neither their interests nor their enmities are enlisted.

The revelation is not, I fear, a cheering one; but I hope that it may be profitable for doctrine. It is possible that some too confiding natures may learn from it that it is not quite safe to put too much trust in what everybody says. The fraternity of newsgatherers may be able to extract a moral from my tale; I leave that task to them.

One "improvement" I will venture to hint. Several of my reputable neighbors, as I have recorded, were quite ready to testify, when I called upon them, that this was a stupendous imposture. But they had not made this statement publicly. Perhaps they thought it not worth while. Perhaps they shrunk from braving the ill-will of those who were making a hero of the poor old man. It is not hard to understand their reticence. Yet it would have been well for them to consider whether they ought not to stamp out this delusion. Honest people all over the land were being imposed upon, and were parting with their money as a result of this imposture. I dare say that some of them would have spoken if the thing had gone much further. But the duty of every individual in the community to contribute, by clear and prompt speech, to the destruction of impostures and delusions of all sorts, and to the formation of sane public opinion, is one that is not sufficiently enforced. The vitiation of public opinion by pretenders and charlatans of all sorts is constantly going on; I know no antidote for this disorder except that which is found in the sound and courageous words of sensible men. We are quite too prone to allow cranks and bigots and mischief-makers to go on sowing the wind, forgetting that we shall be compelled by and by to reap the whirlwind. It is often disagreeable to expose humbuggery; not more disagreeable, however, than many other public duties. And it is part of the service of a citizen to help to create an intellectual atmosphere in which imposture will not thrive.

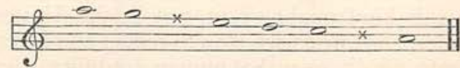
Washington Gladden.

A STUDY OF INDIAN MUSIC.[1]

SOME time ago Miss Alice C. Fletcher of the Peabody Museum of American Archæology and Ethnology of Harvard University sent me an Indian song, desiring me to give her information as to the scale on which it was built, etc. This led to personal consultations, and she eventually intrusted me with over a hundred songs that she had taken down among the Omahas and other tribes, commissioning me to study them, and to report upon them from the point of view of the technical musician. She afterward afforded me the opportunity of hearing Indian singing, and of taking down their songs and studying their rhythms, etc. at first hand.

The collection of songs made by Miss Fletcher has peculiar interest from a scientific point of view. All are undoubtedly old. Only a few had been heard by any white person until she obtained that privilege. The Indians have no musical notation, no theories of music whatsoever; the songs are handed down by tradition, and they are a purely natural product of the impulses of primitive man—the spontaneous result of the universal desire to express emotion in song. Unfettered as they are by any speculations or theories, they afford entirely fresh material for discovering what is natural in music, and a rare opportunity for testing the naturalness of our own musical perceptions by means of comparison.

Being informed that their music was not only entirely vocal, but invariably without harmony, all their songs being sung in unison, with no other accompaniment than that of drums or rattles, my first inquiry was, naturally, On what scales are their melodies built? I soon discovered that they were, in a large majority of cases, in major keys, and built on five-toned scales, similar to those of the ancient Chinese, Hindus, Scotch, Irish, and other primitive peoples. The first one sent me was built on a five-toned (pure) minor scale, running, as nearly all of them do, from the highest to the lowest note of its compass, thus:



Those on five-toned major scales began and ended, as a rule, on the fifth of the scale, thus:

[1] See also "Indian Songs" by Miss Fletcher in the CENTURY for January. The music accompanying both articles is all derived from the Omahas.

It will be observed that in both these typical pentatonic scales the tones omitted are the ones which make the semitone, or "leading-note progressions" (F to E and B to C). I was at first inclined to attribute considerable significance to this fact; but when I sought to harmonize the songs, taking pains to discover the natural harmonies implied in the melodies, I found that no satisfactory scheme of chords could be made without employing the missing scale-tones. Miss Fletcher had informed me of the curious fact that, although the Indians never sing otherwise than in unison, nevertheless, whenever their songs are played on a piano or organ, they are not satisfied without the addition of chords. I was greatly interested, therefore, in sending for Indian criticism my harmonization of the first song given me. I wished particularly to know whether the harmonies which seemed to me natural would prove satisfactory to Indian ears.

The result of the experiment was entirely satisfactory. The Indians were even delighted with the chords I had added to their song, showing that, notwithstanding the fact that they never make any attempt to sing in parts, they possess a latent sense of harmony, and this sense is precisely the same as ours. That is to say, the harmonic sense is innate in the human mind, is a natural constituent of universal human nature. Moreover, the five-toned scale, which makes its appearance in the melodies of so many and so widely separated primitive peoples, seems to be due merely to the fact that the harmonic sense of these peoples is still undeveloped — has not yet been brought forward into consciousness. The fact that primitive man recognizes the missing harmonic tones as valid and satisfactory when they are brought to his attention proves that the sense of them is in his nature, and needs only to be developed in order that he may use them as freely as we do.

This conclusion is still further emphasized by the fact that the Indians *do* use these tones in a considerable number of the songs submitted to me. A few of them employ the full eight-toned scales in use among us, both major and minor, the latter both in its pure and mixed forms. If further proof of the soundness of this conclusion were needed, it is to be found in the fact that all my harmonizations of their songs, whether on complete or incomplete scales, have met with their approval. In every case, as in that above cited, any harmonization which has seemed to me natural, as inherently implied in the nature of the melody itself, has been accepted by them as valid and satisfactory; and this notwithstanding the fact that in the chords I have used tones not to be found in the melodies.

I give here two examples built on five-toned scales. The first (No. 60) is in major, and is a

WAWAN CHORAL.

SOLEMN PROCESSION OF PEACE PIPES AROUND THE LODGE.

No. 60. ♩ = 63.

Ped.

choral song sung in the religious ceremony of the sacred Peace Pipes. It is used in the solemn

procession in which the pipes are borne about the lodge. This harmony I have personally submitted to Indian criticism, as, indeed, is true of all the examples I shall adduce. Musicians will see that I have not only employed the missing fourth and seventh in the harmony, but have also introduced a suspension (in the eleventh full measure). This latter met with decided approval.

The second song (No. 53) is the one originally submitted to me. Curiously enough, the Indian ear seems to prefer the major chord for the final close of the latter, although the song is in pure minor, with what is technically known as a plagal cadence.

HAE-THU-SKA.

RESTING-SONG.

Two double drum-beats in a measure.

No. 53. ♩. = 60.

Hau thin gae ac ah - ma, Hau thin gae

Double drum-beats. ♩ = 60.

f

Ped.

ac ah - ma, Hau thin gae ac ah - ma, Wa - kan- da

thin gae ac ha - ma, Hau thin ga wae tho hac.....

...... thoe. Hau thin gae ac ah- ma, Hau thin gae

ac ah - ma, Wa-kan-da thin gae ac ah - ma, Hau

thin gae wae tho hac...... tho.

The fact of the latent perception on the part of the Indians of the full key-harmony employed in civilized music at once deprives their incomplete scales of much of their significance. At first sight, the numerous incomplete scales are decidedly puzzling; for they not only use the typical pentatonic scales exemplified above, but also other incomplete scales, omitting sometimes the sixth and seventh, sometimes the seventh alone, sometimes the fourth alone, sometimes the third alone, sometimes the second alone, and in one case both the sixth and the key-note. But when one reflects that they do actually possess all the tones of the full scale, and that they recognize them all as both melodically and harmonically valid, the fact that they frequently confine themselves to a portion of them only becomes of comparatively little importance.

But a still more puzzling phenomenon remained in the presence of a considerable number of songs the tones of which could not be referred to any one scale. Examples of these are given in Nos. 118, 54, and 58. In No. 118 the key is nominally G, but the foreign tone A flat is a prominent feature. In No. 54 the tone B flat appears as an emphatic tone, too, while the song is mainly in the key of C; and in No. 58 we have the tone E in a short song supposed to be in the key of B flat.

Of course the only way to be sure of the significance of these tones was to harmonize the songs, and to submit them to Indian criticism. Here, too, I had the satisfaction of finding that my own perception of what was natural in the harmonization was corroborated by Indian approval. And the supplied harmonies made the whole matter clear at once. No. 118 is a case

WAWAN CEREMONY.

WHEN TAKING THE CHILD, THE HUNGA.

No. 118. ♪ = 176.

of change of key, unless we regard the song as closing on the sub-dominant chord. The first two phrases (three measures) are plainly in the key of G. The succeeding two phrases have the chord of C, not G, for their point of repose, but the only chord used as an antithesis to this chord is that of A flat, the *under-third!* Here one cannot help being reminded that one of the most striking characteristics of the modern romantic composers, as regards harmony, is the free use of the major chords of the over-third and under-third, as well as of the over-sixth and under-sixth. We find more or less of it in Beethoven and Schubert, still more in Schumann and Chopin, most of all in Wagner and Liszt. And now to happen on the very same characteristic in the primitive music of our own American natives is certainly a most unexpected, not to say startling, experience.

It shows, I take it, simply this: that the great romantic writers, in going outside of the accepted harmonic limits (there are a very few text-books on harmony, even to-day, which account for their practice, still less sanction it), made a genuine discovery of natural harmonic relations. This has long been my belief; but if it needed confirmation, these Indian songs would serve the purpose; for, whatever else they are, there can be no question that they are absolutely natural.

No. 54 offers a similar example of the use of

WAWAN.

FINAL SONG WHEN LAYING THE PEACE PIPES AT CEREMONIAL REST.

No. 54. ♩= 88.

ff

con. Ped.

ff

ff

the over-sixth chord (in the sixth full measure). The harmony of this song can be accounted for without considering it as departing from the key of C, although it goes beyond the limits of the scale harmony. The one melody-tone (B flat) which does not occur in the scale belongs to the minor chord of the dominant. The song closes, however, with the major dominant chord.

On the other hand, No. 58 affords a plain

WAWAN CHORAL.

FIRST PROCESSION AROUND THE LODGE AFTER THE PIPES ARE RAISED.

No. 58. 𝅗𝅥= 66.

example of modulation. It begins in B flat, closing the first clause in the fifth measure with the relative minor chord. The next phrase is in E flat, closing on the over-third chord (G), leading naturally through the chord of C major to the key of F, whence the transition is easy and natural to the final phrase in C. The whole is easy, smooth, natural, and reminds one of numerous passages in Wagner. But think of it, students of harmony, a twelve-measure song beginning in B flat and ending in C! Yet the naturalness of it cannot be questioned, nor can its dignity and impressiveness. There are more things to be learned about harmony than are taught in the current text-books.

I cannot forbear citing one more example, No. 55, because of the beauty and originality

WAWAN CEREMONY.

SECOND SONG WHEN LAYING THE PIPES AT CEREMONIAL REST.

No. 55. ♩= 84.

f

con Ped.

Trem.

of its natural harmony. Although there are no tones of the song not to be found in the scale of E flat, which is its nominal key, nevertheless it is impossible to harmonize it naturally without going outside of that scale. After the first short phrase, the song might be regarded as in the relative minor key, although the Indians prefer the major tonic at the end.

I desire to call attention also to the sharp dissonance at the beginning of No. 55. This is only a sample of the non-harmonic tones which the Indians constantly use. It requires only a brief examination of these harmonized songs (all of which, be it remembered, have been approved by the Indians) to see that all our apparatus of melodic by-tones is used by them quite as freely as by us. In short, all melodic and harmonic resources to be found in our music, even the most modern and "advanced," are also to be found in this primitive music among a people who have, let us remember, no musical notation, no theory of music, no systematized scientific knowledge of it whatsoever.

Nor is it in harmony alone that this Indian music reminds us of the greatest music of the modern romantic school. The Indian rhythms are frequently as complicated and difficult as any to be found in the works of Schumann or Chopin. The Indians syncopate freely: they use three twos and two threes in the same measure (two drum-beats against three vocal tones), exactly the rhythm of No. 20 of the "Songs without Words" of Mendelssohn, the "Abschied" (Op. 82) of Schumann, and other pieces which will occur to every musician; they alternate $\frac{2}{4}$ and $\frac{3}{4}$ measures, even $\frac{5}{4}$ and $\frac{4}{4}$, and I have found one case of five drum-beats in a measure, against which ten tones are sung, grouped in *two fives*, not in five twos as might have been expected. One rhythmic peculiarity also consists in the frequent use of a short note on the drum-beat, or emphatic portion of the measure, just such as we find in ancient Scotch music.

The following example (No. 123) exemplifies the Indian tendency to syncopation. It may serve also as another illustration of the use of third relationships in harmony (see fourth, fifth, and eleventh measures). No. 112,

POO-GE-THUN SONG.

DANCE-SONG OF A SOCIETY COMPOSED SOLELY OF CHIEFS.

No. 123. ♩ = 104.

HAE-THU-SKA.

SONG OF DISMISSAL AT THE CLOSE OF A GATHERING OF THE SOCIETY. CHORAL OF WARRIORS.

No. 112. 𝅗𝅥 = 58.

ff

here given, exemplifies the same tendency, and shows also that the same melody may imply more than one natural harmony. It was by request of the Indians that I introduced new chords in the repeat. It thus became fuller and richer, and the emotional effect was intensified. No. 65 exemplifies, as does No. 53, the combination of dissimilar rhythms; three eighth notes in the song against two drum-beats. No. 133

WAWAN CEREMONY.

FINAL SONG WHEN RAISING THE PIPES.

No. 65. Song ♩. = 72.

Double drum-beat, ♪ = *No. 144.*

Drum tremolo.

Drum-beat.

MYSTERY-SONG.

VISION OF THE HORSE.

No. 133. ♩ = 104. ♩. = 104.

is the one referred to as having phrases of five tones; each chord stands for a drum-beat.

In the matter of rhythm on a larger scale, what is commonly called "form" in music, *i.e.*, the orderly succession and arrangement of phrases, clauses, etc., the irregularity is quite as great, without, however, impairing the sense of symmetry. In No. 53 the first three phrases consist of one and a half measures (three dou-

ble drum-beats), but the fourth phrase has four double drum-beats, and the fifth has six. The second period is similarly constructed, the first two phrases having three drum-beats each, the third four, and the fourth five. The two periods of which the song consists are thus somewhat uneven, the first having five phrases and the second only four; yet with all this variety the sense of symmetry is not impaired. The phrasing of others of the songs presents similar peculiarities; but it will be so easily recognized by students that I think I need not here analyze each one in detail. It is sufficient to note that the formal structure of these Indian songs is as free, as rich, and as varied, and at the same time as conformable to the natural laws of expression as are their rhythm, their harmony, and their use of melodic embellishments.

It is possible that some may be inclined to think that the harmonized version of the Indian songs here given has more of the elements of our own music than of that of the natives; in short, that the Indian character has been taken out of it in the process of transferring it to the pianoforte. I hope I have already said enough to obviate such criticism; but I offer some further considerations which will enable intelligent readers to judge for themselves.

It must be freely admitted at the outset that there is a striking difference between the rendering of the Indian songs here given and that heard in the native singing of them. This difference does not consist merely, or mainly, in the addition of chords. The Indians sing with a quality of voice different from ours—one more nearly akin to our speaking voice. It is high and shrill, and white men who hear it for the first time, especially if they do not understand the words or appreciate the sentiment embodied in the song, are apt to find it unpleasant. And the difference between their singing and ours lies not alone in the peculiar quality of the vocal tone, but also in the fact that the voice slides from one scale-tone to another, instead of moving by sharply defined intervals, as in our singing. Their melodic ornaments, too, often consist of quarter-tones, or perhaps even smaller intervals, so that they can be only approximately rendered in our notation. Some acquaintances of mine who have casually heard singing among the Chippewa Indians have described it to me as a disagreeable whining, devoid of melody. This is, perhaps, the natural impression it makes on superficial observers, who lack either the opportunity or the training to estimate its musical qualities. Above all, the inability to comprehend the relation of Indian music to the expression of Indian feeling is fatal to any just estimate of it.

It is here that superficial observers fail most signally. Toward white men generally the Indians are reserved. They reveal their private and most sacred feelings only to those (and they are very few) who have completely won their confidence. Such friends, and only such, are able to penetrate beneath the surface into the interior life of the Indian, and understand what his music is to him. Miss Fletcher is one of those exceptional white persons, as I have had opportunity to know—one whose interest in the Indians, proved by hardship, privation, and devoted self-sacrifice in their service, has won for her the lively gratitude and the unreserved confidence of large numbers of them. To her they will open their hearts freely, and to their absolute trust in her I owe the rare and valuable opportunity of studying freely music which, if I had gone among them as a stranger, I should never have heard at all.[1]

I soon found that the piano, with the audible thud of its hammer, its inability to produce intervals smaller than a semitone, its fixity of pitch, and its tempered tuning, was as unsatisfactory to the Indian as his singing can be to our unaccustomed ears. The melodies, as given on the piano, needed to be supplemented by chords, and by the free use of the pedal. Rattles and drum tremolos must be rendered by tremolo chords with pedal, etc. Long before the first week was over, all my preconceived notions of the significance of the incomplete scales, and of the importance of the plain major and minor chords as related to acoustic problems, had wholly disappeared. The Indian criticism had nothing to do with such things. First of all it related to the accurate melodic and rhythmic rendering of the songs, the observing of ties, syncopations, exact length of tones, etc. On such points the Indians are very strenuous, as becomes those who receive and hand down traditions unimpaired for centuries.

But when it came to harmonization and style of performance, the criticism was all directed to the point of artistic interpretation. When I could enter fully into the spirit of the song and of the ceremony in which it was employed, my work satisfied Indian feeling—not before. In short, it became absolutely clear that the determining forces of this Indian music, not only in their own version, but in the pianoforte

[1] I spent two weeks of hard work in taking down and harmonizing songs under continual and free criticism by Indians, going through the music of the entire Calumet (Fellowship Pipes) ceremony, besides numbers of other songs. Besides this, I had a week of listening to Indians singing in a great festival on the Omaha Reservation in Nebraska, in company with Mr. Francis La Flesche, an Omaha Indian in the service of the Indian Bureau at Washington, whose assistance throughout has been invaluable to me. Without him, my work would have been a failure.

translation as approved by them, were precisely those concerned in all artistic production and reproduction, viz., imagination and feeling. That my experiment proved successful in producing a piano translation which the Indians themselves recognized as adequate and satisfactory, ought, I think, to set at rest all doubt, if there should be any, as to the genuine character of the version here presented. The harmony is, in the truest sense, Indian harmony. Not that the Indians could have produced it unaided; but my part in it was simply and solely to supply the technical knowledge which they lacked. I have merely translated from one mode of expression to another; and their judgment of the adequacy of the translation ought surely to be conclusive.

In the absolute supremacy of the imaginative and emotional elements which dominated every moment of the Indians' criticism of my work, I was continually reminded of the out-break of the German romantic movement about 1830. Here, as with Schumann and Wagner, the all-important matter was the feeling to be expressed. The mode of expression was to be criticized solely from the standpoint of adequacy or inadequacy, not from that of any traditional rules or formal considerations. In other words, content was first, and form was subordinate in both.

It would be interesting to read a criticism by Schumann on this Indian music, especially on the Calumet ceremony, with its central idea of "peace on earth, good-will to men," its elaborate ritual, brimful of symbolism, its full choral service, every incident of the ceremony accompanied by song. And if he had taken occasion to compare the original, vigorous, noble, dignified, impressive music of this service with some of the commonplace jingles so frequent in our Sunday-school services, and even in some of our churches, would the comparison have been in our favor? If he had used the phrase "American savages," taking into account the musical comparison alone, would he have applied it to our red-skinned neighbors? But I do not wish to be offensive; I merely wish to emphasize the fact that those whom we are accustomed to despise as an inferior and barbarous race reveal, in the glimpse this music affords into their inner life, a noble religious feeling, not remotely akin to the central idea of Christianity, and expressed in music some of which is worthy of comparison with the best we ourselves possess, and incomparably superior to our worst in the same field.

In this discussion I have sought to confine the technical treatment within the narrowest limits, for the sake of the general reader. Musicians who desire more extended and detailed technical consideration of the Indian music will find it in the monograph on Omaha Indian music lately printed by the Peabody Museum of Harvard University.[1]

John Comfort Fillmore.

[1] Since this article was written, I have had extensive opportunities of hearing, taking down, harmonizing, and testing primitive folk-music, not only of the Omahas, but also of other Indian tribes, besides that of different races represented on the Midway Plaisance, at the World's Fair. This later experience has confirmed the conclusions I have given in this paper.

THE REAL STONEWALL JACKSON.[1]

SO much has been said and written about the military career of Stonewall Jackson that I design to confine myself mainly to personal recollections of him, and to the relation of incidents and anecdotes which I know of my own knowledge to be true. By the way, I have never heard or seen an anecdote of him which had any marks of authenticity about it. A letter-writer from the Rio Grande said of General Taylor, after the battles of Palo Alto and Resaca, "We call him old Rough-and-Ready." No one in the army had ever heard it before; but it struck the popular fancy, it won him tens of thousands of votes for the Presidency, and it has gone down to history.

In like manner a letter-writer from the field of the first Manassas gave Jackson the cognomen of Stonewall, and told a very pretty story about General Bee pointing to him, and saying, "There stands Jackson like a stone wall." Not only was the tale a sheer fabrication, but the name was the least suited to Jackson, who was ever in motion, swooping like an eagle on his prey. But the name spread like wild-fire, and has reached the uttermost limits of the globe. The story of how Jackson told the

[1] The author of this paper, the late General Daniel H. Hill, C. S. A., was brother-in-law to General Thomas J. Jackson, and commanded a division in Jackson's corps during the Seven Days' fighting, and in the Antietam and Fredericksburg campaigns. The reader is also referred to THE CENTURY for October, 1886, for "Personal Reminiscences of Stonewall Jackson," by his sister-in-law, Mrs. Margaret J. Preston.—EDITOR.