

6. THE NEW WORLD OF DODECAPHONIC MUSIC

Whenever and wherever sophisticated musicians gather, there is likely to be a discussion, pro and con, of twelve-tone music. Even in darkest Hollywood, the uncanny potentialities of this new technique of composition are beginning to be exploited to create an atmosphere of mystery and suspense on the sound track.

What is so startling about twelve-tone music? We have had the twelve different notes of the chromatic scale with us for centuries. What is then the difference between old-fashioned chromaticism and new-fangled twelve-tone music? The difference lies in a new organization. In classical music, chromatics are used as passing tones from one diatonic degree to another. In twelve-tone music, all twelve notes of the chromatic scale are equally important. Perhaps it is a good idea to use a special word, Dodecaphonic, for this new music of twelve different notes. Dodeca means twelve in Greek, and dodecaphonic means pertaining to twelve sounds. This term is adopted in France, where it is called *Musique Dodecaphonique*, and in Italy, *Musica Dodecafónica*.

The creator of dodecaphonic music is Arnold Schoenberg, the great Austrian composer who came to America in 1934, and settled in California. He prefers to call his invention “a method of composing with twelve tones,” and objects to such terms as “the twelve-tone system” or “twelve-tone technique.” The idea of composing music based on twelve different notes occurred to Schoenberg in December 1914. His intention was, as he explains it himself, “to base the structure of my music consciously on a unifying idea, which produces not only the other ideas but regulates also their accompaniment and the chords.” This “unifying idea” is a basic tone-row of twelve different notes, or “twelve-tone series.”

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How many twelve-tone rows is it possible to arrange? The answer is: 479,001,600, obtained by multiplying 12 by 11 by 10 by 9 and so forth. An ambitious dodecaphonist who should attempt to write down all possible combinations of twelve-tone rows, a note every second, day and night, would have to spend fifteen years, two months and nine days to finish his task.

The tone-row constitutes the sole foundation of the entire composition. In a dodecaphonic piece of music, this tone-row usually appears in four transformations: (1) original; (2) intervallic melodic inversion; (3) retrograde or reverse motion, also called “crab”—even though real crabs walk sideways and not backwards; (4) melodic inversion of the crab.

All these forms can be transposed beginning on any note of the chromatic scale, adding up to forty-eight transformations in all.

Schoenberg used a tone-row of twelve different notes for the first time in the *Waltz* from his *Piano Suite*, op. 23. But he dates the real beginning of his method from the *Serenade*, op. 24, for voice, clarinet, bass-clarinet, mandolin, guitar, violin, viola, and violoncello, composed in 1924. “Here I became suddenly conscious of the real meaning of my aim,” he writes: “Unity and regularity, which unconsciously had led me this way.”

To illustrate the method of twelve-tone composition, let us take the basic tone-row of Schoenberg’s *Quintet for wood-winds*, op. 26. Its original form has these twelve notes: E flat, G, A, B, C sharp, C, B flat, D, E, F sharp, A flat, and F. In its melodic inversion, the intervals change their direction. Instead of E flat going down to G, four whole tones down, it moves four whole tones up to B natural. The next step in the original tone-row is a whole tone up; in the inversion it will be one whole tone down, and so on.

In the crab, the notes will be F, A flat, F sharp, etc., reading the basic tone-row backwards. In the crab of the inversion, the notes of the inverted tone-row are read backwards.

The peculiarity of dodecaphonic music is that harmony as well as melody is derived from the basic tone-row. A twelve-tone series may begin as an unaccompanied melody, horizontally, then continue vertically into harmony, or it may pick up a contrapuntal lead on a diagonal. Twelve being divisible by 2, 3, 4, and 6, it is very convenient to write dodecaphonic music in two, three, four, or six parts. In orchestral writing, a twelve-tone series may begin in one instrumental part, then skip to another. Or else, two or

more notes of the series are used together in different instruments. Under such circumstances, a dodecaphonic orchestral piece becomes a veritable cross-note puzzle. Analyzing an intricate twelve-tone piece provides a fascinating pastime to sharpen one's musical wits.

In dodecaphonic notation, there is no difference between enharmonically equal notes—one may write A flat or G sharp according to convenience. Remote sharps and flats, such as B sharp, or C flat, occur very rarely, and double flats or double sharps are never used. For safety's sake, naturals are written in whether a cancellation of a previous accidental is needed or not.

There is, of course, no key signature, because there is no tonality in dodecaphonic music. It is atonal. Atonality was the predecessor of dodecaphonic music, but it does not tell the whole story of twelve-tone composition. Dodecaphony is atonality in an orderly arrangement of the emancipated twelve notes.

When the astronomer Huygens first observed the rings of Saturn, he announced his discovery in the form of a Latin anagram to insure priority pending publication of his paper. Something of a similar mystery surrounds the origin of twelve-tone music. Early in 1921, Schoenberg called in one of his pupils, Erwin Stein, and told him about the new "method of composing with twelve tones." "I then asked him to keep it a secret," Schoenberg recalls, "and to consider it as my private method." Schoenberg knew that another Viennese theorist and composer, Josef Matthias Hauer, was working on a method of composition based on six-note tropes, and making use of all twelve notes of the chromatic scale. "If I were to escape the danger of being his imitator," Schoenberg writes, "I had to unveil my secret. I called a meeting of friends and pupils, to which I also invited Hauer, and gave a lecture on this new method, illustrating it by examples of some finished compositions of mine. Everybody recognized that my method was quite different from that of others."

Josef Matthias Hauer is a picturesque personality. He spends his whole day in a Vienna cafe near his house, and has a special wooden armchair reserved for him there, with his name carved on its back. He refuses to surrender his priority claim on twelve-tone writing. He even had a rubber stamp made with the inscription: "Josef Matthias Hauer, der geistiger Urheber und trotz vielen schlechten Nachahmern immer noch der einziger Kenner und Könnner der Zwölftonmusik." (Josef Matthias Hauer, the spiritual protagonist of twelve-tone music, and, despite many bad imitators, still the only one who knows and understands it.)

Still another Viennese musician, Fritz Klein, was working on the problem of twelve-tone composition at the time. Schoenberg has this to say regarding Klein's experiments: "Although I saw Klein's twelve-tone compositions about 1919, 1920, or 1921, I am not an imitator of him. I wrote a melody for a Scherzo, composed of twelve tones, in 1915. In the first edition of my 'Harmonielehre' (1911), there is a description of the new harmonies and their application which has probably influenced all these men who now want to become my models."

Of course, the point in dodecaphonic music is not just using twelve different notes for a melody, but unifying a complete composition by means of a single twelve-tone series. A melody of twelve different notes is found in *Also Sprach Zarathustra* by Richard Strauss, which was written in 1896. It occurs in the section "Of Science." The notes are C, B, F sharp, D, E flat, G, B flat, A, E, C sharp, F, and A flat. But it certainly is not a tone-row in the Schoenbergian, dodecaphonic sense.

Liszt used a theme consisting of twelve different notes in his *Faust* Symphony, in the form of four consecutive augmented triads, chromatically descending, in broken chords.

In the concluding section of *L'Après-midi d'un Faune*, Debussy used four triads, two major and two minor, adding up to twelve different notes. Needless to say that his procedure, as that of Liszt, was a result of enharmonic progressions, having nothing to do with the dodecaphonic method.

In its full development, the twelve-tone method is very elastic and admits many liberties. For instance, a note may be repeated several times without disrupting the essential regularity of the tone-row. The tone-row may be chopped up, and used in a variety of combinations in part writing. The notes of the row may skip freely from one octave to another, a practice that makes a typical dodecaphonic melody rather difficult to sing.

There is no discrimination in dodecaphonic music between dissonances and consonances. In fact, dissonances are preferred, if for no other reason, than the fact that common triads and perfect cadences have been used and abused to death in classical and romantic music.

This dodecaphonic predilection for dissonances naturally creates consternation whenever Schoenberg's music is performed. A piece by Schoenberg was described by a critic as combining "the best sound effects of a hen yard at feeding time, a brisk morning in Chinatown, and practice hour at a busy conservatory." Expressions like "the last word in cacophony and musical anarchy," "bogey noises," "avalanche of dissonance,"

“geometrical music important only on paper,” “the nadir of decadence,” are just a few of the invectives in Schoenberg’s scrap-book. But the same words were once hurled against Wagner and Liszt. Nowadays, Wagner and Liszt are classics. Maybe people will some day get accustomed even to dodecaphonic music.

Schoenberg’s disciples developed his method each in a highly personal manner. The most famous of them, Alban Berg (1885–1935) used a type of twelve-tone writing which came close to tonal music. The basic series in his Violin Concerto is built on triads, and is quite easy on the ear.

Another great Schoenbergian, Anton von Webern (1881–1945), extends the principle of non-repetition inherent in Schoenberg’s method to the domain of tone colors. Thus, in von Webern’s *Sinfonietta*, each instrument in the orchestra is allowed to play only one note of the twelve-tone series: the next note must be picked up by some other instrument. The effect of this intermittent melodic writing is unique.

Among composers in the United States who have adopted the twelve-tone method, the most prominent is Vienna-born Ernst Krenek, who settled in America in 1938. He is also the author of the first manual of twelve-tone composition. The young dodecaphonic school in America is represented by George Perle. The foremost American woman dodecaphonist is Dika Newlin. The Englishwoman Elizabeth Lutyens writes successful works in the strict dodecaphonic style. Juan Carlos Paz of Argentina and Claudio Santoro of Brazil are outstanding Latin-American dodecaphonists.

The leader of the “Ecole de douze tons” in France is Polish-born René Leibowitz, author of several books dealing with the subject. In Italy, the most talented adept is Luigi Dallapiccola. His opera, *The Prisoner*, produced at the May 1950 Festival in Florence, is written in the dodecaphonic idiom. Yet, it was quite a success with the public, and Dallapiccola received four curtain calls.

In Schoenberg’s native Vienna, Hanns Jelinek is the most conspicuous practitioner of the twelve-tone method. Hanns Eisler, a pupil of Schoenberg, who for a time wrote music for Hollywood films, now also lives in Vienna. Egon Wellesz, a Schoenberg disciple and a learned theorist in his own right, now makes his home in England, as does one of Schoenberg’s early adherents, Erwin Stein.

The German twelve-tone composer, Hans-Joachim Koellreutter, now lives in Brazil. Vladimir Vogel, Russian-born composer, resident in

Switzerland, has fashioned a modified dodecaphonic system of his own. Frank Martin, a Swiss composer, uses twelve-tone rows without complete dodecaphonic development.

In Norway, Fartein Valen has developed an atonal style in which the twelve-tone method is applied in a free manner. There are no twelve-tone composers in Russia, where Schoenberg's method is regarded as a product of bourgeois decadence.

Let us now analyze Schoenberg's *Klavierstück*, for piano, op. 33a. The twelve-tone series in this piece appears in the form of three chords of four notes each. The first chord includes B, C, F and B flat; the second, A, C sharp, D sharp, and F sharp; the third, A flat, D, E, and G. Then the chords are inverted, and these inversions are run in crab motion. The resulting progression of six chords constitutes the kernel of the entire piece.

Later on, these six chords appear in a canon, the right hand playing the original progression, and the left hand going in reverse. In chord No. 4 in the left hand two notes change places, a frequent practice in the twelve-tone method. The last chord in the left hand is broken up, which is also common practice in twelve-tone music.

In the middle section of Schoenberg's *Klavierstück*, the twelve notes of the series are criss-crossed in a variety of ways. The cross-note puzzle becomes labyrinthine when inversions, crab forms, and transpositions are all applied simultaneously. It takes a sharp dodecaphonic ear to detect the original tone-row in the integrated maze of melody, harmony, and counterpoint.

The coda of Schoenberg's *Klavierstück* contains the principal six chords. Schoenberg's dodecaphonic cadence is stridently dissonant, the final chord bristling with minor seconds where a classical ending would be a reposeful tonic triad.

Dodecaphonic music is a new language. In order to appreciate poetry in an unfamiliar tongue, one must learn its grammar and idiomatic usage. Dodecaphony will cease to be cacophony even to an untutored ear when the listener will take the trouble of learning its laws and customs.