

PITCH FEATURES FOR TONE AND INTONATION

D.J. Hirst, C.N.R.S., Institut de Phonétique, Université de Provence, France

This paper discusses some aspects of what Chomsky and Halle (1968,IX) referred to as "the still quite open question of the systematic role of pitch contours or levels".

It is argued firstly that a derived phonetic representation will need to include features of pitch whether or not these features are part of the lexical specification. A given pitch pattern should thus be expected to have the same surface representation whatever the language in which it occurs.

Secondly it is argued that features such as (HIGH) and (LOW) are best considered as defining a pitch interval, i.e. as meaning "higher" or "lower" than the last value. This, however, necessitates at least one feature which is absolute for a given speaker and which we refer to as (RESET). It is shown that providing (LOW) defines a greater pitch interval than (HIGH), no further conventions are required to account for downstep and downdrift in terraced-level languages and that the same three features could account for up to four levels in discrete-level languages. Data from recent acoustic studies of Bambara (Diarra, 1976) and Japanese (Nishinuma, 1977) suggest that it is possible to further generalise and specify (HIGH) and (LOW) as a fixed percent increase/decrease for a given speaker.

Finally it is argued that a further pitch-feature is required (TONIC) to account for the fact that in some cases pitch intervals seem to be specified between two non-adjacent syllables and that the pitch of intervening syllables is subsequently interpolated.

References

- Chomsky, N. and M. Halle (1968): The Sound Pattern of English, New York: Harper & Row.
- Diarra, B. (1976): Etude acoustique et fonctionnelle des tons du bambara (Mali), (Doctoral dissertation: Université de Provence).
- Nishinuma, Y. (1977): Contribution à l'étude prosodique du japonais: accent et intonation. (Doctoral dissertation: Université de Provence).