

Disfluencies in English Speaking Young Adults: A Supplementary Study in Indian Setup

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Abstract: *Non fluency is one of the several components of a speech several component of a speech task which initiate the event of disruptions in the ongoing flow of speech. Several studies have attempted to analyse the types of disfluencies and frequency of its occurrence in normal speaker to ascertain the effect it has on speech. The main aim of the study was to assess the common disfluencies observed in 18 to 20 year old Indian adults who use spoken English. The focus of the study was to evaluate a diverse range of disfluencies that occur with various settings namely general conversation, story narration and monologue tasks. In all, there were mainly five types of disfluencies that were observed in them- pauses, repetitions, interjections, revision and prolongations; which do not affect the speech considerably but are present since an increased planning time is required for the rapid flow of speech. The present study has demonstrated that the normal speakers in the age range 18-20 years demonstrate a large number of disfluencies, notably pauses, repetitions and other disfluencies such as interjections, revision etc. The percentage of the disfluency increases marginally from conversation to monologue; revealing highest percentile of disfluencies in the monologue task. This is in harmony with the findings in a study done by Shriberg(2001),who claims that unlike read or laboratory speech,spontaneous speech contains high rate of disfluencies(e.g.; repetitions,repairs,filled pauses,false starts). In addition, the study done by Chacko (2008) supports the above findings. Further attempts can be made to study the effects of suprasegmental features of speech on fluency, the various factors giving rise to disfluency and the effect the other parameters of speech have on fluency. The results of this study reveal that the proportion of filled and unfilled pauses are predominant in both conversational speech and monologue tasks.*

Key words: *Disfluency, Second Language, Young Adults*

1. INTRODUCTION

Disfluency has been defined by the American Speech Language and Hearing Association (ASHA, 1999) Special Interest Division (SID, 1999) 4, as speech that exhibits deviations in continuity smoothness and ease of rate and effort. Non fluency is one of the several components of a speech task which initiate the event of disruptions in the ongoing flow of speech. Several studies have attempted to analyse the types of disfluencies and frequency of its occurrence in normal speakers to ascertain the effect it has on speech.

In countries like India, understanding Bilingualism is important because almost all adults in various parts of the country speak more than one language. The second language that they utilize can be termed as the non fluent speech or L2 which can give rise to various forms of disfluencies.

Speech disfluencies are of any specific grammatical construction and occur within the flow of otherwise fluent speech. The characteristics of disruptions of fluent speech are; *Filled pauses* such as “uh”, “hmm” which are distinct from sounds and words associated with the fluent text. *Unfilled pauses* are characterized by silence that affects the smooth flow of speech. *Repetitions* includes syllable repetitions (*buh-boy*), *part word repetitions* (*abou-about*), *phrase repetitions* (*I was I was going*) and *sentence repetitions* is the repetition of the whole of meaningful unit. *Paranetical remarks* are characterized by fillers like: “that” “this”, “then”, “later”, “u know” etc. *Revisions* refers to the content of the phrase that is modified or there could be a grammatical modification as in “*I was I am going*”.

Several studies have attempted to analyse the types of disfluencies and frequency of its occurrence in normal speakers to ascertain the effect it has on speech. Disfluencies in 5.1 to 6 yr old Kannada speaking children were studied by Anjana and Savitri (2007). Frequency and types of disfluencies and effect of gender on disfluencies were analysed. Results showed that majority of the children had almost all the disfluency types. The most prominent disfluency type was sound repetition.

A preliminary study on the speech disfluencies in English speaking Indian adult was accomplished by Chacko(2008).The main aim of the study was to assess the common disfluencies observed in 22-25 year old Indian adults who use spoken English. Speech samples were collected for 2 minutes, each for 3 different conditions; reading, monologue and general conversation. In conclusion, there were mainly five types of disfluencies that were observed in them- pauses, repetitions, interjections, revision and prolongations; which do not affect the speech considerably but are present since an increased planning time is required for the rapid flow of speech. She concluded that type of disfluencies present in adults is quite normal and do not affect speech considerably. Jocine, Fernandis & SubbaRao (2009) studied disfluencies in 4-5 year old normal bilingual children and concluded that the type of disfluencies present in English speaking Indian children are filled pauses, interjections, word repetitions, prolongations and phrase repetitions.

As it is evident from the review, few Indian studies have been done on normal English speaking Indian adults. Research is still needed to specify the number and type of speech disfluencies that occur in the speech of this population.

Aim: The current study aimed to investigate the various types of disfluencies and their patterns which typically occur in 18-20 year old normal Indian English speaking subjects.

2. METHOD

2.1. Subjects

Ten normal English speaking adults in the age range of 18-20 years served as the subjects. Even though their mother-tongue varied from subject to subject, all of them predominantly used English as their second language and hence considered it as their second most proficient language. The subjects chosen graduated from an English medium school and pre-university setups. They were exposed to English in majority of the times, either at school or with their peer group. All subjects were screened for the structural and functional integrity of the oral speech mechanism, hearing loss and only with those adequately functioning oral speech mechanisms were considered for the study.

2.2. Procedure

Spontaneous speech samples of ten minutes were collected in the English language. The tasks were; General conversation, which involved the topics such as Name of the subject, his/her daily routines, hobbies and overall general description of their respective personalities. Story narration task was also carried out where the subjects were asked to narrate any story of their choice. Finally, a monologue task was given in which the subjects were asked to speak on a topic (e.g sports, entertainment etc) for atleast 2 minutes.

A quiet sound treated room was selected for recording purpose. The subjects were seated comfortably on the chair at a distance of 1 feet from the laptop placed on the table. Each subject's speech was recorded individually using a standard laptop computer with inbuilt microphone with the help of the Praat voice recording and analysis software 5.1 Version (Boersma & Weenick, 2009). Sampling rate was 44100 Hz and quantization level set at 16 bits.

2.3. Data Analysis

A subjective transcriptional analysis was performed and the number of words and disfluencies were noted and marked to determine the types of errors that occur in the non fluent speech. The various types of disfluencies like repetitions, prolongations, interjections, parenthetical remarks as well as revisions were analysed (Yairi, 1981).

Percentage of each Disfluency = Total no. of Particular Disfluency / Total no. of Disfluency x 100

Percentage of Disfluency = No. of Disfluency / Total no. of words x 100

3. RESULTS

Table 1

Types of Disfluencies	Avg. of one Typical subject in Chacko (2008)	Avg. of one typical subject in the present study
FP	27.27	15
UP	---	2
SR	---	
WR	45.45	
PWR	---	
PR	---	-----
R	45.45	
P.R	18.18	5
RE	9.09	---

[D=Disfluency/Dysfluency, Sub = Subject, FP=Filled Pauses, UP=Unfilled Pauses, SR = Syllable Repetition, WR=Word Repetition, PR=Phrase Repetitions, PWR=Part word Repetitions, P.R=Parenthetical Remarks, R=Repetitions, RE=Revision, TP= Total Percentage]

Table 1 shows the distribution of disfluencies in typical subject in Chacko (2008) and the disfluencies of typical subject in the current study. These two subjects showed the maximum number of disfluencies among the samples. As per table, the most common disfluency types seen in both studies are Filled pauses, Unfilled pauses and Parenthetical Remarks. Hence, only these types of disfluencies are used in further comparisons.

Type of disfluencies seen in each subject was counted and their occurrence is given below.

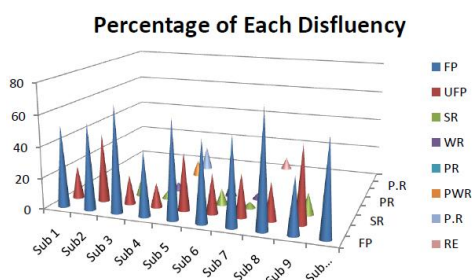


Figure1. Percentage of each disfluency = total number of particular disfluency / total no. of disfluencies X 100.

[D=Disfluency, Sub = Subject, FP=Filled Pauses, UP=Unfilled Pauses, SR = Syllable Repetition, WR=Word Repetition, PR=Phrase Repetitions, PWR=Part word Repetitions, P.R=Parenthetical Remarks, R=Repetitions, RE=Revision]

Figure 1 shows the percentage of each disfluency types among the subjects. As can be seen, number of filled pauses & unfilled pauses occurred ranged from 35-60% & 15-40% respectively. Subject 4 showed least number of filled pauses while subject 3 showed highest number of filled pauses. More number of unfilled pauses was noticed in subject 2 & least in subject 1. Maximum number of filled pauses & unfilled pauses was seen among all the subjects, followed by syllable repetitions, word repetitions and part word repetitions, which were noticed among few subjects in the data and revisions were exhibited only by two subjects.

Number of disfluencies were noted and marked. Percentage of each disfluency type was calculated as the ratio of number of disfluencies to the total number of utterances multiplied by 100. I.e. Percentage of Disfluency = Number of Disfluencies/ total number of words X 100.

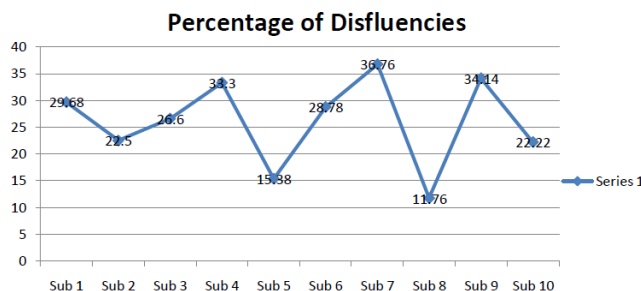


Figure2. Percentage of Disfluencies across Subjects

[D=Disfluency, Sub = Subject, FP=Filled Pauses, UP=Unfilled Pauses, SR = Syllable Repetition, WR=Word Repetition, PR=Phrase Repetitions, PWR=Part word Repetitions, P.R=Parenthetical Remarks, R=Repetitions, RE=Revision]

The above graph shows the percentage of overall disfluencies occurred in each subject during the conversation and picture description tasks. As can be seen, the overall percentage of occurrence of disfluencies ranged from 11-36%. Subject 8 showed least number of disfluencies and subject 4, 7 & 9 exhibited greater number of disfluencies comparatively.

4. DISCUSSION

The present study revealed that normal English speaking Indian adults exhibited higher number of filled and unfilled pauses followed by parenthetical remarks. The other disfluencies like syllable repetitions, word repetitions, phrase repetitions and revisions were noted but considerably less in number in all three tasks.

A demonstration of a large number of disfluencies notably pauses; repetitions and other disfluencies such as revision etc have been noted. The percentage of the disfluency increases marginally from conversation to monologue, revealing highest percentage of disfluencies in the monologue task. This is in harmony with the findings in a study done by Shriberg (2001), who claims that unlike read or laboratory speech, spontaneous speech contains high rate of disfluencies (e.g.; repetitions, repairs, filled pauses, false starts). In addition, the study done by Chacko (2008) supports the above findings. The results of the present study are also in agreement with Jocine, Fernandis & SubbaRao (2009).

In addition, The results reveal that the proportion of filled and unfilled pauses are predominant in both conversational speech and monologue tasks, which supports the finding by Misono(1986), Sugito(1987) and Kiritani,(1989), who said that the combination of pauses occur more frequently in a lecture-style speech when compared to reading. Moreover, the pattern of disfluencies obtained in the above study are in accordance to the study by Yaruss and Gregory et.al(1998), who emphasized on the more typical and less typical disfluencies observed in the normal speakers.

5. CONCLUSION

The current study attempted to determine the type of disfluencies and the frequency of its occurrence in normal English speaking Indian adults under differing circumstances. It thus provides us a base for determining the normative disfluency scores in an Indian English speaking individual. Further attempts can be made to study the effects of suprasegmental features of speech on fluency, the various factors giving rise to disfluency and the effect the other parameters of speech have on fluency; Comparison of normal non -fluency in English and its effect on other Indian languages under different conditions.

Though this study has established common guidelines regarding the various types of disfluencies which are mostly prevalent in an age-specific population, it faces certain limitation of not taking up more subjects. Therefore a more extensive sample size would provide a clearer indication of the type of disfluencies being prevalent.

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