

**LEXICAL STRESS IN A 'STRESSLESS' LANGUAGE:
JUDGMENTS BY TELUGU-AND ENGLISH-SPEAKING LINGUISTS**

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ABSTRACT

The properties of speech referred to by the terms *stress accent prominence sonority* have never been defined physically with enough precision for descriptions of language in those terms to be validated on the basis of "hard" data. The basis for saying that English *bellow* is trochaic and *below* is iambic is simply that a consensus of "competent observers" finds this so. What constitutes competence in stress perception is not clear, but a minimum requirement is some degree of consistency in judging native forms. This paper reports, for linguistically trained listeners with and without command of a language without contrastive stress, Telugu, just how consistently the location of primary stress or prominence is reported.

1. INTRODUCTION

Phonetic-phonological discussions of a language sometimes refer to a property X, and sometimes to a perceived property X. Thus, in the phonology of the English lexicon, the word *believe* may be said to have an initial voiced element or one perceived to be voiced. The distinction (supposing one to be intended) implies that there is a viable non-perceptual, i.e. physical definition of voicing. Some properties ascribed to speech are not of this kind; thus, to say that the second syllable of *believe* is perceived as stressed is not different from simply asserting it to be stressed, since there seems to be no reliable independent acoustic basis for defining the feature of stress [4]. Whereas we can point to a mismatch between voicing and perceived voicing, we cannot similarly claim perceived *believe* is "really" something else.

Most of the literature on stress takes for granted the stress status of a linguistic sample, and addresses itself to the search for its physiological and/or acoustic correlates. No doubt nearly all linguists who speak English natively would agree on the stressing of *believe*, and the truth of the assertion about its stressing is entirely a matter of the degree to which it is accepted by the community of "competent observers." Linguistic opinion on that "community" is not clear. Is training in phonetics and phonology enough, or, as per Jones [2] and Chomsky and Halle [1], must one also have native control of the language? Aside from the fact that few of us explicitly disqualify ourselves as judges of languages not our own, the second requirement would render questionable, if not entirely nugatory, a large part of the literature on stress, including that dealing in general characterizations of languages. Presumably a minimum requirement is a certain degree of consistency in judging native forms, as well as agreement with other observers presumed to be equally or better "qualified." So while it is probably true that stress rules for English are largely the work of English-speaking linguists, stress in other languages has certainly not been pursued exclusively by those with native command. Hyman [3], for example, surveying accounts of some 444 languages, raised no question of observers' competence by this criterion.

In Hyman's survey languages are classified into those with contrastive stress and those with either a fixed or otherwise "predictable" pattern over the word. Of several Indian languages included in the survey a number, including Telugu, are described as

having "dominant initial stress." The basis for this assessment of Telugu seemed doubtful to us (although it has been reported that Telugu speakers tend to stress the initial syllables of English words [5]), and the present research was undertaken to establish a proper empirical basis for a description of stress in the language. Another purpose of the study was to compare the consistency of stress judgments rendered by observers of roughly similar levels of linguistic sophistication, but with very different levels of competence in the language under examination, in order to test the proposition that a difference in language command plays a considerable role in determining consistency of stress perception.

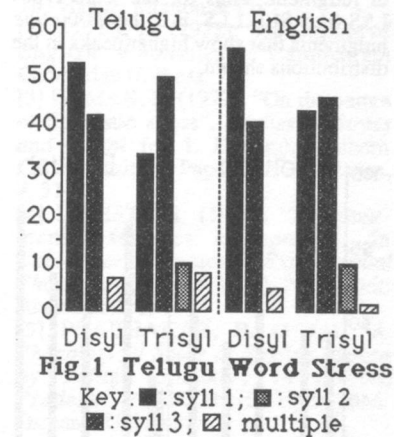
2. PROCEDURE

A list of randomly ordered di- and trisyllabic Telugu words was recorded by a single native speaker of the language. Each word was pronounced with a pitch fall on the final syllable. There were thirty disyllables and twenty trisyllables in the list, one token per word. Since in Telugu both vowels and consonants have distinctive length, and since vowel length or syllable "weight" are known to be factors in other accentual systems, words chosen included various combinations of short and long vowels (and light and heavy syllables). Two groups of listeners were tested: ten Telugu-speaking graduate students in linguistics with training in phonetics, all with a knowledge of English; 2) fifteen English-speaking linguists, none with any previous exposure to Telugu. Listeners were provided with the words in standard broad transcription, and were asked to respond to the recorded words, as these were presented over a loudspeaker in a reasonably quiet room, by marking the location of primary stress, with the option of selecting more than one as "equally stressed." Two responses per word were elicited from each test subject.

3. RESULTS

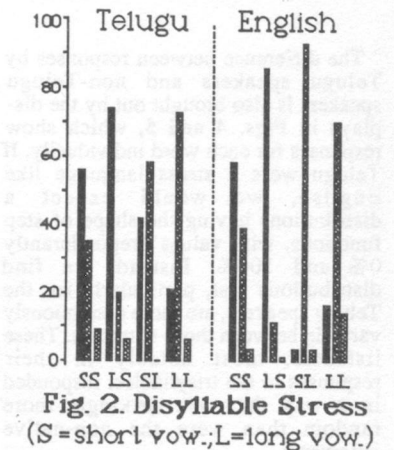
The responses by our Telugu and English speakers are tabulated in several ways in Figs. 1-5. From Fig. 1 it

seems clear that there was no very large difference between the two listener groups, and that neither showed any strong preference for selecting initial syllables as the bearers of primary stress. If anything, the penultimate syllable was somewhat more often chosen as the locus of primary stress.



Disyll Trisyll Disyll Trisyll
Fig. 1. Telugu Word Stress

Key: ■: syl1 1; ■: syl1 2
■: syl1 3; ▨: multiple



SS LS SL LL
Fig. 2. Disyllable Stress
(S=short vow.;L=long vow.)

When stimuli are grouped on the basis of their vowel composition, as per Figs. 2 and 3, it is again clear that there is no great difference between the groups. Disyllables with no long vowel are somewhat more often reported as trochaic, but in trisyllables with only short vowels it is the second syllable that is most often judged to be stressed. Moreover, the English speakers show a somewhat greater degree of consistency of judgment. Thus for the word types LSS SLS SLL LLS, it is the *nonnative* judgments that show higher peaks in the distributions shown.

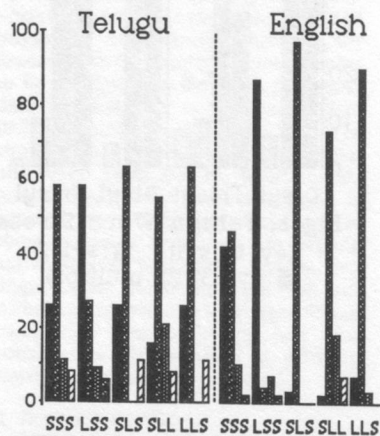


Fig. 3. Trisyllable Stress

The difference between responses by Telugu speakers and non-Telugu speakers is also brought out by the displays in Figs. 4 and 5, which show responses for each word individually. If Telugu were a stress language like English, we would expect a distributions having the shape of step functions, with values preponderantly 0% and 100%. Instead, we find distributions that, particularly for the Telugu speakers, are more continuously variable between those extremes. These listeners, most notably in their responses to the trisyllables, responded in a way that was strikingly more random than were the non-native judgments.

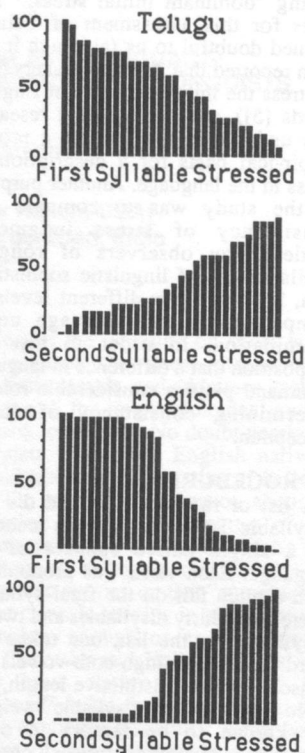


Fig. 4. Judgments of 30 Disyllables

The original motivation for the exercises just described was to characterize stress or prominence patterns for Telugu, presupposing such to be universal features of speech, in order then to proceed to a search for acoustic properties marking these patterns. To some extent both kinds of listeners showed a preference for locating stress on the last long vowel of a word, and that would seem to answer our original question. But the notable failure of the Telugu listeners to respond as categorically as the English speakers calls for explanation, and there is little enough that can be mustered to account for this aspect of our data. We hesitate to conclude that the greater consistency of judgments by the non-Telugu speakers means that they are a "better" guide to stress in the language, for that would

be to assume that we already know what we are trying to find out: the truth of the matter.

4. ACKNOWLEDGMENTS

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5. REFERENCES

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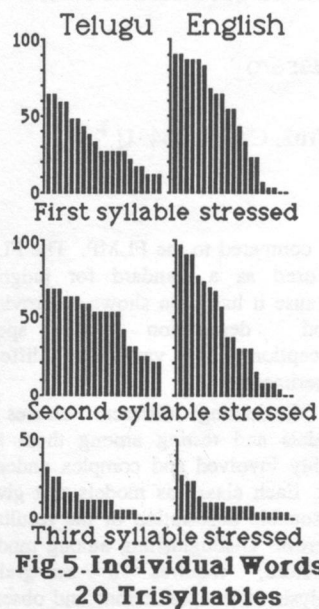


Fig. 5. Individual Words 20 Trisyllables