AN OBSERVATION ON SHADOWING ONE'S OWN SPEECH

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Introduction

The process of shadowing involves a subject copying the speaker's continuous connected speech. Cherry (1953) a tele-communication engineer first noted this phenomenon. He explained phenomenon based on the feedback concepts and emphasised the importance of auditory perception in this process. Marland (1957) applied this method in treating stutterers with the idea that auditory perception might be affected in stutterers. The improvement in the fluency of the shadower was explained by the phenomenon of ' Transfer of auditory perception'. However, the available reports on this aspect of shadowing is scanty. Wingate (1976) reports that there has been little systematic description of subjects speech while shadowing'. Shadow speech is not a faithful copy of ordinary speech as it lacks normal prosody. It is poorly articulated. Sergeant (1961) independently noted that in ' concurrent repetition' intelligibility scores did not improve beyond 68 per cent even with slower rate and high intensity of speech stimulus. It also happens that shadow substitutes the culture specific equivalents for slightly different words like ' air-plane ' for ' aeroplane ', he may add words of semantic equivalence. These evidences clearly contradict the idea that shadower's speech is controlled by a transfer of his auditory perception.

The analysed observable change in speech while shadowing as stated by Wingate are: (1) reduce rate of speech; (2) emphasis on phonation, with reduction of stress contrasts and (3) subordination of consonant articulatory gestures.

The present study attempts to answer how the feedback may be disturbed if one shadows his own speech. The subject concurrently repeated his own recorded speech which is fed to his ears. It is hypothesized that this may act like an ' early feedback'. An acoustic pattern being fed to the ears when a similar pattern is being processed for production may bring change in the output.

Methodology

Seven Kannada speaking adults were first asked to shadow the experimenter's reading for 5 minutes. The other experimenter noted the dysfluencies such as long pauses (as and when the subject waits to hear the reader), omission of words, repetitions, hesitations and changes in the word.

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Later the subjects were asked to read a different passage for 5 minutes. It was recorded. The subjects were asked to shadow their own recorded speech. An interval of at least 24 hours was given in order to minimize the effect of adaptation. Subjects were asked to adjust the intensity output of the recorder through the earphones at a comfortable level. Dysfluencies were noted while the subject was shadowing his own speech.

Of the seven subjects, 5 exhibited more marked dysfluencies. All the subjects increased the loudness of their voice and exhibited pre-phonation. A few subjects reported that they could not shadow well, as there was noise of the tape recorder which was interfering. Therefore some modifications and necessary changes were made.

The experimenter read a passage at a rate of 90 words/minute which was recorded on a cassette. Five different adult subjects shadowed the recorded passage at comfortable intensity levels. The exhibited dysfluencies were noted. Then the subjects were asked to read a different passage at the rate of the experimenter's reading—which they had to shadow later. This was recorded. After an interval of at least 24 hours, subjects shadowed their own speech. The dysfluencies were noted.

Results and Discussions

The dysfluencies observed during the shadowing of one's own speech, and shadowing the experimenter were compared. There was an increase in range of 43 per cent to 314 per cent when they shadowed their own speech. One subject showed a decrease in dysfluencies by 15 per cent.

It is of interest that all subjects showed many different kinds of dysfluencies in shadowing their own speech than the experimenter's. Pauses, hesitations, repetitions, omissions, and word changes were the kind of dysfluencies observed when they were shadowing the experimenter's speech. During shadowing their own speech, they exhibited repetitions of initial syllables; final syllables; part words; prolongations; extraneous addition of vowel ' a '; distortions; substitutions ; hesitations; omissions of words, part words and word changes. Shortening of vowels, monotony in pitch and prevocalization were also observed. Increase in loudness was observed in common among all the subjects. The increase in kinds and number of dysfluencies may be because of the disturbance in auditory feedback. Subject's own speech stimuli may be acting like an early feedback. Pre-vocalizations observed in the subjects could not be explained here. However, such behaviour is observed among cerebral palsied children, wherein the feedback disturbances are obvious.

The rate of speech was observed to be fast though it was not calculated in the study which could be for the compensating for the pauses they exhibited. Under DAF, the speech rate reduces. The converse may happen under the

'early auditory feedback' Mysak (1976), reports that in the accelerated speech feedback (wherein AC signal is feedback through electronic acceleration) the speech rate may be increased.

The increase in loudness in these subjects may not be because of the Lombard effect as it is not the noise but the stimuli which they had to concentrate on, which was at a comfortable loudness level. The increase in intensity could be a result of subjects attempt to have an increased BC feedback, which supports Wingate's view that shadower's speech is controlled by transfer of auditory perception is not right. Thus, it may not be the transfer of auditory perception which increases fluency but it is the disturbances in perception and changes in the speech process which brings about the improvement using the method ' shadowing'.

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