

OUR INADEQUATE NOTATION

HENRY COWELL

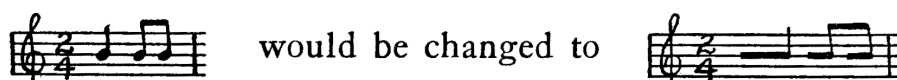
A CERTAIN standard history of music (I will forbear mentioning which one) makes the following statement: "While musical notation has gone through many changes and improvements, it would appear that the present form will never change, as by its means every shade of musical thought can be expressed."

As a matter of fact, the very opposite is true. The present notation can give the bare details of the pitch and rhythm of conventional modes, but little else. It cannot exactly convey a subtle tonal effect of any description. I have heard many argue that such effects should not be notated but left to the artistry of the performer. This is not safe, however, in even moderately modern music. In older forms there are definite standardized nuances (such as a certain sort of portamento in Italian opera) which are studied and known by performers and consequently hardly need notation; but if a composer today desires a special, new effect and leaves it to the performer, any of a hundred different ones may be produced. Quarter steps, exact slides and involved cross-rhythms, for instance, cannot be accurately notated without the addition of new means to the current system.

Present notation is not graphically correct. A notation should express the sound to the eye with as great a degree of graphical perfection as possible. The rhythm represents a certain amount of horizontal distance; the pitch, difference of height. But today we have five widely separated pitches (as far as relationship goes) all expressed on the same line or space: for example, D, D-sharp, D-flat, D-double-sharp, and D-double-flat. Graphically, these pitches should be on separate degrees of height and, furthermore, being so far apart in acoustical relationship, they

should not be called by the same letter; it is too easy to assume a relationship where none exists.

In our notation of rhythm we have different sorts of dots and ovals, some of which represent tones two hundred and fifty-six times as long as others. Yet that difference in length is not expressed graphically in any way; one must learn the differences mechanically, by an involved system of stems and hooks. How simple to present the execution of a quarter and two eighth notes to a young student, if the duration of each were indicated by a like duration of the note itself:



I once copied a simple work using such notation and gave it to a child of six who had not learned to read music. Although there were a number of different note lengths, he gave them the right proportion instinctively, without being instructed as to relative time periods.

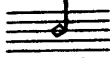
Though we have managed to discover, in a large measure, which tones and rhythms the old masters desired, modern composers are forced to invent various appendages to this old system in order to get their work on paper at all. Certain particular effects are often employed by modernists as an integral part of a composition, as for example the so called "atmospheric" tone quality in some of Debussy's piano works. There is no standard manner of notating such qualities, just as none applies for effects like half pedaling on the piano to bring out desired overtones.

Those interested in collecting native Indian music or writing down any sort of oriental music have had the greatest difficulty in even suggesting the original by means of notation. The printed examples of Indian music published by the Smithsonian Institute if sung purely as written, by one who has never heard Indians, become conventional tunes, no different in type from thousands of our own. An Indian would not recognize them. The yells changing to a tone, the tones which develop into wild cries, the curious wavering sounds, in other words, all that is typically Indian and therefore of interest to preserve, is carefully omitted, as it cannot be put down.

Many contemporary composers use quarter tones, eighth tones or lesser divisions, and sometimes sliding pitches in their works but there is no accepted way of writing them. Certain fractional rhythms at present cannot be notated exactly, as, for instance, if we should have four quarter tones in one part and desired to place against them a rhythm of two and a third, coming out the same length:



The result of all this is that each composer devises his own improvements which enable him to express his ideas more or less well, but as nothing is standardized a good deal of confusion arises. Many similar effects are notated in an entirely different manner by different composers, while totally separate effects are indicated by the same symbols; and in each instance copious footnotes are offered to the puzzled performer.

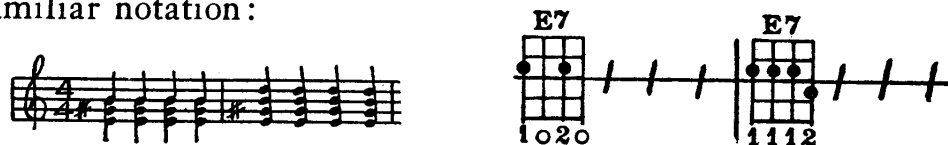
For example, a small lozenge shaped note  is used by Schoenberg to indicate keys of the piano pressed down without sounding (Opus 11, No. 1). Charles Ives, in the *Symphony* recently performed in New York by the Pro Musica Society, used similar notes to represent quarter-tones. In my composition, *Fabric*, I employed such notes to indicate a rhythm of seven to the measure. Such a note also has been in use for a long time to show the position for playing artificial harmonics on stringed instruments.

I have seen no less than twelve ways of notating quarter tones in manuscripts of different authors; probably Haba's system will become standard.

It is particularly difficult to indicate to percussion players just what sort of tone one desires to obtain, or just where on their instruments and with exactly which implement they are to strike, let alone how hard. In this respect jazz musicians have been very clever; they have a standard notation for their new jazz instruments and for many of the new effects; these are understood by any trained player.

For example, the ukulele does not use the notation of notes and staff. At the beginning of a chord a formalized picture of the strings and finger positions is shown, with round black dots

on the strings where the fingers are to be pressed. Underneath this are written numbers indicating the fingering; over it are letters and numbers naming the resultant chord. Thus E 7 means the dominant seventh chord of the key of A. During the continuation of the chord one horizontal line is maintained, with a vertical dash drawn through it every time the chord is to be repeated. Here is an example, and its translation into familiar notation:



Jazz writers apparently agree without question on their new notations, while the composers of modern "classical" music have been more individualistic.

Improvements on our notation are often suggested, but most of them do not seem to get at the root of the matter, and many substitute one evil for another. Only recently I have received from Paris, Budapest and Los Angeles pamphlets explaining systems independent of each other yet all based on the keyboard of the piano or the organ. The idea, a little differently worked out in each case, is to have a note representing a black key on a line, while a note on a space would represent a white key. Mr. Thompson of Los Angeles uses this staff:



Apparently he does not realize the necessity of a unified system for all music, and that his method has no validity for singers or orchestral players. He eliminates accidentals, but then that is done in a simpler manner by Oboukhov, the Russian composer, who uses crosses as note-heads for sharpened tones. In his notation the passage



will appear thus



Mr. Chilton, of New York, believes that the only notation we have which must of necessity be graphically correct, since it produces the sound itself, is the holes in a player piano roll! He

suggests that the rolls be made to play horizontally instead of vertically, and that lines of the staff be drawn through them so that the eye can better distinguish on which pitch the holes occur.

A remarkable system, the best attempt I have yet seen to meet all difficulties, is one devised by Charles Louis Seeger of the Institute of Musical Art in New York. This method I cannot divulge, as his book on the subject has not yet been made public. Here, however, are a few of the things he can notate:

1. Accurate pitch, quarter tones, third tones, eighth tones, or any possible fraction of a whole step, or the exact curve taken by a slide or portamento.
2. Accurate rhythm: any irregular as well as regular rhythm, presented graphically to the eye.
3. Accurate dynamics, the exact degree of *piano* or *forte*, *crescendo* or *diminuendo*, presented within the very note itself, instead of outside the staff by means of an exterior sign.
4. Tone color, differences and changes of tone quality which have no present notation, indicated within the note itself.