contemporary music, the great schism becomes discernible. Though naturally not specifically mentioned, the *attitude* towards the row, a pre-compositional assumption, is more crucial than surface differences between old and new "modern music". One quote should suffice to focus the issue.

Krenek believes that serial techniques have caused fundamental changes in the structure,

appearance, perceptibility and meaning of music.¹³ Certainly anyone acquainted with these new attempts will agree. Speaking of procedures used in serial composition, he continues: "The sequence in which the forty-eight rows thus obtained which were used in the work was determined by the decision to have each original form followed by the second of the two forms of the inversion which would have for their first tones the last tones of the preceding original, while this inversion in turn would be followed by an original form beginning with the last tone of the preceding inversion."¹⁴

The above illustrates not only the constant search for self-sufficient methodology less amenable to analysis, but the composer's reluctance to make more than one initial decision. Contributors to *Die Reihe* are plagued by what relationship there is to be between guided elements and compositional freedom of choice. The only answer seems to be the constant search for new methodology acting as key to a work's construction; what has been programmed is the result.

Such an approach reveals the fundamentally different attitude embraced by serial composers. No longer is the row regarded as a speculative absolute animated by romantic necessarianism towards realization; serialists consider the row One and Absolute with the inner music. Whereas formerly two creative processes functioned -- "Einfall and Realization" -- today "*Einfall*" becomes the complete realization.

The unexpected, the element of surprise is essential to all sophisticated music. Boulez puts it well: -- l'inattendu, encore; il n'y a de création que dans l'imprévisible devenant nécessité. How does this work in total organization?

Krenek, defending serialism to the obvious criticism of emasculated inspiration, sets up the claim that once a compositional plan has been erected, "what happens afterwards is predetermined by the selection of the mechanism, but not premeditated except as an unconscious result of the predetermined operations. The unexpected happens by necessity. The surprise is built-in."¹⁵

Is it possible for the composer to be aware of "surprise" if it is "built-in?" Krenek does not see that Bricken's argument (*Some Analytical Approaches to Musical Criticism, Music Teacher's National Association, Oberlin, 1936*) which he quotes, can be used against him. Bricken maintains that the "inevitable" occurs in the process of harmonic tonality and that the "unexpected" is a result of a *deviation from the norm*. If for the serialists the compositional graph is the norm and determines the result, how can a "deviating surprise" be built-in?

As the row becomes subjected to extreme atomization and cells proliferate through rigid, automatic and pre-ordained plans which remain sacrosanct to their unswerving conclusion, it becomes evident that the proportion of decision involved in composing diminishes. Admitting that total organization induces musical constipation, the Darmstadt school sought improvisation as a cure. This emphasizes as never before the matter of control and restraint in music. Edmund Burke's reflections and conclusions on the commonly accepted notion of man and his natural rights (by having a right to everything, men want everything) should apply equally well to all composers regardless of style. Constraints are positive. William James' insight that conscious thought is an effort to check the natural incoherence of spontaneous generation, neither forbids spontaneity nor does it advise complete surrender to automation. While an esthetic accident often leads to the happiest inspirations, such accidents are not contrived.

The nature of music is obviously changing, but whether all music will or must turn serial remains to be seen. Perhaps the most suspicious thing about devout serialism is a perspective purchased not merely with an extreme view, but a perspective depending on extremes which are never permitted to mature.

Though engaging in polemics, Stravinsky's recent music also proves there are other ways of writing "new music" without giving in either to compositional totalitarianism or improvisation dispensing with the composer. Yet aside from its technical significance, Stravinsky's recent music may become even more important by virtue of its relation to tradition. Its attraction is a perspective viewed in retrospect. Without some sense of tradition or

stylistic permanence, the line from the *Canticum Sacrum to A Sermon, Narrative and a Prayer* would be impossible. Much of this music written between 1948 and the present has discovered the dividing line between complacency and the search merely for its own sake.

An avant-gardist constantly asserting that every work a composer writes must be stylistically more progressive than the last, falls into his own trap. Often a serialist work receiving more attention than another, does so for no intrinsic reason, but because its methodology out-maneuvers other works. Composition of this type depends (dangerously) on gimmicks to attract attention, and so long as this remains the case, no matter how ingenious the trick, such composition remains vulnerable to criticism rapping its lack of cultural maturity. Will this seeming necessity of always denying past works for new stunts ever make possible an extended line of mature development?

The novelty of Karlheinz Stockhausen's *Zyklus für einen Schlagzeuger*, is one percussionist improvising on a large battery from a curiously notated score decipherable only to the initiated. His *Refrain für Drei Spieler* uses another notation entirely and features three improvising players. Besides a problem-exploring notation which is interesting (a nonsensical description when applied to esthetics) it is difficult to say which work recommends itself more because of greater maturity. Stockhausen states that for him composition or music making means -- "to discover and invent."¹⁶ One dares say that all composers - past, present and future, share a similar attitude. The critic Hans Heinz Stuckenschmidt has pointed out that all of Stockhausen's work is concerned with extreme problems of new music. Does this mean Stockhausen is dealing in eschatology?

If the new music can already deal with extremes, the outlook for its future development seems limited indeed. Yet if Webern is simultaneously considered summing-up and oracle, to suspect serialism of bankruptcy after such a short term in business would seem equally pessimistic. History teaches that all eras represent transition; if music can be regarded as holding a mirror to civilization, recent decades peculiarly emphasize that some eras

can be more transitional than others. Judging the number of journals devoting themselves exclusively to the international serial cartel, music stands at the threshold of a great renaissance made possible by discoveries which furthermore offer music a clean slate. The Dark Ages have passed --- again.

From our vantage point history's Middle Ages were not so dark, its philosophy exhibiting growth, flowering and maturing to a climactic bloom. Effected by proximity, the Renaissance saw things differently. Fully aware of its responsibility to the philosophic continuum, the Renaissance defined its relation to the 'media aetas' as a return to proper intellectual conditions. Though considering itself a Restoration, to us the Renaissance stands out as an exuberant explosion sensing the investigation of conflicting ideas essential to the living spirit.

Many concepts found suitable for exploration, however, were those proven durable through past metamorphosis. Values merged with cosmic fact and as the eternal was found circular, the circular became eternal. While paradoxically the Renaissance does not reveal a systematic philosophy, esthetic maturity and stylistic coherence resulted from a struggle with older concepts, renovating, delving into inner essentials and finally transforming them.

Dare one suspect that today's musical ventures marked by systematization, may be the first to be discarded, leaving critical revisions of older concepts as our point of departure and present heritage ?

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¹ Herbert Eimert, "What is Electronic Music," *Die Reihe*, Vol. I, (1955), p. 10.

Since Eimert's Bull of 1955, my listening experience includes Stravinsky's *Agon*, Blacher's *Moor of Venice*, Boulez's *Improvisations* and even Walton's *Cello Concerto*. All have been written since 1955 and, somehow, each seems to possess "genuine musical order."

² *Musical Quarterly*, Vol. XXII, No. 7 (January, 1936).

³ *Melos*, -- Das Problem der Atonalität und das Zwölftonprinzip, -- Vol. VI, 1927, pp. 108-118.

⁴ R.S. Hill, *loc.cit.*

⁵ *Ibid.*

⁶ Ernst Krenek, "New Developments in Twelve Tone Techniques," *Music Review*, Vol. IV, No. 2 (May, 1943), p. 82.

⁷ *Ibid.*, p. 85.

⁸ Though Schoenberg did admit repetition, his wariness of disturbing the row's integrity is well known. To my knowledge examples violating Schoenberg's warning are rarely singled out, i.e. because of a shorter row, Stravinsky in his *Dylan Thomas in Memoriam* (song) naturally must repeat more often than a piece using a full semi-combinatorial set. By seeming to prefer the I and R forms, do not such preferences provide tonalities functioning in relief to other row forms ?

⁹ E. Krenek, *loc.cit.*

¹⁰ *Musical Quarterly*, Vol. XXXIX, No. 4 (October, 1953)

¹¹ Josef Rufer, *Composition With Twelve Tones*, (London: Rockliff Publishing Corporation, Ltd. 1954), p. 178.

¹² E. Krenek, *loc.cit.*, p. 525.

¹³ Ernst Krenek, "Extents and Limits of Serial Techniques," *Musical Quarterly*, Vol. XLVI, No. 2, (April, 1960)

¹⁴ *Ibid.*, p. 214.

¹⁵ *Ibid.*, p. 229.

¹⁶ Introductory comments made during the ninth lecture in the series "Musik im Technischen Zeitalter," Berlin, February, 1963. His words were: -- "Musikmachen, Erfinden und Entdecken." Stockhausen obviously intends to differentiate between "Musikmachen and Komponieren." Even in *Kontakte*, an improvisatory piece using electronic and instrumental sound, the improvisational material for "Musikmachen" has still been "Komponiert."



the orchestral situation in america

At the last meeting of the National Music Council, held in New York City in May of this year, Mr. Stanley Ballard, secretary of the American Federation of Musicians, discussed the present economic situation of the majority of symphony orchestras in the United States:

"... I understand that there are approximately 1200 distinct and separate concert and symphonic orchestras in the United States today. There are of course thousands of bands including professional bands, college bands, high school, industrial, and bands in the Armed Services. This clearly indicates that there is a large and ever growing number of performers on musical instruments. I heard the figure of ten million given the other day as the number of students learning music in the schools of our nation. Now all of this is to the good. I heartily approve, but I believe there should be a distinct separation and also reciprocation between the amateur and the professional musician. The professional must not be submerged by the ever increasing number of amateurs. August Heckscher in speaking on this has said: *The goal must be for everyone to enjoy the Arts in his free time, and yet still to maintain, indeed, to nourish and enhance the standard of high professional excellence, the real values that make a civilization great.*

Inasmuch as I represent the American Federation of Musicians I shall confine my further remarks to the

professional musician and I shall further narrow the field by refraining from talking about some of the great orchestras in the dance, jazz and concert field. I shall confine my remarks to the symphonic field and more specifically to the top twenty-five or thirty orchestras in that field.

Some of the greatest conductors have told me that the top three or four symphony orchestras in the United States surpass in quality those of any other nation on earth, but that many European orchestras surpass our lesser ranked orchestras. The reason for the diminution in quality of some of our orchestras is easily explained. The musicians in the top three or four symphony orchestras are able to give their full time to music while others must work various other jobs in addition and often in place of music in order to make a living. Aside from the New York Philharmonic, the Boston, Philadelphia and one or two others, the annual average wage received by members of our symphony orchestras is approximately \$3,500., decidedly below the national average wage for workers generally. The reply to this statement often is the remark that symphony employment lasts from 22 to 30 weeks a year and the musician should not expect to make a living from a job where he works only six months each year. I should like to comment that symphony musicians work such short seasons not from choice, that they must continue to live the balance of the year and are expected to retain their skill and proficiency

on their instrument the year around. The truth is that it is the symphony orchestra player who is subsidizing the orchestra to a greater extent than anyone. His contribution of time, effort and dedication more than offset the financial contribution made by others. Incidentally, approximately 90% of the contributions which go to support a symphony orchestra come in amounts of less than \$100.

In view of the remarks I have just made about low wages and periodic employment, it is not surprising to note that there is considerable unrest among members of major symphony orchestras today. It does not take any particular wisdom to predict that unless some means are found which will afford symphony musicians a more affluent livelihood, we will experience within the next few years a dissolution of one or more of our major symphonies.

You have all heard the story too many times about how governments elsewhere are subsidizing orchestras and that the United States is the only major country in the world that does not provide some form of subsidy for the performing arts. I do think it bitterly ironic that beautiful opera houses were rebuilt in Vienna, in Berlin and other European cities by governments of those countries at the very time they were receiving hundreds of millions...of dollars in Marshall Plan aid from the United States--that these countries were continuing to substantially

support the performing arts while receiving material help from the United States--a country which thus far has neglected to assist its own performing artist.

It is natural for the A.F. of M. to support the idea of subsidy for the performing arts, but I believe the concept advanced by the United States Supreme Court Justice Goldberg at the time he was Secretary of Labor and settled the most recent Metropolitan Opera controversy has considerable merit. The Goldberg proposal was that the support of the performing arts is a community responsibility, that in addition to the general public support, there should also be support from private patrons and benefactors; business corporations, labor organizations, state and local governments, and the Federal Government. Certainly, this or something similar to it must be forthcoming if our great symphony orchestras are to continue. The citizens of this great country must realize that the well-being of this nation does not depend solely on how many new automobiles, TV sets, washing machines and refrigerators are sold each year. They must wake up to the fact that we have a great cultural asset in our magnificent symphony orchestras that is in grave danger of being lost to our country. Certainly, our great industrial system, our unrivalled political freedom, must be matched by a community supported, and nurtured, and cherished cultural growth."

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