A Preliminary Investigation of Completion and Interrupting Behaviors during Interaction Involving Adults Who Stutter

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Abstract

The current research paper has reported how Completion and Interrupting behaviors, also known as turn-taking behaviors, exhibited by two male adults-with-stuttering disorder (AWS) as Conversational Partners (CPs) were invoked in response to the stuttered speech of another male AWS as their Speaker during face-to-face conversations in Hindi. The paper has discussed the preliminary findings based on two separate conversational speech samples that were drawn from the cohort of forty-four Hindi conversational speech samples collected during the doctoral studies for a larger investigation. The relevance of investigating <u>impaired</u> conversations in Hindi stemmed from the realization that understanding the actual reasons for communication breakdown in AWS would eventually help the speech clinicians in highlighting specific circumstances to AWS clients that invoke their fluent-speaking listeners to exhibit such behaviors during daily conversations, and thus, incorporating therapeutic methods to reduce the negative emotional content of AWS while encountering such behaviors during speaking situations. The larger investigation of the current study was supported in full through the Full-Term Centrally Administered Doctoral Fellowship, Indian Council of Social Science Research, Ministry of Education, Government of India (<u>File No</u>: RFD/2017- 18/LING/GEN/304).

Keywords: Stuttering Disorder, Turn-Taking Behaviors, Completion behavior, and Interruption behavior.

Introduction

Verbal interaction in our society is considered as one of the most fundamental, distinct, and universal features for human existence on this earth (Bavelas, Hutchinson, Kenwood, & Matheson, 1997; Clarke, 1996). It is a way of exchanging information between a speaker, and a listener in a systematic manner to achieve the objectives of the said interaction. This *exchange of information* is often expressed in terms of "*content, syntax, intonation, suprasegmental features, language, and body motion*" (Duncan, 1972). Unlike those researchers who have had attempted to examine the above-mentioned aspects in isolation under experimental conditions, and not from a holistic point of view; psychological anthropologists, and linguistic anthropologists, on the other hand,

affirmed this necessity of understanding these human actions in real-time in the realm of face-to-face interaction (Goodwin & Heritage, 1990). Thus, the examination of various aspects of face-to-face interaction came to be known as *Conversation Analysis* (CA).

CA emerged and developed through the tedious and collaborative research works of Harvey Sacks, Emanuel Schegloff, and Gail Jefferson and their students in the 1960s-70s (Sidnell, 2016). Before the 1960s, much of the ideas about CA were centered around how people should speak. However, after the 1960s, this perception about CA gradually changed and emerged as to how people actually speak in the social settings when scholars such as Garfinkel, Sacks, Schegloff, and Jefferson began to look at the interactions between individuals in an "*orderly, coherent, and meaningful manner*" (Have, 2007). This was then a critical, and important departure from the underlying assumption about CA. For many years, analyzing naturally occurring "*ordinary*" conversations continued to be the major thrust among sociologists, anthropologists, ethnologists, and CA researchers to understand 'what' and 'how' individuals converse with each other. However, in recent times, the examination of naturally occurring "*impaired*" conversations has begun to receive much attention in the field of stuttering disorder outside the clinical settings.

Stuttering is an intermittent, involuntary, and developmental fluency disorder which begins at around 2 to 4 years of age in children (Yairi & Ambrose, 2005 as cited in Langevin, Packman, & Onslow, 2010, p. 407), with many of them (~80%) recover from it without any clinician's intervention (Craig, Hancock, Tran, Craig, & Peters, 2002; Dworzynski, Remington, Rijsdijk, Howell, & Plomin, 2007). On the other hand, the remaining population (~ 20%) continues to stutter for the rest of their lives (Bloodstein, 1995, as cited in Craig & Tran, 2005, p. 41). It is primarily characterized by overt speech disruptions such as part-word repetition (e.g., ba-ba-ba-bat); single-syllable whole word repetition (e.g., and-and-and-and); audible prolongation (e.g., ppppppppet); and silent block (e.g., ba-g) (Yairi & Seery, 2015, p. 11). Many times, these speech disruptions are also visibly marked with tense and struggle-filled ancillary behaviors such as the production of distracting sounds; gaze aversion; head movements; arm jerking; finger-tapping; lip pressing; nostril-flaring; tongue protruding; eye-blinking; the extraneous movement of the limbs; and facial grimacing, etc. (Bloodstein & Ratner, 2008; Van Riper, 1973). With an increase in severity, the extent of receiving negative feedbacks for children who stutter (CWS) about their stuttered speech from their listeners has also been well-documented throughout the stuttering literature (Hugh-Jones & Smith, 1999; Davis, Howell, & Cooke, 2002). This continuous exposure of negative environment for CWS throughout their lives not only led to the development of avoidance strategies in them that extends to specific sounds, persons, or speaking situations (Bloodstein, 1995; Kalinowski, 2006), but they also tend to develop a repertoire of negative attitudes

associated with speaking styles of AWS, the impact of the stuttering disorder can be realized from the fact that it not only affects the functional communicative capability of AWS in daily activities but it also seems to have an impact on their CPs (or, Adults-without-stuttering disorder) during speaking situations by evoking them to exhibit specific turn-taking behaviors in response to their stuttered speech during conversations.

Most research studies, up until now, has focused on examining the role of verbal behavior of parents in the development of the stuttering disorder in young children in the stuttering literature. Very few research studies have actually focused on examining the role of verbal behavior of CPs while interacting with AWS in a dyad as a parallel line of investigation. To the first line of investigation, the effect of verbal behavior of parents such as speaking rates, interruptions, and response time latencies, etc. on the fluency levels of their children during the conversation was strongly influenced by Wendell Johnson's (1942) "*Diagnosogenic theory*" of stuttering. The theory argued that negative reactions of parents towards the speech of their children filled with normal hesitations and repetitions cause the child to stutter (Nippold & Rudzinski, 1995). However, both clinical and non-clinal research studies have failed to provide any substantial evidence in support of the theory proposed. For example, Egolf, Shames, Johnson, & Kasprisin-Burrelli (1972) marked the production of verbal recriminations by parents such as "*interrupting the child, asking multiple questions, using sarcasm,* and *making comments*", might have resulted in the development of speech disfluencies in CWS. Therefore, parents of CWS were advised to module their verbal behaviors to facilitate fluency in their children with the stuttering disorder (As cited in Nippold & Rudzinski, 1995, p. 979). Similar to this line of investigation, parents were also asked by speech clinicians to use more positive reinforcements such as praise, humor, or encouraging questions (Kasprisin-Burrelli, Egolf, & Shames, 1972), and employ methods such as syllable elongation, and pausing between words to achieve slower speech rate while talking with their stuttering child (Stephsenson-Opsal & Ratner, 1998).

Some new research studies have, however, shifted the focus of investigation towards CPs verbal behavior in response to the stuttered speech of AWS. For example, Lee, Van Dulm, Robb, & Ormond (2015) measured and compared the linguistic output such as language productivity, complexity, politeness, and appraisal produced by AWS during a conversation with adults-who-did-not-stutter (AWNS). The findings of the study suggested that due to negative attitudes of AWS towards their own speech, along with the fear of the occurrence of stuttering events during the conversation with AWNS, they used several avoidance strategies such as refraining themselves to speak and thus, allowing their partners to speak more, etc. This resulted in reduced verbal output with shorter, and less complex utterances for AWS. Similar to the

previous research idea, a follow-up clinical study was conducted by Lee, Robb, Van Dulm, & Ormond (2016). The group revealed that after therapy AWS started to produce complex utterances of significant proportion while conversing with AWNS. While previous two research studies had focused on investigating linguistic output produced by AWS while conversing with AWNS, Freud et al. (2016) investigated the production of three common turn-taking behaviors, i.e., Word/Sentence Completion, Interruption, and Reinforcers by CPs while conversing with AWS Speakers. The research group revealed that CPs produced a significant proportion of Completions and Interrupting behaviors in response to the stuttered speech of AWS Speakers. On the other hand, CPs produced a significant proportion of Reinforcers as a backchannel signal when they encountered stuttered speech of a moderate AWS Speaker to encourage him to continue with his speaking turn, as opposed to mild AWS Speaker.

The *Turn-Taking Mechanism* is considered as one of the salient features of CA investigation (Wiemann & Knapp, 1975). It is the fundamental feature of a conversation that allows the interacting partners to take "turns" at regular intervals in a coordinated fashion by sending out turn-taking signals to each other (Duncan, 1972; Wiemann & Knapp, 1975). Duncan (1972) acknowledged four major types of turn-taking signals which are expressed in the form of behaviors during a conversation. These were (i) turn-yielding, i.e., the speaker yields a turn for his CP to take up the floor of conversation, (ii) turn-demanding, i.e., the CP sends out a signal to the speaker about his intention to take up the floor of conversation, (iii) attempt-suppressing, i.e., the speaker reluctant to give up the floor of conversation despite producing turn-yielding signals to the CP, and (iv) back-channel communication, i.e., the speaker sends out a signal to the CP to take up the floor of conversation but CP avoids taking up the conversational turn. Out of these four types, this research paper has focused on examining the instances where two of the selected turn-taking behaviors, *namely*, (i) Sentence Completion behavior, and (ii) Interruption behavior is generated in response to turn-demanding signals produced by AWS CPs when the AWS Speaker was reluctant to give up the floor during the two conversations. The relevance of investigating "*impaired*" Hindi conversations among AWS participants outside the clinical settings stemmed from the realization that not much is known about the conversational circumstances that invoke specific turn-taking behaviors from AWS CPs in response to the stuttered speech of another AWS Speaker. The preliminary findings from this investigation are expected to help the speech clinicians to highlight those specific circumstances to AWS clients that invoke their fluent-speaking listeners to exhibit such behaviors during daily conversations. And therefore, incorporating therapeutic methods to reduce their negative emotional content while encountering such behaviors during speaking situations.

Method

Recruitment Process: The recruitment of participants was considered as the first session of the research study. The researcher recruited potential participants from two speech communities. At the beginning of the study, the researcher arranged a small event in the Jawaharlal Nehru University campus (JNU) after a few initial interactions with male AWS participants of The Indian Stammering Association (TISA). The information about the event was spread through a WhatsApp Chat group of TISA organization. Around 27 male AWS candidates of TISA from Delhi-NCR region had attended the event. No female AWS candidates of TISA from Delhi-NCR region expressed interest for the event and thereof for the study. The researcher briefly explained the objective of the study and was then invited to take part in the study by asking them to fill out the *Profile Forms* for the researcher. Out of 27 male AWS candidates, 21 of them expressed their interest in the study, while the rest of them declined the invitation. The interested candidates filled out the *Profile Forms*. The researcher further informed them that their selection in the study would be solely based on the eligibility criteria of the study. And hence, they would be informed about their selection, via email or phone, along with the other details about the follow-up sessions. The entire administration of the recruitment of the AWS candidates took a day to finish. Once all the *Profile Forms* from all the interested AWS candidates were collected, the researcher then screened each of the *Profile Forms* to look for any missing responses in it. The forms were also examined to determine if the interested AWS candidates met the eligibility criteria of the study. The researcher, finally, selected 12 AWS candidates for the doctoral study. However, only 8 of them had actually completed the entire doctoral study.

Profile Form: This form was primarily designed to identify potential participants, based on the inclusion and exclusion criteria required for the study. It was a pencil-paper form. The form was distributed among interested AWS candidates at the time of the recruitment process. A total of forty-three questions related to their personal, educational, employment and socio-economic details were asked from AWS candidates at the recruitment event. They were asked to provide their responses either in English or Hindi in the space provided in the form. The filling up the *Profile Forms* took around 15-20 minutes for the participants to complete.

Participants: Out of 8 AWS participants, two randomly selected conversational speech data were drawn and investigated from three Hindi-speaking male AWS participants. The background information of AWS participants is shown in Table 1. The mean age of AWS participants included in the current investigation was 31.33 years (SD = 13.05), ranging from 21 years to 46 years. All AWS participants met the eligibility criteria of the study, i.e., (i) were above 18 years of age, (ii)

were not involved in any speech therapy programs, (iii) accepted themselves as AWS, and (iv) reported themselves as native Hindi speakers. Participants were not paid for their participation in the doctoral study. Informed consents from each AWS participant were obtained during the data collection process for the doctoral study. The larger investigation of the current study was approved by the Institutional Ethics Review Board, Jawaharlal Nehru University, New Delhi, India.

Table 1: Background Information on AWS Participants

Participant ID	Age (in years)	Sex	Mother Tongue	Educational Qualifications
NS	27	M	Hindi	B. Tech
SC	46	M	Hindi	Graduation
RR	21	M	Hindi	Pursuing B.A.

Reading and Speaking Materials: The reading and speaking materials were used to collect speech samples from AWS participants to evaluate their stuttering severities. The reading materials consisted of three Hindi oral passages. These passages were randomly selected from the question papers of Union Public Service Commission Main Subject Exam (Hindi) of the years 2015 (UPSC Hindi Mains Examination Paper, 2015, p. 2-3), 2011 (UPSC Hindi Mains Examination, 2011, p. 2-3), and 2012 (UPSC Hindi Mains Examination, 2012, p. 4-6). The passages were provided then with appropriate titles in Hindi. The researcher and another native Hindi speaker had counted and compared the number syllables in each of the three passages until full-agreement was reached between them. The three passages had a total of 898, 593, and 822 syllables in it. The selected oral Hindi passages were printed in Mangal font with a size of 14 on a plain paper.

Table 2: Number of Syllables Produced by AWS Participants During Speaking Tasks

Participant ID	Syllable Production During Speaking Tasks	
	Speaking Task 1 (Divided Attention Picture)	Speaking Task 2 (The Cookie Theft)
NS	129	164
SC	686	339
RR	118	101

Similarly, the speaking task consisted of two line-drawing black-and-white pictures, i.e., Divided Attention Picture (Marshall & Wright, 2007) and The Cookie Theft (Goodglass et al., 2000) that were used to describe the pictures in Hindi. Along the same lines of calculating the number of syllables in the oral passages, the researcher and another native Hindi speaker counted and compared the number of syllables produced by AWS participants while describing the pictures in Hindi until full-agreement was reached between them. The number of syllables produced

by each AWS participant during the two speaking tasks is given in the Table 2.

Stuttering Severity Instrument-4 (SSI-4): It is a standardized, reliable, valid, and sensitive diagnostic instrument which was used to diagnose and evaluate the severity level of stuttering disorder and speech naturalness among AWS participants (Riley, 2009).

Table 3: Stuttering Severity Levels of AWS Participants

| Participant ID	SSI-4 Measurement of Stuttering Severity of AWS Participants							
	A $(S_1 + S_2)$		B	C	Total Score	Percentile Rank	Stuttering Severity Level	S. N.
	S_1	S_2						
NS	5	6	8	6	25	41-60	Moderate	4
SC	6	8	10	9	33	78-88	Severe	6
RR	9	9	12	9	39	96-99	Profound	8

Note: S_1 = Speech Sample 1; S_2 = Speech Sample 2; A = Frequency Score; B = Duration Score; C = Physical Concomitant Score; Total Score = A+B+C; S.N. = Speech Naturalness Score

The researcher, along with a certified Speech-Language Clinician, diagnosed the AWS participants using the Stuttering Severity Instrument-4 (SSI-4). This was done by randomly selecting two speech samples from the cohort of five speech samples consisting of three reading and two speaking samples. This was then followed by watching over the recorded videos repeatedly to identify and count the number of stuttering-like disfluencies (SLDs) present in the two speech samples of each AWS participant. The researcher and the clinician followed the above-mentioned steps separately and compared their ratings with each other until full-agreement was reached between them. The stuttering severity levels of each AWS participant is shown in Table 3.

Selection of Conversational Topics: The researcher browsed various online websites of ESL education (Source: https://www.eslconv ersationquestions.com/englishconversation-questions/topics/; Retrieved on – 4th August, 2018) to get an idea about types of conversational topics to be used for the data collection. Besides, the researcher also visited several TISA self-help group meetings over the weekends to get an idea regarding topics of their interest for conversations. Eight argumentative conversational topics were, therefore, framed for doctoral study in the Hindi language. In the current research paper, only two of them are being analyzed for turn-taking behaviors.

Research Design: A recruitment drive was conducted for AWS candidates in the form of an event at the JNU campus. Those who expressed interest in the study at the event were asked to fill out the Profile Forms. AWS Candidates who met the eligibility criteria of the study were required to attend both the remaining two sessions of the study. During the second session of the study, speech samples were

collected by using reading and speaking materials from three AWS participants to evaluate their stuttering severity levels. Following this, the researcher had randomly assigned one of the AWS participants as Speaker (RR), and the other two of them as CPs (NS, & SC). During the third session, the Speaker had two separate conversations with each of the CPs in Hindi.

Figure 1. Schematic Illustration of the Research Design
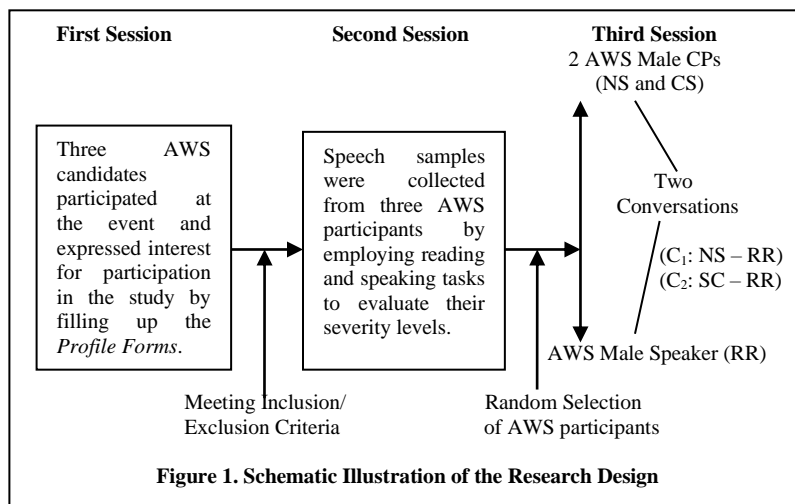
Process: The data collection procedure followed in the doctoral study was divided into three stages, *namely*, (i) recruitment of potential participants based on their inclusion-exclusion criteria of the study; (ii) collecting speech samples and gathering other relevant information about them through questionnaires; and (iii) conducting face-to-face conversations between participants. It should be noted that this research paper investigates only a part of the data collected during doctoral study. Therefore, the research process explained here is according to the objective proposed under the current investigation. The first stage of the study has already been explained under recruitment process section. However, the researcher discusses the following two sessions in detail. The second and third sessions of the research study were also conducted at JNU campus, New Delhi, India. The sessions were conducted on different timings over the weekends and eventually lasted for about two months. During the second session of the study, the researcher collected speech samples from AWS participants to evaluate their severities using the SSI-4. The samples were collected by employing reading and speaking tasks. At the beginning of the second session, an AWS participant was first asked to sit in a quiet room free from any disturbance. The participant was then instructed to read the consent form carefully and sign it. The participant was encouraged to ask or clarify any doubts from the researcher regarding the study. Once the researcher received the informed consent form from the AWS, the participant was instructed to sit on a comfortable chair facing towards the camera lens. A

Canon PowerShot SX40 HS camera was used for the audio-video recording of the speech sample collection process. The camera was placed

on a tripod at about 3 feet from the ground. Throughout the recording, a distance of about 2 feet was maintained between the camera lens and the participant's eye. The researcher then asked the participant to read out loudly three separate Hindi oral passages one-by-one according to their normal reading speed. Following the reading task exercise, the researcher then moved to the speaking task exercise. In this exercise, the researcher asked the participant to describe two line-drawing black-n-white pictures in Hindi shown it to them one-by-one. Participants were allowed to take their time while describing the pictures. They were constantly been encouraged by the researcher to provide any other relevant information which they wanted to add-in in the description of the pictures. The administration of both reading and speaking tasks with each participant took around 15-20 minutes to complete. Before the beginning of the third session, the researcher then randomly picked up NS (Moderate AWS), and SC (Severe AWS) as "CPs", and RR (Very Severe AWS) as "Speaker" in the study. During the third session, the Speaker and the CP were asked to sit on comfortable chairs at a distance of about 2 feet in between them and facing towards each other in one of the rooms located on the campus. Two Nokia 6 TA-1021 DS camera phones were placed on tripods in such a way that each of these cameras was facing towards one of the AWS in the conversational dyad. The researcher then read out instructions in Hindi to AWS participants in the conversational dyad that (i) all the conversational topics were written in Hindi on a piece of paper which were kept in a box placed in front of them, (ii) any one of the participants of the conversational dyad was responsible for reading out the topic aloud in Hindi so that both the participants were able to understand their topic of conversation, (iii) both the participants of the dyad were responsible for putting across their thoughts in Hindi only, and lastly (iv) a timer was placed for their convenience so that the participants could check their time and finish their conversation within a stipulated time period of fifteen minutes.

After listening to the instructions from the researcher, one of the participants in the dyad, either the Speaker or the CP, took out the paper of conversational topic from the box placed in front of them and read out the topic loudly for the other participant. After this, both the participants, Speaker and CP, began their conversation in Hindi. Once they were done with their conversation, a ten-minute break was given to the Speaker. Once again, a similar set of procedures were followed for the second conversation too.

Camera and Tripod: Audio-video recording of second and third sessions of the research study was undertaken during the data collection procedure. While only one Canon PowerShot SX40 HS camera and a tripod were used during the second session of the study. On the other hand, two pairs of Nokia 6 TA-1021 DS camera phones and tripods were used by the

researcher during the third session of the study.

Data Analysis

The conversational speech data collected from AWS participants were transcribed in two steps. During the first step, the researcher went over the two conversational videos repeatedly and transcribed "what has been said" in the videos in standard Hindi orthography. The researcher at this stage did not apply any coding scheme. And therefore, ignored the transcription of other interactional aspects such as coding of suprasegmental features, eye gaze, laughter, whispering, SLDs, & "other" normal disfluencies (ODs), etc. in the conversational transcripts. Once the orthographical transcripts were ready, the researcher then moved to the second step of transcript examination. During the second step, an integrated coding scheme was developed to mark both "ordinary" (Jefferson, 2004) and "impaired" conversations in the collected samples (MacWhinney, 2000; Ratner, Rooney, & MacWhinney, 1996) consisting of SLDs, ODs, eye gaze, and other non-verbal features (refer to **Appendix**). The application of two steps resulted in the generation of convention-based conversational transcripts.

Discussion

The current research paper examined two important turn-taking behaviors, i.e., Completion, and Interruption produced by two Hindi-speaking AWS CPs while speaking with another Hindi-speaking AWS Speaker in our conversational speech data. One of the reasons for selecting these two turn-taking behaviors in our study is that frequent complaints are being registered by AWS in their clinical reports where they mention how fluent speakers complete their words or sentences; and interrupt them regularly (TISA, 2016). Receiving such kind of behaviors from fluent speakers during conversations discourage AWS to socialize and converse with others in the future. However, very little is known if the same set of behaviors are being produced by AWS CPs themselves while talking with another AWS Speaker. Also, under what circumstances such instances of turn-taking behaviors are being produced by two Hindi-speaking AWS CPs is a subject for investigation in this study. Thus, the researcher critically examined two conversational speech data for locating instances of two turn-taking behaviors. It was found that even AWS CPs produced the selected turn-taking behaviors in response to the stuttered speech of AWS Speaker. These are explained below:

C₁: NS↔RR (Moderate AWS CP ↔ Profound AWS Speaker)

The researcher found only one instance of the production of Completion behavior by AWS CP (Moderate) in response to the stuttered speech of AWS Speaker (Profound). An excerpt from the conversation (C₁) is given below:

08 S {£→}: हाँ॒↓। ↑और **^^**मेरा   **^^**मानना   है   कि   **^^**आप   **^^**अगर

  hã:n↓ ↑ɔr   **^^**mera: **^^**ma:nⁿna: hai ki   **^^**a:p   **^^**agər

कि*(/↩)*सी को भी ^^बच्चा गों*(/↩)*द के लिए ^^दें↓ ^^तो

ki*(/↩)*si: ko bhi: ^^bəʧʧa: gõ*(/↩)*d ke lie ^^dẽ↓ ^^to

^^जाँच पर कर दे↓ (.) कि वो ^^परिवार उ*(/↩)*सके

^^jã:ʧ pər kər dẽ↓ (.) ki vo ^^pəriva:r u*(/↩)*sᵊke

स*(/::::::::::::::::::::::)*

s*(/::::::::::::::::::::::)*

(Long prolongation of 15 secs)

"Yes. And I believe that if you allow anyone to adopt the child, then do thorough investigation. To examine whether that family s………………………………"

09 CP {£→}: साथ दें↓।

　　　　sa:th dẽ↓

　　　"Support him".

10 S {£→}: साथ। हाँ↑। साथ दें उसका↑।

　　　　sa:th hã:n↑ sa:th dẽ uska:↑

　　　"Support. Yes. Support him."

In the above conversational dyad (C$_1$), AWS CP (Moderate) had shared his views on adoption policy in India with AWS Speaker (Profound). It is evident from the excerpt that due to profound stuttering severity level of AWS Speaker; it was extremely difficult for him to conduct talk-in-interaction without any communication breakdown with his partner. Under normal circumstances, Completion behavior is produced when a speaker could not able to finish his or her utterance within a stipulated time-frame. This inability can be extended to brief difficulty in searching a word for a moment or organizing thoughts into words. The CP, on the other hand, does not wish to take up the floor of conversation during such scenarios. While production of such behavior is considered normal by fluent-speaking communities during conversations. AWS, however, feels offended if their listeners try to complete their words or sentences. This has been frequently reported in the clinical reports of AWS (TISA, 2016).

In our case, both the interactants were diagnosed with stuttering disorder. Therefore, it is reasonable to believe that the approach of AWS partners towards each other in the dyad would be different from those who were not diagnosed with the stuttering disorder. And therefore, AWS partners in the dyad were assumed to be sympathetic to one another's speech struggle. It is because of this reason that when AWS Speaker prolonged the sound "s" for almost 15 seconds, AWS CP understood the speech

struggle of the Speaker, and realized that it was important on his part to intervene at this juncture to facilitate the Speaker to come out of his

stuttering event and eventually completes his sentence. Another possible explanation of exhibiting Completion behavior by AWS CP in the dyad can be drawn from the fact that while encountering a profound form of stuttered speech of AWS Speaker, AWS CP might have become extremely sensitive to the "time lost" during the conversation. This sensitiveness was extended to the fact that AWS CP might have mistakenly interpreted the signal from AWS Speaker as an indication for him to complete the sentence. Previous research studies have also shown that an extended long pause of more than 300 - 600 ms at dispreferred locations within utterance results in either dispreferred turn-switching format between CPs (Kendrick & Torreira, 2015) or non-aligned responses which are reflected in terms of the exhibition of turn-taking behaviors from other CP in a conversational dyad (Roberts, Margutti, & Takano, 2011). Therefore, the preliminary finding from our examination continued to be in line with previous research findings that Completion behavior is produced by AWS CP in anticipation to help the AWS Speaker in the conversational dyad, and not to offend him. It is, therefore, important on the part of speech clinicians to make AWS aware of such circumstances that generate such turn-taking behavior of CPs during daily life conversations.

Another turn-taking behavior that has found its place in the clinical reports of AWS is Interruption behavior. During daily life conversations, CP interrupts the utterances of Speaker when the CP attempts to take up the floor and the Speaker, on the other hand, reluctant to give up the speaking floor. However, when such behavior is exhibited by AWNS CP in a conversational dyad while conversing with AWS Speaker, the AWS Speaker feels humiliated and offended for not allowing him or her to put across his or her viewpoints on the floor of conversation. In a way, such speaking situations add up to their list of "*difficult speaking situations*" which restricts them to participate in future engagements.

C₂: SC↔RR (Severe AWS CP ↔ Profound AWS Speaker)

In the second conversation, the researcher found several instances of production of Interruption behavior by AWS CP (Severe) in response to the stuttered speech of AWS Speaker (Profound). However, due to space limitation, only one of the excerpts from the conversation (C₂) is discussed below:

27 CP {£→}: आपको↑ तो जब **[/]** वो आपसे ^^मिलने को ^^आई

a:pko↑ to jəb **[/]** vo a:pse ^^milne ko ^^a:i:

है↓। ↑या ^^आया है↓। देखने में तो अच्छा ही↓

hai↓ ↑ya: ^^a:ya: hai↓ dekʰne mẽ to aʧʧʰa: hi:↓

टीप-टॉप बनके ^^ही↓ तो आएगा आपके पास↓। या

ṭi:p-ṭa:p   bənke ^^hi:↓ to a:ega: a:pke pa:s↓ ya:

आएगी आपके   पास↓।

a:egi: a:pke   pa:s↓

"Whenever that person came to see you, he or she should have dressed up well to see you."

28 S {£→}: नहीं **+/.**

nəhĩ: **+/.**

"No".

29 CP {£→}: हमें↑   उसके बारे में ^^क्या पता↓ ↑कि अपने ↑वहाँ

hʌmẽ↑ uske ba:re mẽ ^^kya: pəta:↓ ↑ki   apne   ↑vəhã:n

ल(/↩)ड़ती है↓? ↑वो ^^↑कैसे र(/↩)हती है↓? ^^नहा

lə(/↩)ɽ̥ṭi: hai↓ ↑vo ^^↑kaise rə(/↩)hti: hai↓ ^^nəha:

^^धो के भी आई है कि नहीं? कि परफ्यूम   लगाया,

^^dʰo ke bʰi: a:i: hai ki   nəhĩ: ki pərəfju:m laga:ya:

🤚

फूस-फूस-फूस, मूँह गिला करा, मेकप   करा और आ गई।

fu:s-fu:s-fu:s mũ:h gila: kəra: mekəp kəra: ɔr   aa gəi:

"How do we know if she fights at her place? How she lives at her place? Whether she took bath or not? If she applied the perfume, made the face wet, applied makeup and came."

30 S {£→}: नहीं**+/.**

nəhĩ: **+/.**

"No".

31 CP {£→}: या आ गया। दोनों के लिए केह रहा हूँ। एक के लिए नहीं

ya: aa gəya: donõ ke liye keh rəha: hũ:n ek ke liye nəhĩ:

केह रहा   हूँ।

keh rəha: hũ:n

"Or he came. I am talking about both of them. I am not leaving out any one of them."

In the above conversational dyad, AWS CP (Severe) had shared his views on marriages in India with AWS Speaker (Profound). The researcher found that although AWS CP (Moderate) was considerably more

sympathetic towards AWS Speaker (Profound) by facilitating the Speaker to complete his sentence, in the middle of his stuttering events, without any intention to claim for the speaking turn. The same, however, cannot be said in the current conversational dyad. Throughout the conversation, it was found that AWS CP (Severe) did not give AWS Speaker (Profound) enough time to put across his viewpoint. And therefore, interrupted the utterances of AWS Speaker (Profound) quiet frequently. One of the plausible reasons for the exhibiting such behavior can be drawn from the fact that AWS Speaker had an extreme degree of stuttering severity level which might have had prompted the AWS CP to take up most of the conversation time by speaking up himself and hence, giving less time to the Speaker to share his viewpoint. Another plausible reason for the exhibition of this behavior could be related to the concept of "time loss". While conversing with AWS, CPs without the stuttering disorder (or, AWNS) usually feel the pressure of losing conversational time due to the occurrence of stuttering events. It is for this reason that, in normal daily life speaking situations, AWNS often intervene to claim their speaking turn so that a probable situation of communication breakdown for AWS Speaker can be avoided. It is, however, interesting that despite the involvement of both the participants with the stuttering disorder, AWS CP (Severe) exhibited similar turn-taking behavior while conversing with AWS Speaker (Profound), as reported in the conversational dyads involving AWS and AWNS participants (Freud, et al. 2016).

Conclusion

To conclude, it is evident from the preliminary examination of two conversational speech samples that AWS CP (Moderate) had produced Completion behavior in response to the stuttered speech of AWS Speaker (Profound). On the other hand, AWS CP (Severe) had produced Interruption behavior in response to the presence of AWS Speaker (Profound). The significance of understanding these two distinct findings stemmed from the realization that it is extremely important to take into account specific circumstances that result in the production of such turn-taking behaviors during conversations. In the first conversation (C_1), AWS CP (Moderate) had patiently listened to the viewpoint shared by AWS Speaker (Profound). This is reflected in the way AWS CP (Moderate) had positively reacted to the stuttering events of AWS Speaker (Profound). On the other hand, in the second conversation (C_2), AWS CP (Severe) had premeditated chalked out the plan at the beginning of the conversation on how to put across his viewpoints while conversing with AWS Speaker who had a more severe form of stuttering disorder than him. Therefore, the instances of Interruption behavior were produced more frequently in the presence of AWS Speaker (Profound) than actually confronting the stuttered speech of AWS Speaker (Profound) by AWS CP (Severe). These circumstantial situations highlight the complexities of the conversational dynamics between the interactants in the dyad. The preliminary findings not only support the viewpoint that turn-taking

behaviors are produced in response to the disordered speech of an individual. But it is also produced in response to the negative attitudes or stereotypes generally held by AWNS towards AWS. Although in the presence of only two conversational speech samples, it is not possible to generalize our findings to the entire AWS community. But the findings have certainly paved its way to model the speech therapy programs in such a way that AWS clients know and understand specific points in the conversations that send acoustic signals of their stuttering events to the listeners and therefore, invoke verbal behaviors as a reaction to such actions.

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Appendix

Transcription Symbol

Sequencing

[A *single-left bracket* indicates the starting point of overlap.

] A *single-right bracket* indicates the ending point of overlap.

= A pair of *equal-signs* one at the end of a line, & the other at the beginning of a next line, indicate two scenarios:

a. If two continuous utterances produced by one speaker are joined by a pair of equal signs then it indicates that no pause or break was taken. This series of continuous utterances could also be broken down to accommodate overlapping or interrupting talk in between it. For example:

A: I went to the market=

B: [Oh really!!]

C: =[and saw J]ohn over there.

b. If two utterances are being produced by two different speakers, then the second utterance is "latched" to the first utterance, indicating no silence between the two utterances. For example:

A: =I got book from Rose.

B: =Alright.

Time-Interval

(.) *Dot in parentheses* indicates a brief interval (+/- a tenth of a seconds) within or between utterances.

Gesture

A *picture of a man with a downward block arrow* indicates nodding of head of the person in agreement.

A *picture of hand* indicates hand gesture to perform non-verbal action. This is shown above the utterance.

-x- A *hyphen with a cross in the middle followed by another hyphen* indicates laughter. This is shown above the utterance. A short

series of hyphens with a cross in the middle followed by another set of hyphens indicate a smiling gesture. For example:

A: Do you like this dress?

B: --x--

Yes.

On the other hand, a long series of hyphens with a cross in the middle followed by another set of hyphens indicate that the person is laughing or smiling while speaking. For example:

A: I am going to college.
B: -------------------------x------------------------------
Oh really! I thought you are going for the movie.

Characteristics of Speech Production

_ An *underscoring sign* indicate some form of stress, via pitch, and/or amplitude. A short underscore indicates lighter stress than does a long underscore.

↑ An *Upward Arrow* indicates rising tone.

↓ A *Downward Arrow* indicates falling tone.

[/] A *solidus within square brackets* indicates multisyllabic word repetition which is shown immediately after the repeated word. For example: I would like to opt for Psychology [/] [gloss: I would like to opt for Psychology-Psychology-Psychology].

+/. A *plus sign followed by a slash, and dot* indicates interruption which is used when an utterance is left incomplete by the speaker because the other person in the dyad interrupts the speaker. For example:

A: I am going to +/.

B: School.

A: Yes. I am going to school.

: A *colon* indicates prolongation of the immediately prior sound. The longer the colon row, the longer the prolongation.

[ ] An *empty square brackets* indicate that the speaker did not utter anything. The length of the space within empty square brackets indicates the length of the utterance.

Eye Gaze

{£→} A *pound sign with rightwards arrow* indicate looking towards.

👁 An *eye icon* indicate that the speaker visually indicates the hearer

(or listener) to take the floor of the conversation.

Stuttering-Like Disfluencies

^^ A *double up arrowhead* indicates block which is shown immediately prior to the blocked segment without any intervening spaces. For example: ^^He is nice.

(/↩) A s*lash followed by a leftward arrow with loop within round brackets* indicate sound, or syllable repetition within a word. For example: ba(/↩)by [gloss: ba-ba-ba-by].

(/«) A *slash followed by a left-pointing double angle quotation mark within round brackets* indicate whole word repetition. This is shown immediately after the repeated word. For example: He is eating banana and (/«) apple [gloss: He is eating banana and-and-and-and apple].

(/:) A *slash with a colon within round brackets* indicates prolonged segment which is placed after the prolonged element. For example: s(/:)omething [gloss: ssssssomething].

Normal Disfluencies

&- An *ampersand with hyphen* indicates filled pause which is used immediately before the filled pause, or interjections. For example: &-um, or &-hmm. For example: I was going to &-um market, and was hit by a car from behind [gloss: I was going to umm… market, and was hit by a car from behind].

[»] A *number followed by right-pointing double angle quotation mark within square brackets* is used to indicate phrase repetition. This is shown immediately after the repeated phrase. For example: I was [»] going to market. [gloss: I was - I was - I was going to market].

+… A *plus sign followed by three dots* indicate an incomplete or abandoned utterance which is shown immediately after an incomplete utterance. For example: I like +… [gloss: I like….].

®.. A *registered sign with two dots* indicate revised utterances. This is shown immediately before the revised segment. For example: I like ®..I want this ball [gloss: I like…I want this ball].

/®.. A *slash followed by registered sign with two dots* indicate revised word. This is shown immediately before the revised word. For example: Which /®..Who is that girl? [gloss: Which..Who is that girl?].