

A quantitative and qualitative analysis of speech markers in the native and second language speech of bilinguals

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ABSTRACT

The present study investigated the use of five speech markers in the native and second language production of French-English bilinguals in a military setting. We propose that these speech markers, mechanisms for self-repair and turn-taking in conversations, are a major component of fluency. The ten participants, five high fluency speakers and five low fluency speakers, were tape-recorded with their peers in three different situations in their native and second languages, and the frequency of occurrence of speech markers was tabulated for a 5-minute segment for each situation.

It was hypothesized that speakers who used differentially more prepositioned repairs (progressives) or markers placed before the repair that do not require a reorganization of the expectation of what is to follow based on what has been produced in the turn so far, would be judged more favourably than those who used more postpositioned repairs (regressives). There was no quantitative difference in the frequency of occurrence of speech markers between the high and low fluency speakers, but the high fluency speakers used more progressive than regressive types of marker. Progressive markers place fewer demands on the interlocutor than regressive markers, which require constant readjustments on the part of the listener. The profiles were similar for each individual in the native and second language but in every case there were fewer markers in the native than in the second language. Furthermore, there were fewer markers in the planned (teaching) than in the unplanned (interview) situation. The findings have important implications for the evaluation of second language fluency.

INTRODUCTION

Researchers and educators have studied a variety of speech phenomena to explain perceived individual differences in fluent speech production. In discussing fluency, C. W. Fillmore (1979) suggests four criteria which appear to be related to perceptions of native speakers' fluency in their own language. These are: the

ability to talk at length with few pauses; the ability to talk in coherent, reasoned, and "semantically dense" sentences; the ability to have something to say in a wide variety of contexts; and the ability to be creative and imaginative in language use. In the present study we have chosen to focus on the first of these criteria, more specifically on a category of speech markers¹ which primarily affects the ability to pause, hesitate, and self-correct appropriately without causing undue strain on the listener. Clearly, all four factors described by Fillmore, in addition to other obvious ones relating to phonology, vocabulary, and syntax, may influence listeners' perceptions of nonnative speakers' fluency in their second language. Furthermore, there is reason to believe that speech markers and other constituents of fluency are highly correlated, in that fluent speakers will share all or most of the characteristics of fluency, while nonfluent speakers will manifest few. However, we were interested in studying speech markers specifically because of their salience in spoken language and the fact that their existence as a stable characteristic of fluency in one's native language is frequently ignored in formal evaluations of second language fluency, in spite of their potentially important role in informal impressions of fluency.

The goal of the present study was to examine the profile of speech markers in the first and second language of bilingual speakers of varying levels of fluency. The data to be presented address the following specific research questions:

1. Do high and low fluency speakers differ in terms of the types and the frequency of speech markers produced?
2. Does the occurrence of speech markers differ in the bilingual speaker's first and second language?
3. Does the occurrence of speech markers vary with the context of discourse?

We propose that the five types of speech markers examined in our study are a major component of fluency in the speech of the French-English bilinguals who served as subjects for the investigation. The data which we will report in this paper are drawn from a broader study (Olynyk, 1983), set in the context of a Canadian military college, in which we investigated the relationship between first and second language fluency and judgements of speakers' linguistic acceptability, social desirability, and professional competence.

Speech markers

Our interest in the use of speech markers developed out of a pilot study of naturalistic speech in which it was observed that speakers at the same level of measured second language development varied considerably in oral fluency. One of the salient features of fluent speech seemed to be the avoidance of extended pauses by the use of appropriate pause fillers such as *you know*, *eh*, or *O.K.*, and it was hypothesized that this was an important element of fluency. Moreover, several authors (e.g., Seliger, 1977; L. W. Fillmore, 1979) have proposed that a high perceived degree of fluency encourages native speakers to interact more extensively with the second language learner and that this interaction with native

speakers can play an important role in second language learning. (d'Anglejan, 1978; Krashen, 1978; Schumann, 1978; Klein & Dittmar, 1979; Long, 1983).

It is not possible in the context of the present paper to present a detailed account of the extensive literature relating to speech markers. Rather, we will highlight those studies most relevant to our research. For a comprehensive review of this body of literature, see Olynyk (1983).

Early studies by Malinowski (1935) and Jakobson (1960) looking specifically at linguistic functions of speech provided a framework for the exploration of speech markers in the present study. Jakobson (1960) proposed that while the referential function may be the predominant one of any message, at least five other functions can be identified, two of which are relevant to the issue of fluency. Whenever the speaker or addressee needs to focus on the code itself – to check on understanding or possible confusion in the use of language itself – the metalingual function is in focus. Malinowski's (1935) phatic function may be displayed by a profuse exchange of ritualistic formulas which serve essentially to prolong communication. According to Malinowski (1935) and Jakobson (1960), both the metalinguistic and phatic functions of speech are relevant to the use of the type of speech marker investigated in the present study. The repeats and filled pauses which constitute our data reveal the speakers' concern for difficulties arising in the use of language and attempts to maintain contact with their interlocutors. These two functions have also been discussed by Martirena (1968) in her study of interaction markers. She defined an interaction marker as an element which leaves the information in an utterance unchanged after its deletion. Its function can be determined mainly from the context which immediately precedes or follows it. In discussing Martirena's study, Vincent (1980, 1981) claims that elements of speech with a phatic function can be either interactional or serve to punctuate and divide the flow of speech. She states that expressions such as *uh*, *O.K.*, *you know* in English and their French equivalents *eah*, *O.K.*, *tu sais* have lost referential meaning but maintain interactional and emotional force. She adds that the speaker is unaware of their use and their function to keep a turn, signal a problem in the code, or maintain contact with the interlocutor.

Within the field of psycholinguistics, the study of various hesitation phenomena has evolved into a specialization called pausology. A pioneer in the field, Goldman-Eisler (1951), studied unfilled pauses, their frequency, and length to discover the inner process of speech organization during periods of silence. Rather than consider phonation as activity and silence as inactivity, silence was considered the period of central activity (Goldman-Eisler, 1968). She found pause length to be a permanent speech characteristic of an individual's conversation style. Individual differences in pause profile have been confirmed in studies by others such as Maclay and Osgood (1959), Ramsay (1968) and more recently Kay (1977), Chafe (1980), and Kowal and O'Connell (1980).

Cross-language studies

Of particular relevance for the present study are investigations of the occurrence of speech markers in different linguistic communities and in the speech produc-

tion of the same individual in the native and second languages. It has been proposed that pause time ratios are probably the same across languages but that their distribution is different (Grosjean, 1980). Grosjean and Deschamps (1975) have proposed an explanation of differences in the position and frequency of occurrence of speech markers which focuses on two features of a particular language, syntax and "phonotactic configuration." In a comparison of the spontaneous speech production of English and French speakers in televised interviews in England and France, it was found that the pause time ratio was identical for both groups but that pause time was organized differently in the two languages. There were fewer pauses in French than English, but pauses in French were of longer duration than those in English. It was discovered that native speakers of French used as many drawls – the nonphonemic lengthening of syllables – as filled pauses or *uhs* when speaking French, whereas the native English speakers used more filled pauses than drawls in their speech. The differing phonotactic configuration of the two languages provides an explanation for these differences. More drawls occur in French because it is an open syllable language in which words can be lengthened when there is a need to hesitate, whereas the closed syllable feature of English eliminates this option for English speakers and thus there is a greater occurrence of filled pauses.

In a study of native speakers of German and American English, a difference was found in the frequency of use of pause fillers and silence (Scherer, 1979). The two language groups used the same number of *uhs* or pause fillers but there was a greater amount of silence in American English. In an attempt to account for this difference, Scherer (1979) suggests that explanations can range from the question of the degree of complexity or structuredness and the cognitive capacity for processing the particular language to a consideration of different cultural expectations.

Di Pietro (1980) has proposed that speech markers are acquired as an element of linguistic competence and that the conventions for their use are determined by the linguistic community. For purposes of illustration, he provides the following cross-cultural examples of the hesitation formulas employed when the speaker wishes to hold the floor. In English the speaker utters *uh*; in Spanish spoken in Latin America, the hesitation pause is *este* repeated several times; and in Japanese it is *a-no*. Di Pietro suggests that these be considered similar to other conventions such as leave-taking and introductions.

Comparative studies of native and nonnative speech

Studies which have compared the occurrence of various speech markers in native and nonnative speech production have discovered a tendency for bilingual individuals to reproduce the first language organization in their second language with a general increase in all types of hesitation, a decrease in the rate of speech, and a loss of fluency (Deschamps, 1980; Raupach, 1980). The participants in one study, French university students, were interviewed in their native language, French, and their second language, English (Deschamps, 1980). Silent pauses were no longer in their second language than in their native language, but the length of runs – that is, continuous speech with no pauses or hesitations –

decreased and there were more filled pauses. There were more pauses at non-grammatical junctures (the end of sentences, between noun phrase [NP] and verb phrase [VP], between NP and VP and complement, between complements and NP and VP) (Deschamps, 1980). It should be pointed out that breath pauses, or junctures, occur at transition-relevant places, in other words a place in the interaction where a change of speaker might occur. One might hypothesize that the occurrence of markers within units would require more readjustment on the part of the listener than those at transitions and junctures. The results of the study completed by Deschamps (1980) showed a greater occurrence of nonjuncture pauses in the second language, but the expectations of the different linguistic communities in regards to second language speakers was not examined to determine the effect on the listener. In a study of French and German students in their native and second languages, which were German and French, respectively, those individuals whose rate and use of various types of hesitation deviated from the norm in their native language also deviated in their second language (Rau-pach, 1980).

Two fairly recent studies investigated the impact on the listener of the occurrence of speech markers, in this instance, in the second language (Albrechtsen, Henriksen, & Faerch, 1980; Lepicq, 1980). Both studies adopted the Maclay and Osgood (1959) classification system, which distinguishes four types of hesitation: repeats, false starts, filled and unfilled pauses. In one study the effect of Dutch speakers' interlanguage on native speakers of English in Great Britain was examined (Albrechtsen et al., 1980). The results suggested that the extensive occurrence of hesitation phenomena was related to negative evaluations. The two speakers who used restructurings and self-corrections received the lowest evaluation. It is pointed out that the constant demands on the interlocutor to abandon one attempt to decode the message and start another might have hindered comprehension.

Another relevant study (Lepicq, 1980) examined the occurrence of hesitations in the speech production of Anglophone students in a French immersion program in Ontario and of a control group of native speakers of French in Quebec, using the Maclay and Osgood (1959) categories. The results showed that there were more false starts and repetitions among the immersion students. The less proficient immersion students in their second language produced more silent pauses, whereas the native speakers used relatively more filled pauses such as *uh* and *well*. By tabulating the number of words spoken per minute, it was discovered that those who talked more hesitated the least.

In summary, speech markers have been studied as hesitation phenomena, as signals in the turn-taking system, and as serving metalingual and phatic functions of speech. In the present study, we extend the scope of this research in several directions. In addition to examining qualitative and quantitative aspects of speech marker use across languages in bilinguals, we studied their relationship to speakers' perceived level of second language fluency. Whereas most previous studies have been based on speech samples drawn from only one situation, we compared second language speech profiles based on planned and unplanned discourse. We believe this research has important implications for language testing and for perceptions of second language speakers in bilingual or multi-

lingual communities where speakers are often called upon to interact socially and professionally in a nonnative language.

METHOD

Subjects

The 10 subjects who provided the speech data for this study were native speakers of French who had studied English for at least five years in Quebec high schools prior to enrolling in the military college in Quebec. All were males, between the ages of 19 and 21. Control of these variables was important since it has been shown that sex and age influence both the rate of speech and the frequency and rate of silent pauses (Smith, 1979; Kowal & O'Connell, 1980). There is an increase in the rate of speech and a decrease in the frequency and length of pauses with increasing age up to adulthood, when these features of fluency become a stable feature of an individual's speaking style. Many studies have confirmed the link between variable language behavior and social class. Sankoff and Laberge (1978) adapted the notion of the linguistic marker (Bourdieu & Boltanski, 1975) to rank individuals according to the importance of the standard form of language for economic activity. This system of ranking reflects the fact that teachers, receptionists, and actors speak a more standard variety than others in the same social class. A subjective ranking of the importance of the standard variety of language for future officers in the Canadian military places our participants high on the linguistic market scale.

In terms of their second language proficiency, test scores (Canada Forces Languages Test) showed all 10 students to have attained the intermediate or functional level as a result of their formal and informal language learning experiences. However, in spite of their comparable test scores, the students were perceived to vary in their ability to manage certain elements of discourse, making some sound more fluent than others. On the basis of the first author's observations of their oral fluency over a period of several months in test situations, classrooms, and informal contexts, five high fluency (HF) and five low fluency (LF) students having similar language proficiency scores were identified.

Speech samples

The 10 students were requested to tape-record their own speech while interacting with a peer in three different situations. Since fluency has been shown to be sensitive to context (Shimanoff & Brunak, 1977; Ochs, 1979), we chose to include two contexts characteristic of those in which the students might actually be called upon to perform professionally in their first or second language. In the first, English planned (EP), the students were asked to teach a skill or present new information to a peer on a topic of mutual interest in English. In the second, French unplanned (FU), and third, English unplanned (EU), situations, the students were interviewed in their first and second languages by native speaker peers on topics relevant to life at the military college. The interviewer was instructed to allow the student to express himself as fully as possible. The

interviews were spontaneous, closely resembling the real-life situations in which the students are interviewed every six months for professional assessment. They frequently use language in situations approaching the formal end of the formal-informal spectrum. The investigators were not present at any of the recording sessions in order to avoid what Labov (1972) has referred to as "the observer's paradox." He suggested that speakers should be studied interacting with their own families or peer group in order to elicit the most natural variety of speech for a given situation.

It should be noted that a French planned situation was not included in the study. The students' English unplanned speech was considered sufficient to permit cross-context comparisons (see Olynyk, 1983).

Transcriptions

The transcriptions were done by assistants who used standard English or French orthography to record speech as it actually occurred without editing the imperfections of speech production or standardizing the text. A native speaker of English did the English transcriptions and a native speaker of French did the French ones. All texts were verified by the first investigator. For each of the three situations (FU, EU, EP) a 5-minute transcript was assembled for analysis. The transcript, which included only speech produced by the student, was composed of segments from 25 seconds to 2 minutes in length. These segments are representative of the uneven distribution of turns at speaking which occur in an interview or teaching situation.

Speech marker data analysis

In order to validate our a priori classification of the students as high or low fluency speakers, their differential use of speech markers in their first and second languages was analyzed. The number of occurrences of speech markers in the three situations (EP, FU, EU) was compiled from the 5-minute samples of speech in each situation.

The speech markers were first classified into five types (*uh*, *repeats*, *transitions*, *repair conversions*, and *cut-offs*). According to the descriptions of speech phenomena originally proposed by conversation analysts (Schegloff, 1979), four of these, *uh*, repeats, cut-offs, and repair conversions, are instances of self-initiated repair. The fifth, transitions, derives from studies of the turn-taking system in conversations. The self-repairs were subdivided into two categories, *progressives* (*uh*, repeats) and *regressives* (cut-offs and repair conversions). It was hypothesized that markers which occur before a repair (progressive markers) and do not require a reorganization of the expectation of what is to follow would be less disruptive to the listener than markers which occur after a repair (regressive markers). Intonation, sound sketches, and an increase in the rate of articulation at the end of a word contribute to the accurate identification of the speech markers. The following descriptions drawn from Sacks, Schegloff, and Jefferson (1974) and Schegloff (1979), along with examples from the data of the present study, illustrate the various speech marker types:

1. *Progressive markers*: markers that occur before a pause
 - a) *Uh*: a filled pause (*eu*h in French)
 - (1) If we *uh* increase the angle (02, 11-64).
(*Note*: In all instances where *uh* co-occurred with repeats or repair conversions they were tabulated as such [see 1b and 2b].)
 - b) *Repeats*: repetition of a word or phrase, not for intensification, but in a semantically insignificant way
 - (2) . . . t'a beau travailler comme un, comme un pas bon (07, III-8).
'ya work like a, like a no good'.
 - (3) . . . like *uh*, all kinds of, *uh*, all kinds of little, *uh*, regulation they did this (06, IV-15).
2. *Regressive markers*: markers that occur after a repair
 - a) *Cut-off*: a within word repair signalled by a glottal or other stop
 - (4) . . . a hun/hundred feet (01, II-36) (where the cut-off is followed by the production of the same word, or in the next example where the cut-off is followed by a different word).
 - (5) . . . pur/good instrument (01, II-94).
 - b) *Conversion*: modification of an element of speech already produced
 - (6) . . . it's like, it was kind of a preparatory year (06, IV-25).
 - (7) . . . c'est que, c'est tsé, c'est parce que (07, III-66).
'it's that, it's ya know, it's because'.
3. *Transitions*: use of *uh* or other fillers at transition-relevant points in the turn, i.e., at the end of a clause
 - (8) . . . you've got to try to meet her, *uh*, *well*, down where you are (09, II-9).
 - (9) . . . tu montres qu'est-ce que t'es capable de faire *puis eu*h tu récoltes ce que t'as semé, tsé (07, III-7).
'you show what you're able to do then *uh* you reap what you've sown, you know'.

The occurrence of transition markers was compared to self-repair types within units: cut-offs and repair conversions (postpositioned) and *uh* and repeats (prepositioned and progressive). It would seem that transition markers, occurring as they do between units, would be less disturbing to the listener and would therefore not be a negative factor in perceptions of fluency. While the first four types all occurred in the same positions and were contrasted for the presence or lack of progressivity, the last category, transitions, was compared to the four repair types for location: within the unit or in a transition-relevant place. It was hypothesized that those speakers perceived a priori to be more fluent would use transition markers rather than speech markers within the units. In an analysis of progressivity and regressivity only, transitions were calculated with the former category. Other pause fillers such as *O.K.*, *you know* and the French equivalent *tu sais* were tabulated as transitions when they occurred in transition-relevant places.

Statistical analysis of speech marker data

The following statistical analyses were performed on speech marker frequency data tabulated from 5-minute segments of speech:

1. a three-way analysis of variance of the use of progressive versus regressive speech markers in the three contexts (EP, FU, EU) by the two fluency groups (HFS and LFS). (This analysis was also carried out with five different levels for the type of speech marker.)
2. correlation coefficients among 15 vectors representing the five types of speech marker in three contexts (EP, FU, EU) where $n = 10$ speakers. (This was undertaken not with a view to testing the significance of the individual pairwise associations, since these associations are obviously not independent, but as a heuristic device for detecting clusters of related or opposing measures. Thus the matrix of correlations was examined for consistent patterns of positive or negative correlations [arbitrarily set at $> .20$ or $< -.20$] among marker types across the three speech contexts.)

RESULTS

Average frequencies of occurrence of the five speech markers are presented in Table 1. The results of the ANOVA can be summarized as follows:

- 1a. The high fluency speakers (HFS) use 10% more speech markers than the low fluency speakers (LFS), but this difference is not significant ($p = .26$). There are fewer regressive than progressive markers. The difference is highly significant whether this factor has two or five levels.
- 1b. The order of frequency of occurrence of the five types of speech marker from the least to the most frequent is: cut-offs, repair conversions, *uh*, repeats, transitions.
- 1c. Consistent with our expectations, the HFS use more progressives and transi-

Table 1. *Average number of occurrences for each combination of levels*

		Progressives			Regressives		
		<i>uh</i>	Repeat	Transition	Cut-off	Repair conversion	Total (no. of cells)
English planned	LFS ^a	18.00	18.40	24.60	3.60	12.80	17.18 (50)
	HFS	25.20	24.60	31.60	2.60	10.40	
French unplanned	LFS	11.80	16.60	23.80	1.40	13.20	13.80 (50)
	HFS	11.60	23.80	25.20	1.80	8.80	
English unplanned	LFS	22.80	24.00	28.60	4.40	17.40	19.52 (50)
	HFS	20.00	27.00	35.00	5.60	10.40	
Total (No. of cells)	LFS 16.09 (75)	18.23 (30)	22.40 (30)	28.13 (30)	3.23 (30)	12.17 (30)	
	HFS 17.57 (75)						

^aLFS = Low fluency speakers; HFS = High fluency speakers

tions ($\bar{X} = 74.7$) than the LFS ($\bar{X} = 62.9$), but the latter use more regressives ($\bar{X} = 17.6$) than the former ($\bar{X} = 13.2$). This interaction is significant at the .01 level. When the marker factor is divided into five levels, the marker \times fluency interaction is marginal ($p < .1$), largely due to the sparse data for cut-offs.

- 1d. There is a significant difference in the use of speech markers in the three contexts as follows: FU < EP < EU with the greatest difference at FU ($p = .01$).
- 1e. This pattern of increase among the contexts (FU < EP < EU) is the same for HFS and LFS; there is no significant interaction between fluency and situation.
- 1f. The distribution of speech marker types across contexts is more or less parallel; there is no significant marker \times context interaction.

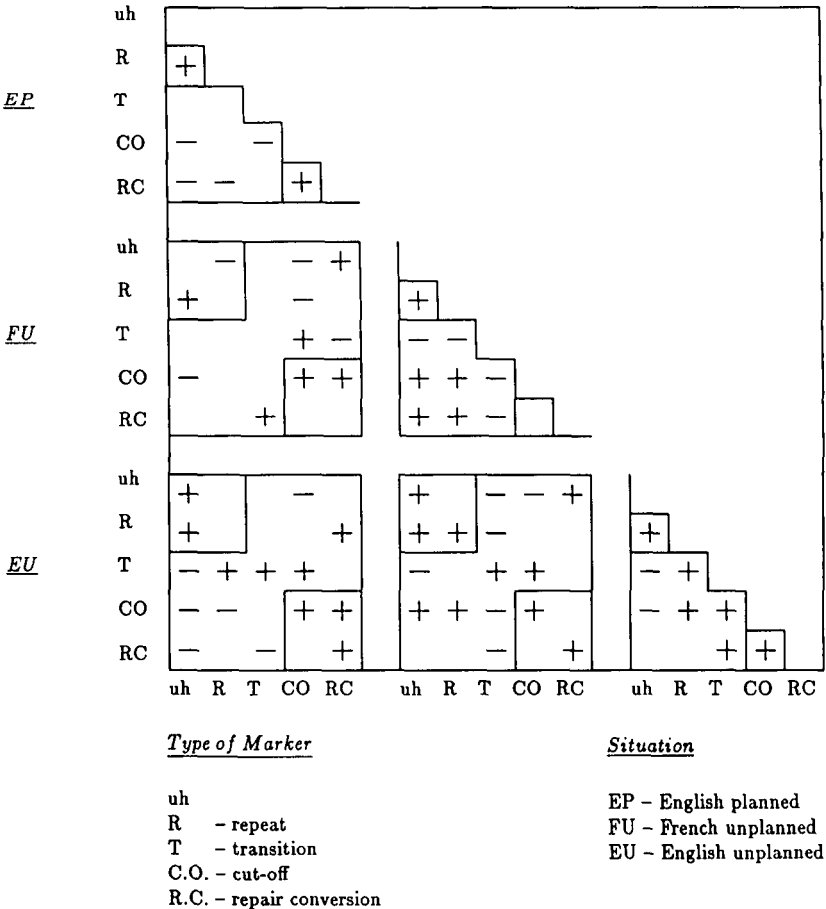


Figure 1. Patterns of positive ($r > .20$) and negative ($r < -.20$) correlations of marker types across three situations. + = positive correlation, - = negative correlation, blank otherwise.

The correlation coefficient results which appear in Figure 1 can be summarized as follows:

- 2a. There is a positive correlation among *uhs* and repeats (R) in same and different contexts (9 positive correlations and 1 negative correlation exceeding cut-off, among 15 coefficients). This may be seen in the upper left hand corner of each square or triangle in the figure.
- 2b. There is a positive correlation between cut-offs (C.O.) and repair conversions (R.C.) in the same and different contexts (9 positive, 0 negative among 15 coefficients). This may be seen in the bottom right hand corner of each square or triangle in the figure.
- 2c. The use of transitions (T) in French unplanned (FU) is accompanied by a reduction of all other markers (four out of four negative coefficients), and this reduction is carried over to the EU style (four out of four negative coefficients).
- 2d. *uh*, repeats (R) seem independent of cut-offs (C.O.) and repair conversions (R.C.).
- 2e. The use of each type of marker in English unplanned (EU) is correlated with their use in English planned (EP) and French unplanned (FU), but there is no direct correlation between EP and FU.
- 2f. In the native language (FU), there are basically two patterns: one using transitions and one using all other types of marker.

DISCUSSION

The results of the analysis of our data provide answers to the research questions specified at the beginning of the study. Those speakers categorized as less fluent used more regressive type speech markers than those categorized as more fluent, whereas the more fluent speakers used more markers of the progressive type. Furthermore, the more fluent speakers used proportionately more transition markers. Whereas it was predicted that more speech markers would occur in the speech of LFS, in fact the HFS had 10% more. While the difference is not significant, it is clear that it is not the frequency of occurrence, but the category of speech marker which is of importance, a finding that requires further analysis and explanation.

As mentioned previously, regressive speech markers require a readjustment on the part of the listeners in their expectations of the next element of speech to be produced. In contrast, those markers in the progressive category make demands on the listeners' patience due to the intrusion in the flow of speech, but require no readjustment. This is due to the fact that regressive speech markers follow the element to be repaired whereas progressive markers precede the repair. It would appear that the use of different types of speech markers – progressive or regressive – might influence fluency evaluations of a speaker. In addition to the category of markers, their occurrence at the end of a speech unit, a transition-relevant place, or within the unit might be a factor in the evaluation of fluency. As mentioned, units of speech have a quality of projectability which enables

speakers to coordinate a change in turn. Markers in these transition-relevant places were used more frequently by HFS than LFS.

In his study of fluent and nonfluent cycles of speech, Beattie (1980) found that pauses at grammatical junctures occurred more frequently in the fluent cycles. To our knowledge, there are no studies which deal with the comparison of the effect on the listener of speech markers at transition-relevant places with those which occur within the unit. It should be recalled that transition-relevant places occur at the end of the turn, on completion of the unit speakers set out to produce at the beginning of their turn. We are proposing that the occurrence of speech markers at transition-relevant places can be compared to pauses at junctures (places in the natural flow of speech where speakers usually breathe, mainly between clauses) in that in both instances the expectations of the listeners have been fulfilled on the basis of what the speakers have projected so far in their speech production. In one study comparing the same people reading and speaking spontaneously, it was found that breath pauses occurred more often at junctures in the reading than in the speaking situation. It was claimed that the readers were producing speech closer to "ideal delivery" (Clark & Clark, 1977) than the speakers who breathed at both grammatical junctures and within clauses (Henderson, Goldman-Eisler, & Skarbeck, 1965).

In response to our second research question, our findings showed that the profile for the occurrence of all types of speech marker was similar for the individual in the native and second languages. The fact that there were fewest markers in French unplanned speech confirms the results of Raupach's study (1980), in which he claimed that speakers transfer their pause profile from the native to second language performance with some loss of fluency.

With respect to our final research question, the context of speech production did affect the frequency of occurrence of speech markers, a finding which held for both HFS and LFS. In increasing order of frequency, these occurred as follows: French unplanned, English planned, and English unplanned. This confirms the results of Ochs (1979) and Shimanoff and Brunak (1977).

SUMMARY AND CONCLUSION

In this paper we have examined the profile of occurrence of five types of speech marker in the speech of fluent and less fluent French-English bilinguals. Our findings indicate that the two speaker groups differ not in terms of the quantity of speech markers used but rather in terms of their nature or quality. We have hypothesized that the frequent need to make readjustments in order to predict the ongoing message is disruptive in interpersonal communication and may adversely affect listeners, causing them to avoid nonessential interactions with less fluent nonnative speakers.

Our second and third findings, to the effect that speech markers are context sensitive and that there is a transfer of the pause profile from subjects' native language to their second language, have important consequences for the evaluation of oral proficiency of nonnative speakers. Our results suggest that testees' speech production in an oral interview situation is indicative of their least fluent variety of interlanguage. For this reason, the ratings should be considered with

caution. We suggest that the evaluation of second language proficiency by means of an interview should comprise only a small portion of the total assessment of speakers' oral skills. In judging the fluency of second language speakers, examiners should be aware of the speakers' fluency in their native language. Speakers who hesitate and repeat frequently in their native language will probably transfer this pattern to their second language speech production. Standards applied by evaluators in rating fluency are often vague and are frequently based on comparisons between nonnative speakers' speech performance and that of ideal native speakers.

The potential importance of our findings for the evaluation of the social and professional competence of nonnative speakers in a professional setting has been demonstrated in earlier reports (Olynyk, 1983; Olynyk, Sankoff, & d'Anglejan, 1983).

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NOTE

1. The term *speech marker* was chosen to reflect our system of categorization which encompasses mechanisms for self-repair and turn-taking in conversations, as well as some which have been labelled hesitation phenomena and communication strategies in other studies.

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