

Effect of Familiarity on the Performance of Subjects in a Competing Message Task *

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The main aim of this study was to study the effect of an unknown language as a competing message on the discrimination scores.

Speech discrimination scores were obtained for 100 normal hearing adults for two digit numbers embedded in sentences in the presence of competing message. The competing signals consisted of sentences spoken simultaneously by two males and a female. The primary and competing signals were presented together monaurally. Five signals-to-noise ratios, -12 dB, -6 dB, 0 dB, +6 dB and +12 dB were employed. Ninety-two of the 100 experimental subjects were tested in quiet using similar test materials (Control conditions I and II). Discrimination score was defined as the number of digits in sentences correct out of the total number presented. The score was expressed in percentages. Articulation curves were obtained for subjects in both the experiments.

Statistical analysis revealed that the signal-to-noise levels, languages, and the interaction between them were significant.

The following conclusions seem warranted :

- (1) Discrimination scores are better when the language of the competing message is not familiar to the subjects.
- (2) Significant differences are found in the discrimination scores when the subject is familiar with the language of the competing message.

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- (3) Performance on speech discrimination increases as the signal-to-noise ratio decreases.

Suggestions for Further Research

- (1) Further research may be done using the present study on the clinical population, viz., sensori-neural loss and conductive hearing loss cases.
- (2) Discrimination scores may differ if the test material is presented binaurally than when presented monaurally.
- (3) Since English and Telugu have nothing in similarity, a study could be undertaken on two very similar languages in a competing message task.
- (4) The effect of familiarity of the competing message on the discrimination score for aided listeners could be undertaken for further research.
- (5) The effect of different languages (familiar and unfamiliar) in the competing message on the discrimination of the primary stimulus could be studied. *E.g.*, If primary message is Telugu, then the competing message could have two different language combinations, viz., Telugu + English + Telugu. Several such combinations in the background message and the effects on discrimination scores could be studied.
- (6) A separate study could be undertaken to see what happens if the instructions to ignore the competing messages are not given.