4

The boundaries of speech and song

George List

George List, 'The boundaries of speech and song',
Ethnomusicology, 7:1 (1963), pp. 4–13.

For this article List made extensive use of the spectrograph, a machine for generating visual displays from sound recordings. List used the spectrograph – which has long since been superseded by computer software – to aid him in the accurate transcription of pitch contours: the vertical axis in his figures refers to a voice's pitch (frequency), measured in cycles per second (cps, also sometimes written Hz or Hertz).

When speech is heightened in a socially structured situation, such as a dramatic production or in the telling of a tale, two opposite tendencies appear. The first is the negation or the leveling out of intonation into a plateau approaching a monotone. The second is the amplification or exaggeration of intonation, especially of the downward inflection that serves in most languages as a phrase, sentence, or paragraph final.

[. . .]

The classification system which we shall now develop is based to a great extent upon these two divergent modifications of speech intonation. The chart or graph, Figure 4.1, is analogous to a hemispheric map of the world. At the north pole is placed casual speech. Song, as previously defined, is found at the south pole. The forms found north of the equator are those which seem to have more characteristics of speech than song. The forms south of the equator exhibit to a greater extent the traits associated with song.

Movement to the east represents the diminution or negation of the influence of speech intonation. Movement to the west represents either the expansion of intonational contours or of scalar structures. Modification is continuous along the diagonals and each area marked extends its

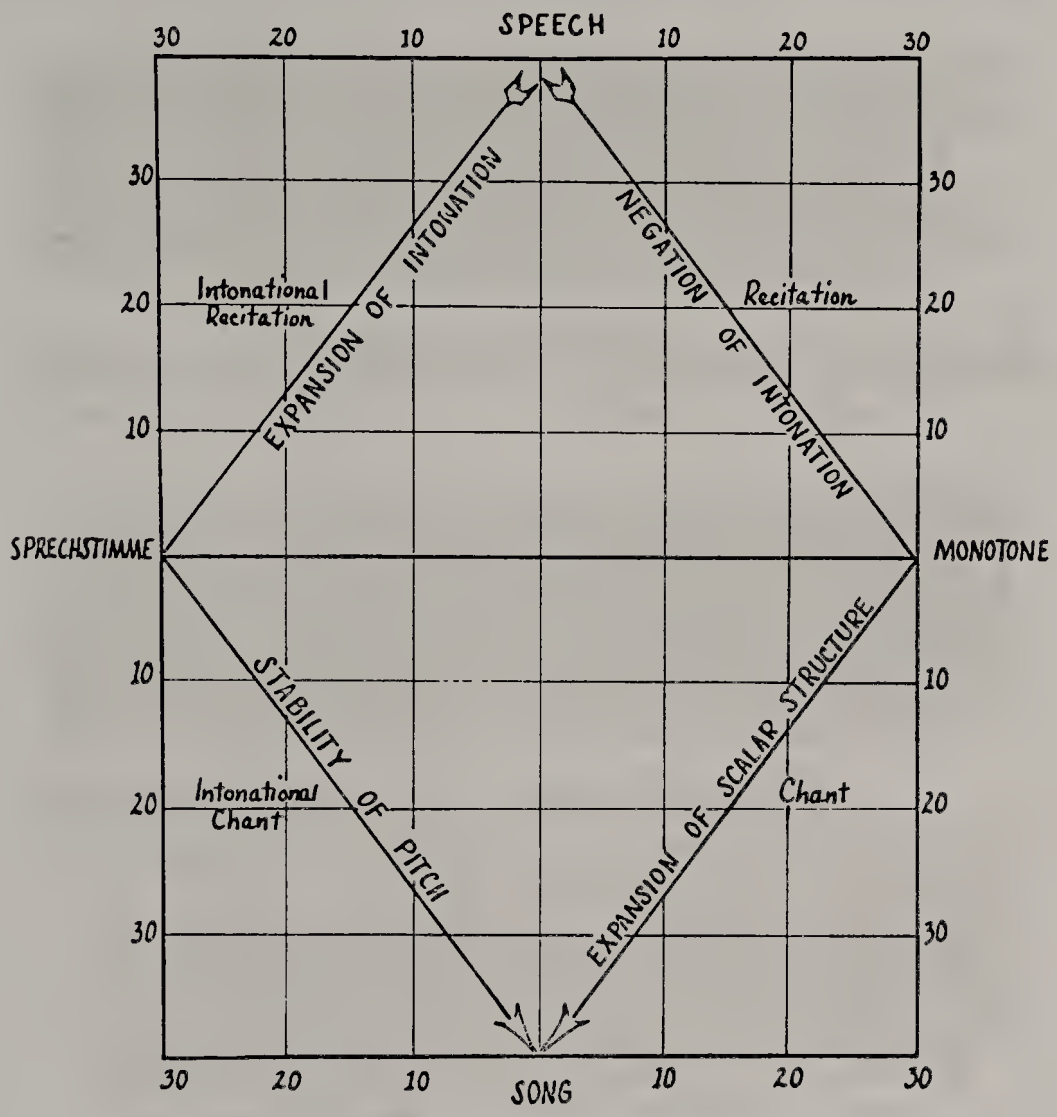

Fig. 4.1 Chart for classifying forms intermediate to speech and song

influence with decreasing magnetism in the three possible directions. Thus, the use of lines of latitude and longitude permits the placement of forms at midpoints both horizontally and vertically.

[. . .]

At latitude 20° north, midway on the diagonal moving to the southeast, we shall place forms such as the counting out or jumping rope rhymes of American children. These forms, while basically speech, make limited use of intonation. What intonation is present, usually short terminal glides, revolves around a central speech monotone which is ornamented with one or two auxiliary tones. The form is described here as "recitation." Figure 4.2 is a transcription of the first section of a jumping rope rhyme as recited

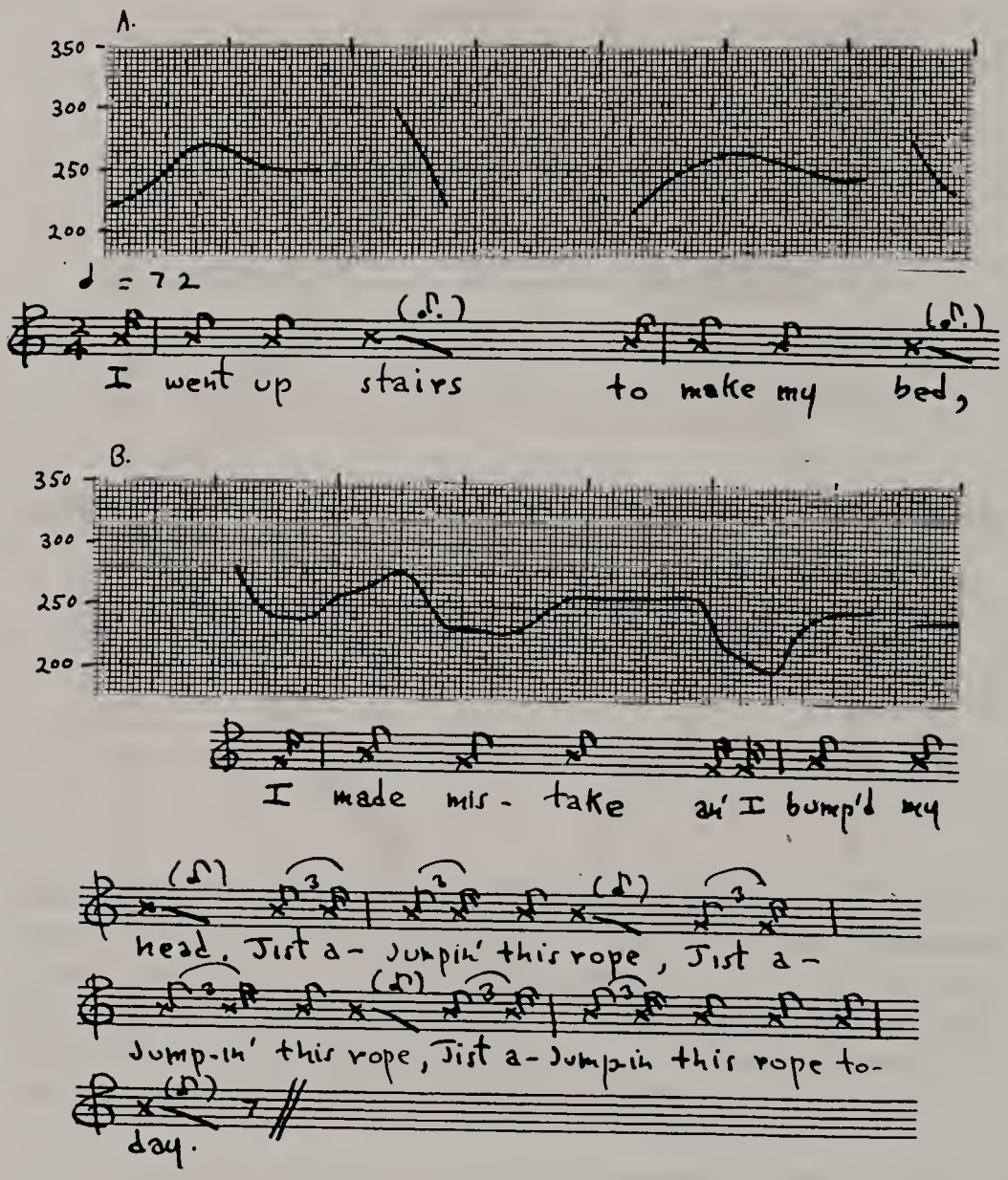

Fig. 4.2 Jumping rope rhyme

by an eight-year-old American child. The recitation of poetry by small children in our culture is comparable form.

When the line representing the continuous negation of speech intonation reaches the equator, the area of the complete monotone is reached. Certain Buddhist chants in Thailand exhibit pure monotone (Figure 4.3).

The midway point between the north pole and the equator on the diagram moving to the southwest has been assigned to forms displaying amplification of speech intonation. This type has been designated

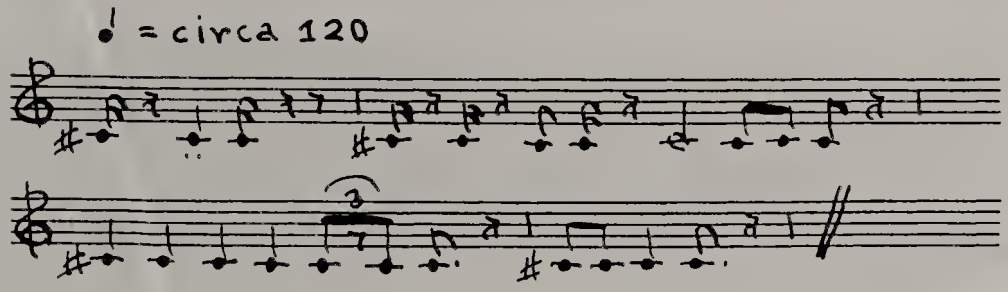

Fig. 4.3 *Thai*, Buddhist chant

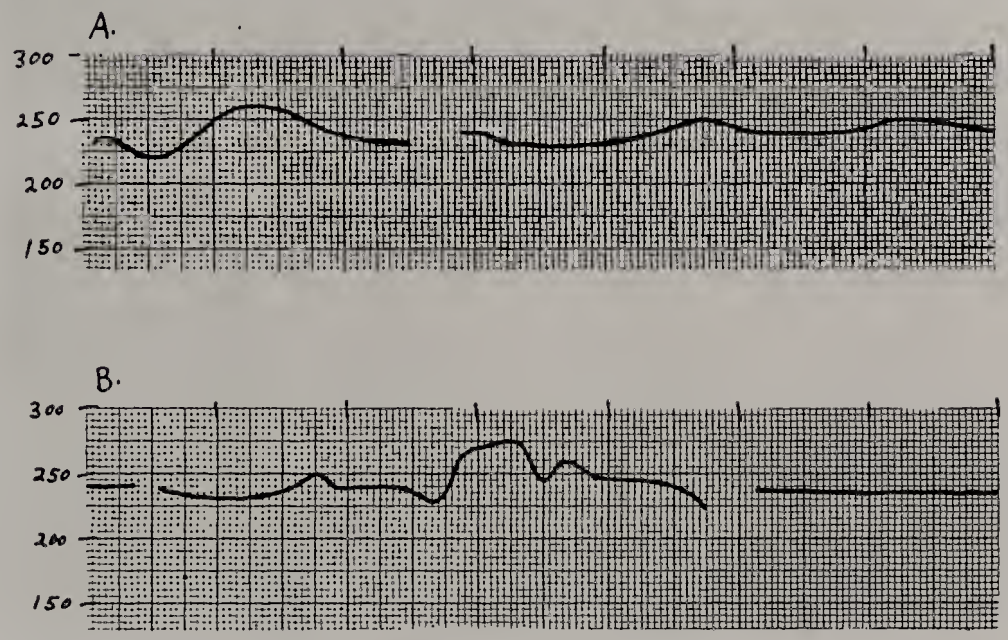

Fig. 4.4 *Palau*, intonational recitation

"intonational recitation." This communication form is found, for example, in the singing of the women of Palau, one of the Caroline Islands in Micronesia (Figure 4.4). In group singing the leader customarily recites a short text which several women then repeat in an improvisatory type of part singing. The "lining out" by the leader is what is termed here "intonational recitation."

At the point where the westwards moving diagonal meets the equator is found not merely the greatest amplification of intonation contours but their development into a free melodic form. This area has been labelled *Sprechstimme*. The term refers to the type of elevated or heightened speech characteristic of the melodrama and is best known by its application by Arnold Schoenberg to the type of vocal communication displayed in his *Pierrot Lunaire*. The Maori *haka* (Figure 4.5) is an example of *Sprechstimme*.

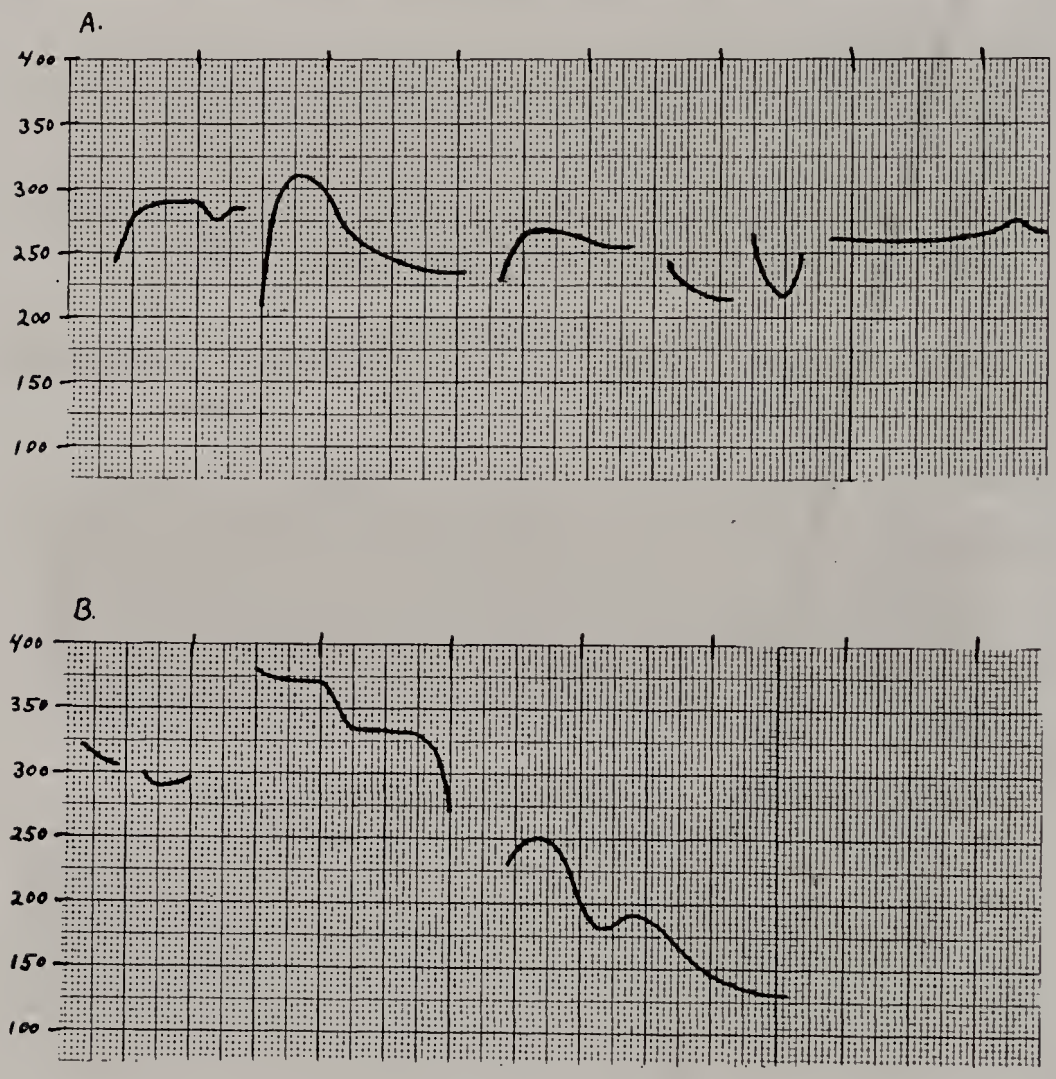

Fig. 4.5 *Maori*, haka

It will be noted that the range of the Palauan "intonational recitation" is approximately 220 cps to 275 cps, or approximately a major third. In contrast the Maori *haka* has a range of 130 to 380 cps, approximately an octave plus a perfect fifth. The latter therefore has an ambitus more than four times larger than the former.

The forms found to the southwest of monotone along the diagonal leading to SONG all display reasonably stable pitches. The influence of the monotone pervades until the halfway mark, to the area marked "chant." Along the diagonal to this point will be placed monotonic chants displaying an increasing number of auxiliary tones. Figure 4.6, a transcription of

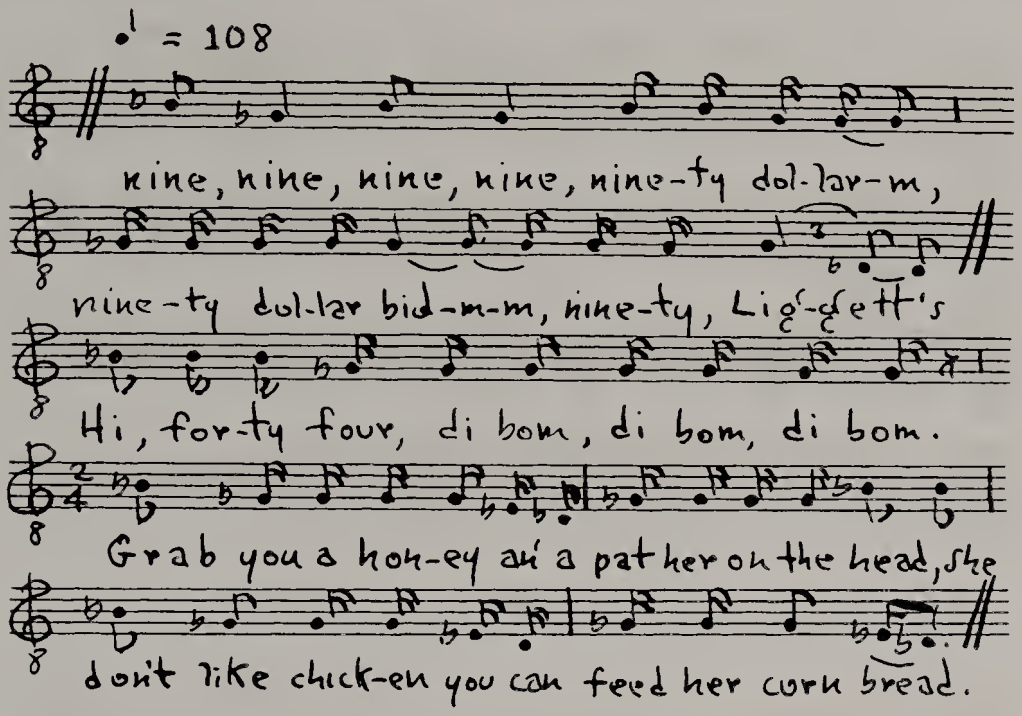

Fig. 4.6 Tobacco "auctioneering"

excerpts from a recording of a tobacco auction in North Carolina, is an example of a fully developed form of "chant." Four auxiliary tones are utilized.

From this point south to SONG will be placed forms increasingly independent of monotonic influence and exhibiting increasing complexity of scalar structure, ditonic songs of the Vedda, tritonic taunts of American children, tetratonic Bulgarian folk songs, etc.

Along the diagonal moving southeast from the equator to latitude 20° south will be placed chant-like forms exhibiting contours related to speech intonation. They will be placed here in descending order of intonational complexity and increasing order of pitch stability. The Hopi "announcement" (Figure 4.7) is an example of "intonational chant."

Further south on this diagonal will be placed song-like forms which exhibit instability of pitch or some aspects of speech intonation. Since the songs of the Australian aborigines simultaneously exhibit a reasonably clear scalar structure such as the pentatonic and considerable instability of pitch and use of glides, they find their place here at latitude 30° south. The following American Negro song (Figure 4.8) will be placed at the same latitude on the central axis.

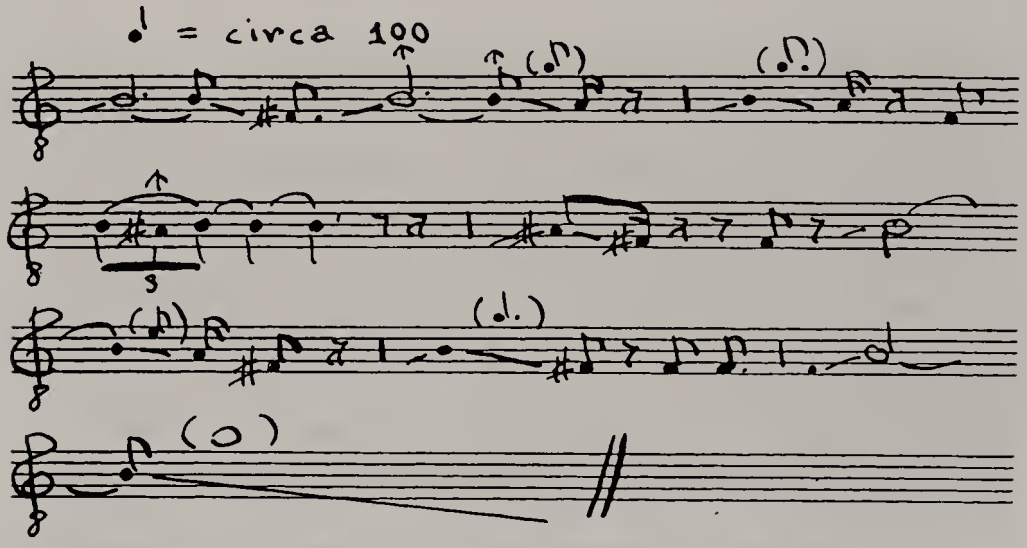

Fig. 4.7 *Hopi*, Announcement of a Rabbit Hunt

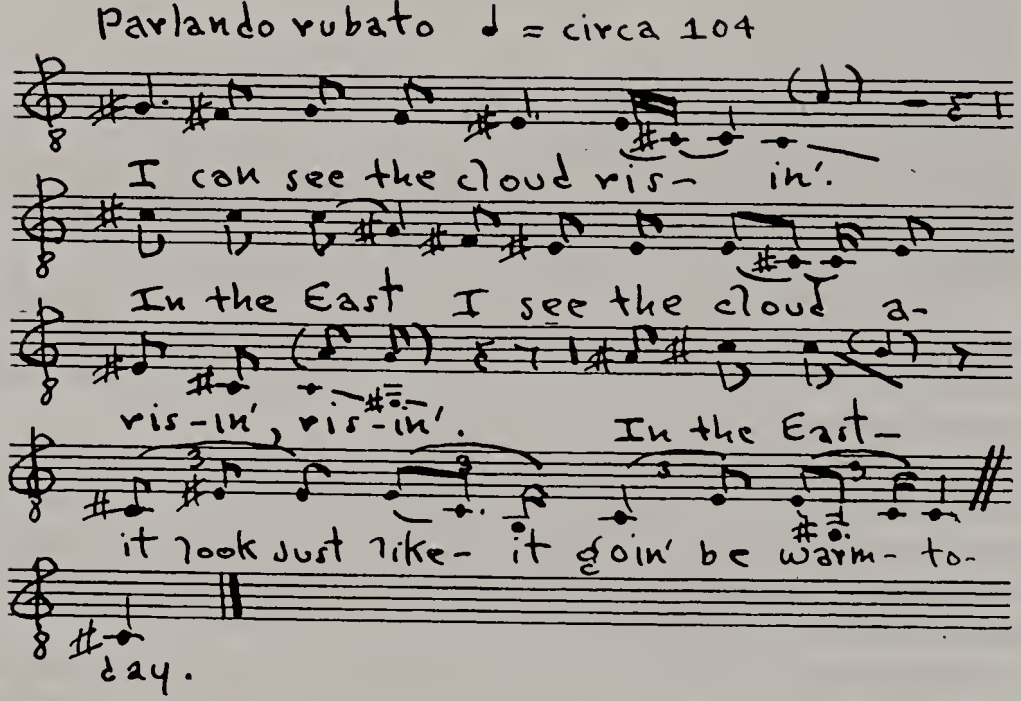

Fig. 4.8 American Negro Song

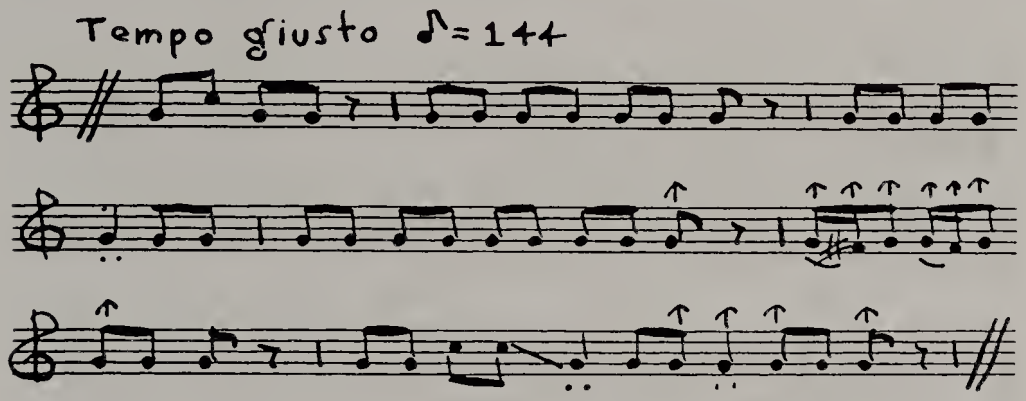

Fig. 4.9 *Hopi*, Owák Kachina Song

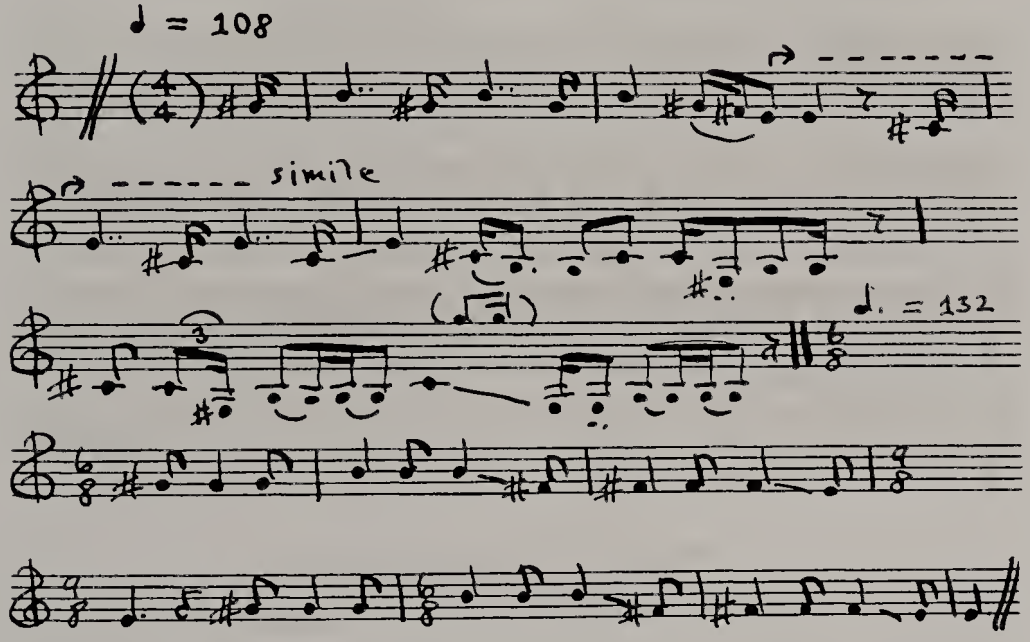

Fig. 4.10 *Hopi*, Buffalo Dance Song

Of the two Hopi songs discussed above, the Kachina song (Figure 4.9); a monotone embellished with one auxiliary, would be placed on the east diagonal a few degrees south of "monotone". The second (Figure 4.10), which possesses a pentatonic scale and exhibits few vocal glides, would be

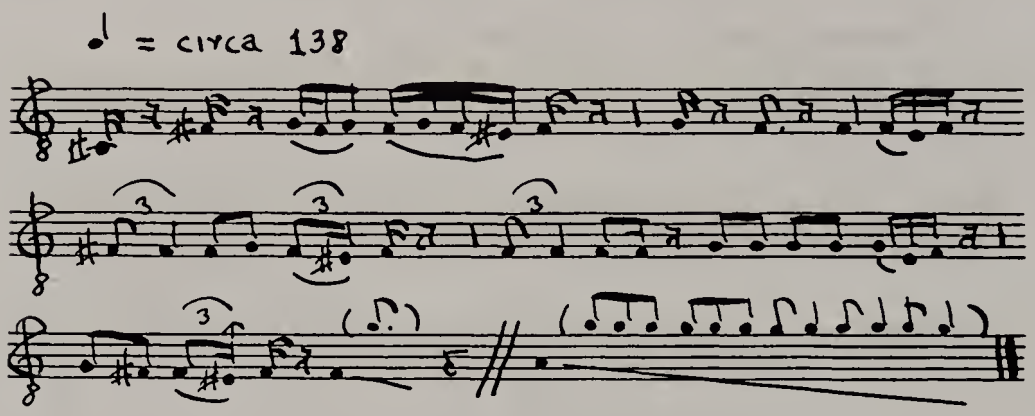

Fig. 4.11 *Maori*, Ritual Chant

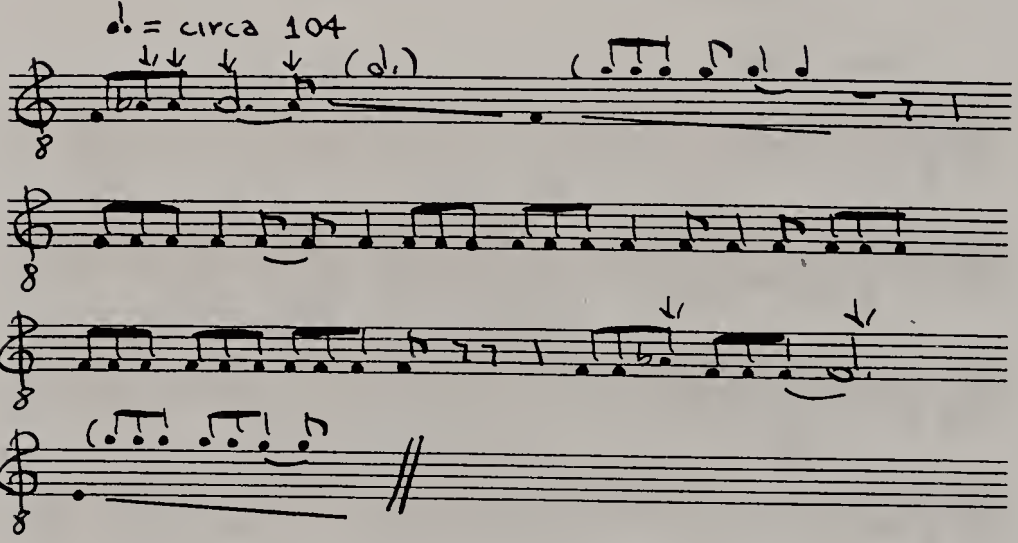

Fig. 4.12 *Maori*, Sentinel Song

placed on this diagonal at latitude 30° south. The Maori chant (Figure 4.11) and song (Figure 4.12), both exhibiting monotone, a limited number of auxiliaries, and a highly developed use of terminal intonation, would be placed on the central axis, a few degrees south of the equator.