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Investigating the oral fluency of non-native speakers of English

V. Michael Cribb

Introduction

Fluency is a term used often by teachers and researchers when describing the oral performance of non-native speakers of English, but what does it actually mean to say that a person is fluent? Certainly we cannot just equate fluency with speed of delivery since this would qualify a student who merely repeated himself as fluent. Hedge (1993, p.275) suggests fluency is the 'ability to link units of speech together with facility and without strain or . . . undue hesitation' while non-fluent speech is 'discernible in frequent pauses, repetitions, and self-corrections' as in this extract of speech from a student of English:

> The biggest problem is pollution . . . another problem is . . another problem exists but pollution is . . very serious pollution . . . all pollution . . . . . all pollutions . . . . . i cant explain . . . all pollution . . . frighten- er no no . . . . our . . . lives threatens okay okay okay

Schmidt (1992) has suggested that fluent speech is 'automatic, not requiring much attention or effort . . .' while nonfluent speech is 'effortful . . . exhibit[ing] many hesitations and other manifestations of groping for words' (p.358). Lennon (1990) takes the listener into account in documenting the components of fluency and suggests that 'fluency is an impression on the listener's part that the psycholinguistic processes of speech planning and speech production are functioning easily and efficiently' (p.391).

Clearly, the notion is not a simple one, but it is a notion that demands further examination since it is often taken to be one of the defining features of non-native oral performance. The aim of this research, then, is to investigate the notion of fluency to determine its characteristic features and how they interact with each other. To this effect, three non-native speakers of English (NNS) were chosen from a group of students interviewed during the first week of an intensive

English language program. The speakers were chosen to represent oral proficiency levels of intermediate-mid, intermediate-high and advanced on the ACTFL/ETS (1986, 1982) oral proficiency rating scale, the hypothesis being that there would be clear differences in the fluency of the three speakers according to their proficiency level and that these would show up in a variety of componential features. However, it was also assumed that since fluency exhibits a complex multifaceted nature, some analysis of oral discourse from a qualitative point of view would be required if the true nature of fluency is to be understood.

The paper will begin with a look at how various scholars have viewed fluency in the past before giving an outline of the present study and how it was conducted. This will be followed by the results and a discussion of their implications.

Background

For many students entering university for the first time, fluency is a concept that is relatively far from their minds. An over emphasis on accuracy and vocabulary during high school means that they are often hesitant and conscious of making mistakes in grammar and pronunciation when they are required to speak in class. Paradoxically, for the teacher, though, fluency is often given higher priority than accuracy. "If only my students would release themselves from the fear of making mistakes and just talk naturally" is a common thought that most teachers have had.

Whilst accuracy is obviously an important aspect of classroom learning, it is clear that there are a number of advantages to developing fluency. Fluency appears to improve self-confidence (Gatbonton & Segalowitz, 1988) which allows students to take more risks with the language. This in turn allows them to participate in more conversation (Kirkland, 1984), leading to more practice and hence greater fluency. Fluency also allows students to circumlocute around linguistic gaps in their own knowledge, such as when they do not have the appropriate vocabulary to express an idea, enabling them to negotiate for meaning with native speakers. More negotiation in turn leads to more input which is rich in target features, thus improving the chances of noticing and acquiring the lexis and/or grammar that they were lacking in the first place (Swain, 1985). Finally, the increase in confidence and participation in conversation that comes with fluency can lead to greater motivation and pleasure in language learning (Gatbonton & Segalowitz, 1988).

Gatbonton and Segalowitz (1988) have suggested that there are two broad aspects of fluency. One is the 'skills concerned with selection of utterances' (i.e. knowing what to say and what

is appropriate) and the other is the 'skills concerned with the actual production of these utterances' (p.473). Skill in the first aspect does not necessarily guarantee mastery in the second skill however. Students may know what to say and be able to plan the necessary forms in advance of a forthcoming communication situation but still be unable to articulate them fluently when they are actually needed. This is a common situation most students have experienced whereby they feel they have the necessary grammar and lexis to express their ideas, but find they cannot use these to speak in English when the need arises.

The second component of fluency, Gatbonton and Segalowitz suggest, develops through a process of automatization which comes through 'extended and consistent practice, of rapid, smooth, comfortable speaking skills' (p.474). By automating certain aspects of performance, skilled performers free up attentional resources and are able to 'allocate their limited capacities' (p.475) to where they are needed most. They use the example of a musician where the need to be able to conduct certain activities such as appregios using little or no psychological resources is paramount if skilled performance is to be achieved.

Schmidt (1992) has also suggested that automaticity in speech is important if students are to develop fluency. He says fluency depends on 'procedural knowledge . . . or knowing how to do something, rather than declarative knowledge, or knowledge about something' (p.358). He identifies fluency with a skill rather than knowledge, thus emphasizing performance over competence. Foster & Skehan (1996) follow Schmidt in taking fluency to reflect the capacity to cope with real-time communication.

Other scholars have emphasized the listener and the part they play in the communication process. Lennon (1990), for example, says that fluency 'reflects the speaker's ability to focus the listener's attention on his or her message . . . rather than . . . the working of the production mechanisms' (pp.391f.). He suggests that listeners may be 'unduly intolerant' (p.394) of certain non-native features and may assign them greater prominence than they would for a native speaker. Certainly it seems that the human mind does not process incoming speech from a completely objective point of view but tends to be biased in its interpretation. Particular features may be given more prominence than others, and one speaker may be judged to be more fluent than another even though temporal variables and disfluencies are similar. This can be important because as mentioned earlier, students are likely to be judged less positively by listeners (especially non-teachers) if they are judged to be below a certain fluency threshold.

Even though the listener's part in the communication process has been recognized as important, most studies have attempted to approach the problem through objective measurements

of the components of fluency. Lennon (1990) classifies these into two distinct categories: those which look at the temporal nature of speech (e.g. speech rate and articulation rate) and those which look at dysfunctional markers such as repetitions, filled pauses, false starts etc. Griffiths (1991) proposes that speech rate and pauses are the major variables in determining fluency, and that speech rate is largely determined by pausing.

Lennon (1990) suggests that speech rate and pause time are important variables but adds that 'it is not simply proportion of unfilled pause time that is important for fluency attainment but position, length, and frequency of individual pauses' (p.414). Increase in fluency then is not simply a quantitative reduction in the amount of pausing or an increase in the speed with which words are articulated. Towell, Hawkins, & Bazergui, (1996) suggest instead there is 'an increase in the length and complexity of the linguistic units which are uttered between pauses' which is due to a change in the 'rapidity with which syntactic and discourse knowledge can be accessed for on-line speech production' (pp.112f.). The authors reached this conclusion after studying the development of fluency in advanced learners of French over a one year period. They measured four temporal components before and after the period abroad and concluded that the major changes are due to 'the way linguistic knowledge is stored as procedural knowledge rather than to changes in the way subjects either have learnt to conceptualize the knowledge in the L2 or to articulate speech in the L2' (p.103).

Recent theories of how language is stored and retrieved have pointed to the primacy of formulaic units as necessary for fluency development. Formulaic units are 'preassembled language chunks' (Celce-Murcia, Dörnyei and Thurrell, 1997, p.146) which are stored and retrieved in the mind without the need for on-line assembly or internal analysis. Native speakers have access to thousands of these and their retrieval during speech is 'cognitively undemanding' thus allowing the speaker to focus on meta-cognitive aspects of speech production. For non-native speakers, however, the lack of such a repertoire means that language has to be planned and assembled from scratch as it were, which uses up most of their cognitive resources preventing them from achieving fluency.

The Present Study

The present study was undertaken to investigate both temporal features of spoken discourse and disfluencies such as pausing, repairs and false starts in non-native speaker output. However, it was also hoped that some insight would be gained into how coherence in discourse impacts on the listener's perception of fluency. This is important because we cannot simply say

that speakers who talk quickly are fluent if the discourse they produce is incoherent. In other words, there has to be some qualitative assessment of how the discourse is articulated and how the listener perceives it to be comprehensible and easy to follow. This idea will be taken up in the discussion section and the reader will be introduced to some examples to show how this feature presents itself in non-native speech.

Three male subjects were chosen from a group of Korean students of English in an eight-week intensive English program at a major institute in South Korea. The group had been interviewed during the first week of study using an oral proficiency interview (OPI) as developed by ACTFL (1986) and ETS (1982). The OPI is a 30 minute, face-to-face interview between interlocutor (teacher) and candidate (student). The interlocutor asks a series of questions with various degrees of complexity and/or abstractness and the candidate demonstrates his or her proficiency through answers. Whilst several topics are broached as standard during the interview (e.g. job, family) as a warm-up, the candidate has no knowledge of what questions will be asked during subsequent phases of the interview. The interlocutor deliberately raises the complexity and/or degree of abstractness of questioning during the interview in order to discover the candidate's peak performance. When a candidate is unable to meet the level of questioning, 'breakdown' starts to occur. This is often indicated by a decrease in fluency of production compared to answers for less demanding questions, but can also be combined with loss of accuracy, groping for words, topic avoidance etc. At the end of the interview, the candidate is assigned a rating based on the scale shown in table 1. The OPI had been used in the institute for several years and all raters were suitably skilled in interview techniques and rating.

Table 1: The ACTFL/ETS oral proficiency rating scale

ACTFL/ETS Rating	Level
0	No functional ability
	Novice-Low
	Novice-Mid
0+	Novice-High
1	Intermediate-Low
	Intermediate-Mid
1+	Intermediate-High
2	Advanced
2+	Advanced-Plus
3 to 5	Superior

The three subjects in this study were chosen to represent oral proficiency levels of inter-

mediate-mid (subject A), intermediate-high (subject B) and advanced (Subject C) on the scale. The intermediate/advanced division forms a major boundary of the scale, and one of the main aims of the study was to observe the features than contribute to the perception of fluency in students on both sides of this border.

Table 2: Number and length of turns for each subject

Subject	A	B	C	Total/Ave.
No. of turns analyzed	13	14	6	33
Total no. of words[1]	730	820	466	2016
Ave. length per turn (words)	56	59	78	61
Total length (mins.)	17m 30s	13m	7m 48s	38m 18s
Ave. length per turn (secs)	80	56	77	70

[1] Excluding non-lexical items (e.g. *um, er*)

Subjects A and B were interviewed twice during the first week of the program while subject C was interviewed once. The interviews were transcribed and various extended turns were selected for further analysis. The criteria for selection were chiefly length with anything between 30 seconds and 2 minutes being considered optimal. Turns shorter than 30 seconds were considered too short for effective temporal analysis while very few turns greater than 2 minutes were present in the corpus. Some statistics concerning the turns are given in table 2.

The following measurements were made for each turn:

(a) **Speech rate in syllables per minute** (spm). The total number of lexical syllables in the turn were calculated and divided by the total delivery time excluding any hesitation at the beginning and/or end of the turn. False starts and repetitions were included in the syllable count but non-lexical fillers (e.g. *um, er*) were excluded.

(b) **Pause time** (filled or unfilled) greater than one second as a percentage of the total delivery. One second is taken as a nominal mark which captures substantial pauses but allows for the practical difficulty of logging shorter pauses.

(c) **FS-R index**. The FS-R index calculates the degree of false starts, repetitions, repairs and recasts. It includes all lexical items, which may interfere with the listener's perception of fluency, but excludes non-lexical fillers (e.g. *um, er*). The four categories of the FS-R index and how the index is calculated are explained below:

(c.1) False start: when the speaker realizes he or she has chosen the wrong surface form to express their meaning and backtracks.

they are they worked very hard
the north the headquarter of north korea

(c.2) Repetition: when a word or phrase is repeated exactly word for word.

yes very much *very much*

they don't know about er *they don't know about*

(c.3) Repair: when the speaker detects a surface error and attempts to correct it.

like at the school *at school*

because of the wedding is very important *because of wedding is very important*

(c.4) Recast: when the original utterance is not erroneous but the speaker backtracks to add further semantic information. The same surface form is maintained throughout.

she want *i feel that time she wants* (note, this also contains a repair)

they want *they don't want*

It is not always possible to be certain which category the phenomena fall into. Sometimes it is difficult to know what is a repair and what is a recast. For example, *there are – there aren't*: is this a repair of an utterance where the negative is missing or did the speaker recast the original concept in the negative? At other times, it can be difficult to tell the difference between a repair and a false start, e.g., *they are – they worked very hard.*

Whilst identification of FS-R phenomena in the extended turns is useful, this doesn't give an indication of the burden on the listener for the turn overall. For example, lexical repetition such as *they – they are* interferes less with comprehension than repetition of whole phrases such as *they don't know about – er they don't know about.* In other words, it is necessary to give weights to the phenomena. A simple index based on the following scoring method was thus used:

(a) Score 1 points for FS-R phenomenon at the lexical level.

(b) Score 2 points for FS-R phenomenon at the phrasal level.

(c) Score 3 points for FS-R phenomenon at the clausal level.

To determine the FS-R index, the number of points for each turn is calculated, divided by the number of words per turn and then multiplied by 100. For discourse with no FS-R phenomena, an index of zero would be obtained. At the other end, a score close to 100 would be recorded if say students simply repeated themselves over and over.

The study had three main research hypotheses:

(1) The speech rate for the advanced speaker would be significantly higher than the intermediate speakers.

(2) There would be a strong correlation between the percentage pause time over one second and speech rate suggesting that pausing is the greatest cause of disfluent speech.

(3) There would not be a strong correlation between the FS-R index and speech rate sug-

gesting that this phenomenon does not significantly slow down the rate of delivery of speech. However, it is assumed that FS-R phenomena do affect fluency to some degree, although the relationship is complex and not easy to measure.

Results and Discussion

The results of the study are given in table 3 below.

The first item to note is an increase in speech rate from an average of 70 spm (syllables per minute) for subject A (intermediate-mid), 94 spm for subject B (intermediate-high) up to 101 spm for subject C (advanced). Unrelated t-tests show that this difference is significant between subject A and C ($p < 0.005$ one-tailed) and between A and B ($p < 0.0005$) but not between B and C ($p > 0.1$). Hypothesis (1) then is only partly proven, and surprisingly, there appears to be a greater difference in speech rate between the intermediate subjects than there is between the intermediate-high and advanced subject, even though the intermediate /advanced borderline is a major boundary of the OPI rating scale. This suggests that speech rate by itself can tell us little about fluency and that we need to consider other factors.

Table 3: Results of study

Subject A	**A1**	**A2**	**A3**	**A4**	**A5**	**A6**[2]	**A7**	**A8**	**A9**	**A10**	**A11**	**A12**	**A13**		**Ave**
Speech Rate (spm[1])	103	59	53	59	63	84	84	85	66	64	78	73	41		70
FS-R Index	5	18	16	7	5	8	7	27	22	15	9	29	9		14
Repetitions/Repairs	3/0	3/3	2/3	3/1	0/1	0/1	0/2	2/0	5/2	5/2	2/0	8/3	0/1		2.5/1.5
Recasts/False Starts	0/0	1/1	0/0	0/0	1/0	0/1	0/0	2/2	1/0	2/0	2/0	0/0	2/1		0.8/0.4
%Pause time over 1sec	43	60	71	57	63	56	48	59	60	49	52	56	65		57
Subject B	**B1**	**B2**	**B3**	**B4**	**B5**	**B6**	**B7**	**B8**[2]	**B9**	**B10**	**B11**	**B12**	**B13**	**B14**	**Ave**
Speech Rate (spm)	78	77	102	84	107	93	100	81	83	107	92	108	107	101	94
FS-R Index	13	15	15	10	15	1	22	13	19	12	19	27	6	8	14
Repetitions/Repairs	3/0	3/0	3/0	3/0	2/1	1/0	3/0	0/0	4/0	1/2	3/0	1/2	1/0	1/0	2.1/0.4
Recasts/False Starts	0/2	1/2	1/1	1/1	0/2	0/2	0/6	1/3	0/0	0/1	2/0	3/1	1/1	2/1	0.9/1.6
%Pause time over 1sec	*[3]	*	*	*	*	*	*	62	53	46	43	32	44	46	47
Subject C	**C1**	**C2**	**C3**	**C4**	**C5**	**C6**									**Ave**
Speech Rate (spm)	116	96	100	80	131	84									101
FS-R Index	6	7	5	11	10	9									8
Repetitions/Repairs	3/0	2/0	1/0	3/0	3/0	3/4									2.5/0.7
Recasts/False Starts	0/1	1/0	1/0	1/3	1/0	1/0									0.8/0.7
%Pause time over 1sec	41	45	50	53	35	53									46

[1] spm = syllables per minute [2] Start of second interview [3]* = unable to calculate

One such factor is the FS-R index. Recall, the FS-R index measures the degree of disfluency due to lexical items in the turns. That is, the amount of hesitation due to repetitions and false starts etc. which might lead to the listener judging the speech as less than fluent. The FS-R indices given in table 3 range from about 5 for turns with few FS-R phenomena to about 30 for the most hesitant turns. The index average is the same for subjects A and B (14) but drops sharply for subject C (8) indicating that there are fewer hesitations and repetitions in C's speech overall (unrelated t-test A/C: $p<0.1$, B/C: $p<0.05$ one-tailed). All subjects have similar repetition averages (2.5, 2.1, 2.5) and recast averages (0.8, 0.9, 0.8). Subject A has a high repair average (1.5) while subject B has a high false start average (1.6), suggesting that A is monitoring more for grammatical accuracy while B is monitoring more for semantic accuracy. Subject C has a lower average in both these counts, which accounts for his lower FS-R index overall.

If FS-R phenomena were a major cause behind decreasing fluency, then we would expect to see a correlation between the FS-R index and the speech rate. On first examination of the data, though, this doesn't appear to be the case. The turns for subject A which scored highest on the FS-R index (A8 & A12) both have speech rates above average (85 & 73 spm). Similarly with subject B, the turns with highest FS-R indices (B7 & B12) have speech rates above average (100 & 108 spm). Furthermore, the Pearson product moment coefficients of correlation between speech rate and FS-R index across all subjects is $r = -0.122$, which is not significant ($p>0.1$). In other words, there is very little correlation between speech rate and FS-R index, which suggests that an increase in disfluencies does not substantially cause the turn to be delivered at a slower speed. This supports hypothesis (3).

To see why this is so, we can look further into the data and calculate rates for stretches of speech where disfluencies are particularly severe. Some sample rates for subjects A and B are given below:

Turn	spm	Speech sample
A2	184	another problem is– another problem exists
A3	158	each understanding– lack of– it caused lack of- lacking of each understanding
A12	189	talk each other– talk each other
B11	164	there were– there were– there were
B12	121	there are– there aren't- there are no– there is no

Note how the speech rate for all of these examples is above the average speech rate for the subject in general. So even though the subject is repeating, repairing and making false starts, the rate of delivery of speech is quite rapid compared to the subject's average rate. For exam-

ple, in one particularly bad case of repetition for subject B, the speech segment *there were – there were – there were* is articulated at a speech rate of 164 spm while the average for the subject is only 94 spm. This appears to be the case for most disfluent stretches of speech (although there are some examples where the speech rate is lower than the average).

What might be happening here? We can hypothesize that the extra attentional resources required to articulate most (but not all) tokens of FS-R phenomena are minimal since the phrase has already been articulated once and is in working memory. Thus the repetition of the phrase with slight modification is 'low cost' and can be articulated easily and without delay. For example, in turn A2, the speech sample *another problem is – another problem exists* contains a false start and the subject backtracks to change *is* to *exists*. However, the unit *another problem [- -]* is already stored in working memory and it is thus a simple matter of inserting the word *exists* in the slot for *is*. In B12, the speech sample *there are – there aren't – there are no – there is no* contains several false starts/repairs as the speaker searches for the correct phrase. Since it is just a matter of trying different permutation though, the disfluency phenomena do not lead to a reduced speech rate. Where disfluency phenomena do result in a slower speech rate, this may be due to conceptual planning at the discourse level or lexical search and retrieval.

If FS-R phenomena do not lead to a reduced speech rate, then what is the cause? One possible reason could be the degree of pausing. To investigate this, the Pearson coefficient of correlation was calculated between speech rate and %pause time over 1 second across all subjects and this was found to be $r = -0.859$ which is significant at $p < 0.001$ (two-tailed). This seems to suggest that pause time does significantly affect speech rate, thus giving credence to hypothesis (2). That is, turns in which the speaker spends a large proportion of time pausing between words generally are delivered at slow speech rates. This finding tallies with Lennon (1990) and Griffiths (1991), who suggests 'slow speech is mainly due to the frequency and length of pauses' and that the 'drawing out of individual words in NS-NNS discourse is a relatively infrequent occurrence' (p.348).

Qualitative Analysis

The above analysis looked purely at the temporal aspect of speech in an objective way. However, as noted earlier, we also need to take the listener into account to see whether he or she perceives the NNS to be fluent or not. When, for example, an NNS produces speech such as *there are – there aren't – there are no – there is no –* how much does this lead to a perceived lack of fluency on the part of the NS listener? It will only be possible to take a brief look at some sam-

ple turns here to see how disfluencies such as these occur and how they might interfere with fluency, and any analysis is likely to be subjective. My hope is that by highlighting certain phenomena, this will lead to further research in the area.

As a first example, turn A12 produced by subject A is given below. A paraphrase of the interlocutor's question is given in capitals and the candidate's reply is given below this. The turn is divided into units (a, b, c...) merely to facilitate discussion.

A12. WHAT DO YOU THINK SOUTH KOREA SHOULD DO TO TRY AND SPEED UP UNIFICATION WITH THE COMMUNIST NORTH?

(a) most north Korea– Koreans– er most north Koreans does not know– doesn't know the south Korean environment circumstance (b) through– through the– er through– or– er citizens diplomacy we meet north Koreans frequently often (c) talk each other– talk each other and (d) understand each other (e) we Koreans feel unification feel need– need of unification yeh (f) we more chance- we more chance– we have more chance– we have to more chance to meet each other

The turn was delivered at an above-average speech rate for the subject (73 spm) but the FS-R index was high at 29. Even though we have seen that FS-R phenomena do not slow down the rate of delivery of the turn, to what degree can we say that these phenomena do not interfere with the listener's perception of fluency? Lickley (1994) has suggested that in native-native conversation, the human listener is able to 'filter out' the disfluencies that are a regular part of conversation in order to understand the underlying message. In fact, there is some evidence to suggest that listeners may not be able to even detect the presence of particular disfluencies in native speech (Bard & Lickley, 1997). But how different is non-native discourse to native discourse and how much do the disfluencies in the turn above interfere with the listener's ability to pick out the message and lead to the perception that the speech is not fluent? Certainly, there appear to be some disfluenices which are far from nativelike and which could potentially interfere with fluency. In (a), for example, in an attempt to express the idea *most north Koreans don't know the south Korean circumstances* the subject makes many repetitions and repairs. The percentage of lexical items that are not part of the underlying message is almost 50%. A similar situation is seen in other units and in particular unit (f). In fact, approximately 42% of the lexical items in the turn overall are FS-R phenomena and as such are not contributing to message that the subject is trying to deliver. This equates to one disfluency every 6.5 words on average which compares with a figure reported by Lickley (1994, p.57) for native speakers of one disfluency every 20 words.

Another example is given in turn A3 below.

A3. WHAT DO YOU THINK IS THE REASON FOR THE INCREASING DIVORCE RATE AND WHAT CAN BE DONE TO ELIMINATE IT?

(a) it caused er each understanding– lack of– it caused lack of– lacking of each understanding mm (b) I think each other mm more understand more patient– (c) if– if more patient– more understandable (d) it could be dismissed divorcing rate (e) that's– yeh– that's the very important point.

This turn was delivered at a speech rate of 53 spm. From a purely temporal point of view, then, it is less than fluent. The FS-R index is 16 and most of these phenomena occur in unit (a) where fully 57% of the unit consists of repetitions and repairs, making it difficult for the listener to follow. Further, it is arguable that unit (c) is merely a repetition of (b) and it is quite possible that a listener would take this to be so.

So even though we have seen that FS-R phenomena do not slow down the rate of delivery of speech significantly (and may in fact speed it up), from a qualitative viewpoint, they are obviously an important component of fluency, especially at the intermediate level. Non-native discourse which contains a high proportion of these disfluencies puts a greater burden on the listener than what he or she would experience when listening to native speech. However, the relationship between fluency and FS-R phenomena is a complex one and is not easy to measure in an objective fashion. Clearly this is an area where further research would benefit our understanding.

There is another aspect of non-native spoken discourse which needs to be addressed when considering fluency. As an example, we can take turn B13 produced by subject B (intermediate-high). On first inspection, this may seem like a turn which can be deemed fairly fluent. The speech rate is 107 spm, which is even above subject C's (advanced) average, and the FS-R index is low at 6. However, on closer inspection of the internal construction of the turn, we can observe a lack of coherence in it which makes it less than fluent. This lack of coherence is not due to the FS-R phenomena but more to the way the information is packaged in the discourse. The turn is given below:

B13. WHY DO YOU THINK THE COMMUNIST NORTH (KOREA) IS CONTINUING TO SEND INFILTRATORS TO THE SOUTH?

(a) I didn't think about that deeply, (b) but the situation in north is very dangerous now (c) I think (d) so– there– (e) relatively we are so– we Kor– we south Korea is er so calm down rel– relative to north (f) so the top of the north Korea wants to disturb us (g) because they are now disturbing– they are– (h) the situation of the north is very urm boring (i) the situation is very dangerous– (j) I think (k) so the top of the north send the person or people to disturb our country

Most of the FS-R phenomena are contained in units (d) and (e). After unit (e), the FS-R phenomena virtually disappear, but from (g), where the subject attempts to give the reason why 'north Korea wants to disturb south Korea', a problem arises. Unit (g) is introduced with the connector *because* which normally indicates to a listener that a cause is to be expected. But the information contained in the unit cannot logically be a cause since it is almost a repetition of what has previously been stated: *they are now disturbing.* Unit (h) is then given but without any connector to show how it should be integrated into the discourse. It is possible that the previous because was intended to carry over to this unit but again it is difficult to see how the fact that *the situation of the north is very boring* could be a plausible cause of the previous information (boring situations don't normally lead to confrontation). Likewise, (i) is introduced without any connector and then so introduces (k) which signals that it is the consequence of the preceding discourse. However, the information contained in (k) has already been stated and thus cannot be a ready candidate for logical consequence. This has the effect of making it feel to the listener as if the subject is going round in circles and the listener never quite gets a logical reason for why infiltrators are being sent. Hence, we can see how a listener might judge the turn to be less than fluent due to the fact that the 'packaging' of information in the discourse is not nativelike, even though from a temporal point of view the turn appears to be fluent.

Compare this now to a turn from subject C, the advanced speaker:

C2. IF YOU WERE PRESIDENT OF YOUR COMPANY, HOW WOULD YOU IMPROVE CONDITIONS FOR WOMEN?

(a) very difficult question (b) among other things er women workers will be treated er like men workers in the field of pay and er mm education chances (c) but the most thing that women er workers should know is (d) women workers should and can do any jobs as any other men workers (e) so if I were a president in – in my co – in my – in my company (f) I'd like to equal rights and responsibilities to their abilities in many ar – areas (g) yeh, I hope so.

The temporal elements of this turn are similar to B12 (speech rate = 96 spm, FS-R = 7) but the turn is likely to be judged more fluent by a NS listener because of its internal qualities. Whilst the turn is not perfect, the speaker manages to keep the line of meaning moving on from unit to unit, and there is no feeling on the listener's part that the speaker is going round in circles. This is not to suggest that subject A and B always produced discourse which appeared to go round in circles. There are examples where they keep the line of meaning going. However, the comparison is useful here because it highlights the multifaceted nature of fluency, being on the one hand concerned with the (objective) rate of delivery of speech but being on the other

hand a function of how efficiently, directly and coherently the speaker manages to package and deliver his or her message and how the listener perceives that this task has been met.

Conclusion

We have seen that fluency is a very difficult notion to define: it is multifaceted and needs to be viewed both from a qualitative point of view as well as a quantitative one. On the one hand, there is a temporal aspect which is chiefly determined by the degree of pausing and hesitation within the discourse. Presumably, this pausing is due to cognitive processes involved in the monitoring and planning of speech both at the sentence level and discourse level. Students who pause frequently to correct and plan linguistic units generally have slow speech rates while students who have automatized (proceduralized) these processes are able to deliver their discourse at a more nativelike speed. Phenomena such as false starts, repetitions, repairs and recasts, which are present in all spoken discourse, do not appear to have a great impact on speech rate and may in fact contribute in some cases to increasing the rate at which speech is delivered since they are 'low cost' in terms of cognitive resources.

On the other hand, there is a qualitative nature to the notion of fluency which is rarely discussed in the literature due presumably to its covert nature and the problem of measuring it. Fluency is not just how quickly the words or syllables are articulated but also includes how effectively and efficiently the speaker moves the line of meaning on and comes to the point as perceived by the listener, and how easily and effortlessly the speaker joins the discourse together so that the listener is not distracted by the disfluencies which are present in all speech.

We have learned a lot from previous studies of non-native spoken discourse but there is still a need for further research to be carried out in this area. In particular, I would suggest the following as questions which need to be answered:

(a) How does non-native speech compare to native speech in terms of quantity and quality of disfluency phenomena discussed here? Is there a threshold level below which disfluencies do not disturb the listener but above which they do?
(b) Of the four FS-R phenomena (repetitions, repairs, recasts, false starts), which causes the greatest burden on the listener in terms of perceived fluency?
(c) How does fluency change and improve as students progress from intermediate to advanced level. This will require longitudinal studies to be carried out.

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