Abstract of D.M.A. Lecture Recital Paper:

"Intonation Variables in the Performance of Twelve-Tone Music"

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Presented at The Catholic University of America
School of Music
October 22, 1974

The possibility of intonation in twelve-tone music being preferentially variable rather than adhering strictly to an equal duodecimal division of the octave corresponding to equal temperament is considered in the light of findings that the intonation of string players and others tends to exhibit characteristics of Pythagorean tuning rather than of equal temperament. The nature of Pythagorean intonation with its enharmonic pitch distinctions (involving the Pythagorean comma) is discussed along with pitch adjustments (involving the syntonic comma, diaskhisma, diesis, etc.) sometimes required for harmonic reasons.

Arguments by composers, performers and others concerning tempered versus untempered intonation are presented, followed by an analysis of this writer's observations in preparing a twelve-tone work for performance, in which an aurally satisfying rendition of the music was found 1) to exhibit pitch variations consistent with Pythagorean and, in appropriate instances, just intonation; and 2) to indicate an aural process of enharmonic selection based on the acoustical relationships among notes and not necessarily corresponding to the enharmonic choices notated, perhaps arbitrarily, by the composer.

Noting that pitch adjustments for harmonic reasons have persisted despite traditional notation's inability to express them, the writer proposes that the twelve-tone composer's decision to relinquish, in effect, the available written means of distinguishing enharmonic pitches need not be interpreted to mean that such distinctions must cease to exist in performance.

Appendixes to this paper include a coordinated diagram of the systems of Pythagorean and just intonation in comparison with equal temperament; a description of the enharmonium, an electronic keyboard instrument designed and constructed to display the effects of untempered intonation; and a table of intervals.