SPECIAL REVIEWS

THE ORIGINS OF MUSIC

Die Anfänge der Musik. CARL STUMPF. Leipzig: J. A. Barth, 1911. Pp. 209.

In this interesting little book the author draws in a simple and popular manner the conclusions which may be reached from recent studies of primitive music. It should perhaps be noted at once that the use of the term *primitive* is to be taken relatively, not literally. Careful study of the structure of exotic melodies usually reveals the fact that they represent a considerable degree of cultural evolution. Only by reference to relative simplicity of structure may we approach a conception of the beginnings of music.

The book deals first with certain recent theories as to the origin of music. The Darwinian theory is characterized by the phrase: "Im Anfang war die Liebe." Here it is noted that Darwin's attempt to derive music from sexual selection gives no adequate explanation of the unique ability to recognize and transpose melodies. So far as we yet know animals have no capacity of this order. Bird songs seem to depend upon absolute pitch, whereas human music is based upon a recognition of tonal relations which involves a capacity for abstraction which the animal does not appear to possess. Spencer's theory is characterized by the phrase: "Im Anfange war das Wort," indicating a derivation from accent and tonal variations in speech. But music differs essentially from singing-speech in the use of fixed intervals. In speech, on the contrary, it has been shown that the sounding of a single syllable shows great variation in pitch. Similarly the view that music finds its origin in rhythm, as characterized by Hans v. Bülow's phrase: "Im Anfange war der Rhythmus," is equally unsuited to explain the facts, since the problem of definite intervals remains unsolved. Rhythmic expression may involve differences in intonation, but it makes no demand for consonant intervals. Furthermore, the most primitive songs known to us evidence a regard primarily for musical composition, rather than any definite aim or requirement of rhythmic expression. The oft-cited rhythmic accompaniment of work done by a group in unison is not found among the most primitive tribes, but seems to indicate a stage in cultural evolution beyond that at which music appears.

To explain the origin of music we must have in mind, not merely tonal expression of any arbitrary sort, but the use of tones in definite relationships. The explanation for this phenomenon finds its basis for Stumpf in the inherent capacity to recognize tonal fusion. He therefore characterizes his own explanation by Goethe's phrase: "Im Anfang war die Tat." The problem is, how did primitive man discover this natural capacity? Stumpf believes that the essential facts were first brought to his notice through the use of vocal signals. In signalling the production of an intense and relatively fixed high tone is demanded. The duplication of this tone by men, women and children, whose vocal register naturally varies, brings about the expression of similar tones which appear to be identical because they fuse. Thus in the attempt of voices of different range to produce the same tone, we see the first use of the consonant intervals of octave, fifth and fourth which furnish the framework for all music. Little by little these intervals are recognized as such, even when the absolute pitch varies.

The first melodic phrases may be due to the filling-in of the interval of the fourth, say, with arbitrary tones. Brief phrases constructed from such tones are well adapted to use as signal calls, and it is noted that, among the most primitive songs recorded, the fourth and fifth represent the greatest intervals used, indeed they often limit the total range of the melody. Thus we see that although the steps in primitive music are often arbitrary and sometimes variable, they are nevertheless constrained by the limit of a consonant interval. The evolution of music is dependent upon the reconciliation of these small steps with the consonant intervals which furnish the framework and basis of transposition. Polyphony is found very early in parallel passages where various members of a family may duplicate the melody simultaneously in octaves, fifths and fourths. The use of the falsetto, which is very frequent, also indicates an attempt to imitate the precise register of a certain individual.

From primitive instruments we may learn much concerning the origins of music, although it is well to remember that many very simple forms of instrument now in use probably represent a retrograde development from forms originally much more complex. Pipes are among the most ancient instruments of which we have knowledge. The introduction of holes to produce a variety of tones was doubtless determined at first, not in accordance with musical principles, but by external conditions. For instance, the rings of the bamboo, and the use of three or six fingers seem to have been prominent factors.

Pipes of varying length are combined in the Pan's-pipes which may follow one another in pitch, or form groups, sometimes even giving a definite melody. We are not to conclude from this, however, that the intervals used by a people are entirely arbitrary, varying from individual to individual. On the contrary, even though the scale contains not a single pure consonance, the relation of the intervals is fixed and duplicated with remarkable exactness in all the instruments of a tribe.

Among some of the wind instruments there occurs the possibility of blowing higher tones (*Überblasen*), thus producing harmonics in definite consonant relationship to the fundamental. This may be considered as a contributary cause for the use of consonant intervals. It is not a primary cause, however, for these intervals are quite as well known among people who have no such instruments. String instruments appear to have their origin in a modification of the hunter's bow. The musical-bow, much used by primitive people, is a single stringed bow which indicates this analogy clearly. Drums are found in great variety with varying tones, but no consonant effects. The xylophone and metallophone are among the most interesting of exotic instruments, since with their aid we can study most exactly the scale of intervals in use. Here, as with the Pan's-pipes we learn the exactness with which unmusical intervals are employed.

The pleasure in manifold combinations, developments and resolutions of accords is a modern invention. Primitive music is essentially homophonic; dissonances without resolution are frequent. The use of polyphony is quite different from that which we make of it. Aside from the parallel passages, already noted, the repetition of a fixed tone is often met with, similar to the drone-bass or bourdon. However, if polyphony is undeveloped, rhythmic accompaniment has evolved to a point quite beyond our ordinary capacity. This is due primarily to the lack of polyphony, which requires for its performance relatively simple rhythms. The rhythmic accompaniments to the songs of primitive peoples are often extraordinarily complex, and we find that five- and seven-part measures are not at all exceptional. The rhythmic setting is also characterized by a frequent and complicated shifting from one tempo to another.

The appearance of a fixed scale indicates the usage of five and seven intervals within the octave as the most common divisions. Two methods of development may be distinguished: (1) the construction of a scale by reference to the consonant intervals of fourth,

fifth, and later, the third, with a more or less arbitrary filling-in of the larger steps; (2) the construction of a scale by a purely arbitrary division into five or seven steps of equal intervals, as may be found in the Siamese and Javanese scales, respectively. Even in this case, however, the limiting interval is the octave, so we may say that all scales in their development are in some measure limited by the principle of consonance.

An interesting polyphonic orchestral usage among certain Asiatic peoples is noted. The principle of these compositions is a more or less independent elaboration and variation upon a central melodic theme, which is carried out in unison by the different instruments of the orchestra. The effect upon our ears, trained to harmonic combinations, is very strange, but to a people whose musical development has been strictly homophonic, the effect is apparently agreeable. Stumpf proposes to call this form of composition *heterophony*, a term which he derives from a passage in Plato which describes what appears to have been a similar practice among the Greeks.

The second part of the volume consists of a series of transcriptions of exotic melodies, largely derived from the phonogram archives of the Berlin Laboratory, with a running commentary on varying peculiarities and principles of construction. The examples include melodies from the Wedda of Ceylon—the most primitive forms of music which we now know,—the Andamanese, the Kubu of Sumatra, Australian aborigines, South American, Mexican and North American Indians, the Eskimos, Greenlanders and the African Negroes. There are also appended eleven plates illustrating primitive musical instruments.

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