REMARKS: Charles Ives' quartertone pieces are available on records. Consult current record catalogs.

His quartertone pieces are certainly on a level of merit comparable with those of Hába, Carrillo, Vyshnegradski, and others.

This article sheds some light on his ideas concerning how to get into quartertone harmony and what chords etc. to use at the beginning. To the preliminary kind of notation given in this article I have appended a transcription into Mildred Couper's notation, which should be easier to read.

Some of Ives' ideas herein might be applied to the 22-tone temperament, even though he apparently never heard of it.

Ivor Darreg

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SOME "QUARTER-TONE" IMPRESSIONS

INTRODUCTORY NOTE

EVEN though Ives wrote at length concerning broad underlying concepts affecting musical style and expression, he wrote little that dealt with technical or theoretical problems. Rather, he coped with such problems in actual tones; if he had a theoretical idea, he wrote an experimental piece, and there are many of them among his manuscripts. One of the rare exceptions to his general avoidance of specific technical matters in his writings is an article on the use of quarter-tones. The article is particularly interesting for certain autobiographical passages, and for the insight it gives into Ives' approach to new sounds. It shows that, in spite of the scarcity of theoretical writing in his works, Ives thought a great deal, and read more than many composers do, about the musical material. While he was willing to take under consideration any possible tonal combination, intellectually, he nevertheless placed a typical musician's reliance, in the last analysis, on the judgment of his ear—in his case, a very sharp ear indeed. Clues to the great variety of Ives' technique may be found in this article—one being his

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The word *gamut* was used to signify both the lowest note of the system and the entire scale of sounds contained in the system; and if we visualise the word *scale* (which, of course, was never used in connection with music until a much later date) literally as a ladder, we shall find the different *modes* (or melodic intervals considered in relation to compass) perched upon its different rungs.[1] But, to continue the figure of speech, the rungs do not all occur at equal intervals. For instance, between the third and fifth notes (A and C) of the third hexachord (which begins on F) we find not only the natural diatonic note of that hexachord (B flat) intervening, but also the third note (B natural) of the overlapping fourth hexachord which has begun again on the G below. Sooner or later some relationship will have to be established between them, although at first sight they do not appear to be on speaking terms.

We observe, however, that the passage from one hexachord into the next above it is always made by means of the semitonic interval: the principle of the sharp "leading-note," apparently based upon an instinctive demand of the ear coupled with a desire to avoid the melodic interval of the tritone resulting from a succession of three whole tones, is at once apparent. The same principle necessitates the flattening in *descent*, of the note which had been sharpened in *ascent*. This sharpening and flattening of the notes of a melody in accordance with the dictates of the ear was known as *musica ficta*, music made consequently false.

[1] For the only lucid account of the modes in English, see R. O. Morris: *Contrapuntal Technique in the Sixteenth Century*, which is the best book on counterpoint in the English language, being based upon first-hand study of the works of the great masters, not upon information gleaned from previous theorists.

It will be readily seen that the combination of the principle of *musica ficta* with that of transposition could not but lead towards the filling up of the gaps in the gamut and the establishment of what we now regard as the complete chromatic scale. Long before they recognized it as such, musicians could contemplate the chromatic scale spread out before their eyes on the keyboards of their organs and virginals, and on the frets of their lutes. But we must remember that as a matter of acoustical fact, G sharp and A flat, for example, are far from being identical, and it is only by the adoption of the compromising system of equal temperament that we are enabled, as a matter of convenience, to regard them as a single note. They were, at any rate, clearly differentiated in the minds of musicians for long after keyboard instruments were introduced. . . .

END OF QUOTE.

REMARK:

At the present time, there is a new musica ficta, *consisting in the use of microtonal deviations which are never allowed to be printed in sheet music--the classical violinist sharpens leading-tones by a tiny amount; the popular artists indulge in* pitch-bending.

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anti-harmonic Oriental principle of pure melody, as opposed to Occidental chordal music. Mendelssohn and Meyerbeer have shown how creative this linearism can be, just as does Offenbach who always used the same harmonic turns for his rhythmic and melodic ideas. The true linear principle, however, was carried out fully in Europe for the first time by Arnold Schoenberg, whose twelve-tone school is made up so largely of musicians of Jewish descent. Schoenberg, Berl points out, unlike Debussy and the impressionists, who broke through the system of harmonic thinking, has gone back to the principle of Oriental music. If Berl is right, then Jews in the twentieth century have played a role like that of the enharmonists and chromaticians in Venice and Naples during the Renaissance. They are present-day exponents of the anti-harmonic system. Let us remember at this point that all the Jewish musical traditions of the Middle Ages were of Arabian origin, and were materially bound to the Arabian system of intervals.

In the music of our time, we recognize a continually increasing Oriental influence. Classical and romantic harmony with its principle of suspense and solution, so characteristic of the Occident, is constantly being challenged. The dynamic Faustian tension of spiritual life is perfectly represented by the tension and resolution of dissonance. Of all this the Oriental knows nothing. To him, music, if we may use a metaphor of Hanslick's, is but an interplay of tonally moving forms, a mosaic of ornaments, which corresponds exactly to his contemplative or ecstatic state of mind. Today our own modern music, as exemplified in the twelve-tone system is abandoning the old harmony of suspense. Schoenberg's melodies need no suspensions or resolutions, nor do they have them. The leading tone thus becomes obsolete. The melody despite all loss of harmony and counterpoint, goes its own way, following the laws of pure melody, while the polyphony is frequently relieved by the old, more primitive form of heterophony which is found in the music of the Orient.

On hearing one of the ecstatic dances of the Balinese or Javanese, with their rhythmic complications and counter-rhythms, their heterophony and their daring mixtures of tonal color, one recognizes a fascinating similarity to the works of the French impressionists. The psychological basis is the same; instead of concern with psychological problems, music here is ecstatic, or playful,—music for its own sake.

And finally, with the emerging of the National Schools of Czechs and Poles, Russians and Hungarians, also other elements of Oriental origin have made their way into European music. To a lesser degree, American jazz, partly built on Negro culture—which in turn is related to the culture of the Near East—has exerted its anti-Western influence. The modern emphasis on rhythm and further destruction of the old European tonal system are additional evidence.

Music in the nineteenth century was still predominantly European. In the twentieth it is definitely so no longer. Just as Europe, through America, Russia and the East, has lost its monopoly on so many things, so its hegemony over music also has been challenged by almost all the peoples of the earth.

Paul Nettl. (*From "Modern Music"*)

Quote from a book on Gesualdo, somewhat prejudicial to experimentation in music.

investigator." But Gesualdo was a creative artist whose best works retain their expressive significance to the present day; and since practice is always ahead of theory in musical matters, it is almost impossible for the technical parlance of his day to provide any explanation of the workings of his strange mind. Harmonic analysis in modern terms, such as Keiner has made, is equally useless, if not actually pernicious. It will be far more profitable for those who encounter

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Gesualdo's music for the first time in these pages to consider it as a purely expressive phenomenon, and to bring as little historical and theoretical prejudice to the study of it as they would bring to the study of their own contemporaries.

Count Bardi and his little coterie of musicians, fired with enthusiasm for Greek art and wishing to resuscitate what they conceived to be the methods of melodic declamation, or recitative as we should now call it, employed in the performance of the ancient Greek drama, set to work and achieved instead the creation of an entirely new kind of music as remote as music could possibly be from ancient Greek practice. Greek music was essentially a melodic art. Neither harmony, as we understand it, nor the combination of independent melodies were known to them. To their ears the only concordant intervals, or *melodic-relations*, were the fourth below and the fifth above a given note: and its octaves, above and below. The octave was divided into two *tetrachords* (or intervals of four notes) separated by a whole tone—that is, by the difference between the two consonant intervals. The tetrachord was, in its turn, sub-divided into three and only three, smaller intervals in three different ways,

which were called by Aristides Quintilianus (B.C. 110), a disciple of Aristoxenus who seems to have been the first theorist to refer all questions of consonance and dissonance to the judgment of the ear rather than to that of mathematics, "the enharmonic, the chromatic, and the diatonic." "The diatonic," he says, "is so called because it proceeds by, or abounds in, *tones*, The chromatic is so termed because, as that which is between white and black is called Colour, so also that which holds the middle place between the two former genera as this does, is named Chroma. . . .

The diatonic is the most natural of all, because it may be sung by everyone, even by such as are unlearned. The most artificial (τεχνικώτατον) is the chromatic, for only learned men can modulate it; but the most accurate is the enharmonic: it is approved of only by the most skilful musicians, for those who are otherwise look on the quarter-tone as an interval which can by no means be sung, and to these, by reason of the debility of their faculties, the use of this genus is impossible." Thus the diatonic tetrachord scale of the tonic A would run E, F, G, A; the chromatic, E, F, F sharp, A; and the enharmonic, E, the quarter-tone above E, F natural, A. It will be evident from the above that Greek music differed fundamentally from anything known in later European practice.[1]

Now, in spite of our old friend the Unko

[1] Intervals smaller than a semitone, and intervals compounded of semitones exceeded by such an interval may still be heard from folk-singers who have preserved the genuine tradition of folk-singing, particularly in the West of Ireland. For this reason there is a great disparity between Irish folk-songs as *heard* and the same songs as read from the printed page, as these intervals have never been measured accurately enough to permit of their being accurately notated. Cf. Béla Bartók: *Volksmusik der Rumänen von Maramures* (1923) on a similar phenomenon in the folk-music of Eastern Europe.

(*Hylobates Rafflesii*) who has been heard by travellers to sing complete chromatic scales with perfect intonation and great intensity of feeling in the forests and jungles of India, the diatonic genus remained the most "natural" for human singers in Europe, and by the eleventh century of the Christian era, when Guido d'Arezzo devised his system of Hexachords (or diatonic series of six notes with a semitonic interval between the third and fourth sounds), the other two genera had been both in practice and theory discarded in favour of it. In Guido's system, which consists of the simple transposition of the same series of intervals on to different bases (Gamut, or the G on the bottom line of the bass clef, C, F, G, c, f, g), we see the root of the modern principles of scale and tonality.