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Dialogic Fluency - Why it Matters

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ABSTRACT

Numerous studies of spoken language have investigated scripts which were read aloud rather than the dynamics of real, unscripted, informal native-to-native (L1-L1) dialogues. Studying television or radio recordings is also problematic, as participants are in 'broadcast' mode, aware that they are being recorded and therefore unlikely to exhibit those reduced features of spoken language which are found in everyday interchanges.

The FluenCi project, with its PHRASECON mini-corpus, aims at promoting learner integration into an English L1 speech community by studying the use of intonation and prosody in L1-L1 dialogues, particularly with respect to high frequency phrases. The absence of these 'small words' and intonation patterns is seen as detrimental to fluency by L1 listeners, and therefore the current paper outlines the concept of dialogic fluency and the role of the FluenCi project in attaining this goal.

A tripartite structure for informal dialogic speech is also proposed.

Keywords: speech corpus, spoken corpus, formulaic sequences, fluency

FLUENCY AND FluenCi

This paper deals with a new, emerging concept of fluency, particularly with respect to English as a Foreign Language (EFL). EFL learners, especially at the lower CEFR levels, naturally have to acquire a sufficient lexicon and grammatical knowledge in order to function in an English mother-tongue environment. But while this knowledge might be adequate, it is not sufficient to allow non-native users of English to integrate into a native user community, since L1 users do not speak in structured dialogues.

The paper introduces the concept of 'dialogic fluency' and how the EU funded Lifelong Learning Project, FluenCi, aims to provide EFL learners with a major stepping stone towards the goal of 'interactive fluency' as practised by native speakers in their daily, unscripted conversations.

L1-L1 SPEECH AS AN LSP

It might seem strange to consider spontaneous L1-L1 dialogue as a language for specialist purposes, but many dialogues presented to language learners could more correctly be described as 'interleaved mini-monologues', their purpose being to provide examples of grammatical sentences in realistic settings. They are designed to teach a foreign language, not prepare the learner for immersion in a real, native speech community. They have been carefully crafted by experienced authors, with one eye towards a learner-friendly progression of grammar and lexical complexity.

Real dialogues, on the other hand, are not scripted. They are worked out 'live', with neither speaker knowing in detail where the conversation will lead. In spontaneous L1-L1 dialogues the interaction is **not** pre-constructed, but rather evolves. This has a very significant effect on the language of the native speakers, whose key task is not to produce utterances worthy of imitation by language learners, but to respond in an acceptable fashion to the previous utterance(s) of the interlocutor. Real dialogues are social interactions, not linguistic exercises.

As Mehrabian (1981) has pointed out, when there is affective relevance to the interlocutors in a dialogue, only 7% of the communication is transmitted by the words chosen. When emotions are involved and personal feelings, wishes, fears, status etc. are important in the working out of the interchange, then 38% of the communication is effected by the **manner** in which the words were spoken. As higher primates we are extraordinarily sensitive to tonality, and every owner of a domestic pet will attest to the importance of tone in communicating with social animals.

Speaker interaction is therefore marked to a large extent by intonation and prosody. It is an interesting experiment to take one half of a lively, unscripted dialogue and listen particularly to the turn beginnings. It often becomes clear that the speaker is reacting to the interlocutor's input, rather than producing a coherent string of monologically fluent speech. The fluency achieved by the speakers is **con**-fluency rather than a traditionally understood, uninterrupted flow of coherent speech.

MONOLOGIC FLUENCY

The goal of training dialogues is to enable the learner to produce grammatically correct sentences appropriate to the lifelike situation being modelled. This monologic fluency is a reasonable target for users of English as an international language, given that they are four times more likely to speak with a fellow non-native user of the language than with a native speaker of one of its many varieties.

In oral and written examinations students are likely to be marked down for disfluencies, which will be seen as demonstrating a lower level of linguistic performance. Pauses of more than one second will be understood by the examiner as indicating a lack of linguistic ability and graded accordingly. In similar situations the native speaker has a range of strategies to fill those gaps in a naturally evolving verbal interaction.

DIALOGIC FLUENCY

The objective of L1 speakers engaged in dialogue, however, is not to impress an examiner, but to realise a social or personal goal, with language forming only part of effective communication. Possibly the bulk of the communication devolves to prosody, shared knowledge and body language. Mehrabian (ibid.) calculates the prosodic component as representing 38% of the communication and the visual feedback as 55%. Yet how much time and effort are devoted to these aspects of L1-L1 communication in language classes?

Due to time constraints and the lack of suitable technological support, unscripted dialogues are not currently a mainstream resource used by language learners; nor is the dynamic interaction of L1-L1 dialogues taught in the classroom. Nevertheless all learners of English likely to come into contact with native speakers should be sensitised to native-speaker prosody.

INFLUENCE OF LIVE DIALOGUE ON SPEECH PRODUCTION

Given that the aim of an L1-L1 dialogue is not to provide learners with sample sentences, but rather to use language as a key factor in a social encounter, learners need a tool which will allow them to study the interactions displayed in real dialogues.

Of particular interest is the turn-taking behaviour of speakers, which is often flagged prosodically and produces utterances which, on the surface seem disfluent, but which on further analysis are seen to have an interactive function. In the construction of dialogic con-fluency speakers use prosody to flag their intention to take a turn – by force if necessary! They also use it to ‘hold the floor’ and leave themselves vulnerable to turn grabbing by the interlocutor, unless they use non-lexical fillers.

The development of such a software tool is the aim of the Dynamic Speech Corpus (DSC) currently being produced by the Dublin Institute of Technology, supported by funding from Enterprise Ireland.

THE DSC AND THE ATTRIBUTE TREE

The DSC is a learning and research resource built on informal L1-L1 dialogues and characterised by a high degree of naturalness combined with very high audio quality. There is a requirement for such a high audio quality (4 times that of CD recordings) in order to slow down the recorded speech so as to reveal the dynamics and the phonetic detail of the speech production.

The recording technique used promotes the production of the phonetic reductions and ‘blur’ of natural L1-L1 dialogue which learners find so difficult, but which are important in allowing the speaker to steer the dialogue by highlighting some sections and down-playing others. An understandable but fatal mistake made by many language learners (and some language teachers) is that every word in an utterance is

equally important. This impression is fostered in written language where each word is neatly surrounded by a gap or punctuation.

The visualisation of spoken language using a spectrogramme, however, can easily demonstrate that there are no words in speech, but rather a continuum of sound. The role of this analogue audio signal is to trigger the mapping of discrete words onto the stream of speech. While this top-down activity presents few difficulties to a native listener, many bottom-up language learners struggle with the blurred, unstressed parts of the L1 speech flow designed to highlight those parts of the utterance which are important to the speaker. They have not yet learned the stressed-unstressed patterns of English prosody.

The high recording quality allows the blur of natural speech to be slowed down (anywhere up to 40% of normal speed) so as to allow the learner to follow the melody of the speech and become sensitised to the role of prosody in L1-L1 communication. Should the learner wish to imitate the L1 speech production, then a gradual increase in the replay speed to, say, 60% and 80% (in reality, any desired speed can be chosen) each speed in turn being imitated by the learner, can lead to a native-like production ability.

Access to the reduced speech forms of unstressed speech sequences can be gained via the application, through tagging, of an 'Attribute Tree'. This is a framework of labels for describing communicatively significant features of natural dialogue. The guiding principle is that if a native listener (especially one with experience in teaching EFL) 'notices' any aspect of speech production as deviating from a 'neutral' delivery, then that sequence is tagged using one of the labels of the Attribute Tree. Some of the main categories currently covered by the Attribute Tree are: speaker intention, turn construction, formulaicity, phonetic features and discourse function.

The same labels used to tag the natural dialogues can be used as a tool to retrieve the relevant audio sequences, as well as a tool for training the learner in the role(s) of prosody in natural communication. Searches conducted in the DSC can be based on a string search, on a tag search or on a combination of both. This very powerful search tool allows learners, authors/teachers and researchers to find multiple examples of the spoken feature being studied and to replay the original recording at any desired speed.

THE FluenCi PHRASECON

The FluenCi project, funded by the Leonardo Lifelong Learning Programme, is based on some of the findings emanating from the DSC. In particular, from studying DSC assets, the importance of collocations and high-frequency phrases in informal L1-L1 speech is becoming evident.

Erman and Warren (2000) have calculated that almost 60% of spontaneous L1-L1 dialogue is composed of formulaic language. These sequences are pre-constructed and fitted into an expressive envelope in which 'c'est le ton qui fait la chanson'. The formulaic sequences can be lexical in nature, ranging from high-frequency collocates to full-blown idioms, or they can be syntactical/grammatical (such as: 'I wouldn't

have ...’) and, in the rapid delivery of L1 speakers to L1 listeners, be subject to extreme compression and phonetic ‘erosion’ – a considerable challenge for EFL learners.

One of the key functions of formulaic sequences is to ease the cognitive burden on both speaker and listener, as according to Wray (2002) they are retrieved from memory as a unit and delivered as a unit. Since these formulaic building blocks are so frequent in informal speech, their true communicative effect often lies in the *manner* in which they were spoken (i.e. the expressive intonational and prosodic envelope in which they were delivered) rather than in the formulations themselves. Frequently these phrases are subject to ‘phonemic erosion’, and Campbell et al (2008) have demonstrated that there is prima facie evidence for an indirect correlation between the speed of delivery and the pitch range of formulaic chunks.

According to McCarthy (2010), the absence of these formulaic chunks, ‘small words’ and interactive features such as back-channelling, lead to the perception of a lack of fluency on the part of the EFL speaker. L1-L1 fluency is therefore more about the correct production and perception of intonation and prosodic patterns – including turn-taking behaviour – rather than a citation form of speech couched in impeccable grammar.

The EU FluenCi project, which started in January 2010 and is due to finish in June 2012, aims to sensitise learners to the role(s) of intonation and prosody in L1-L1 speech by illustrating their realisations in the high-frequency phrases which make up a large proportion of natural, spontaneous dialogue. These phrases form a PHRASECON of some 200 high-frequency collocations, as evidenced by the Cambridge and Nottingham Corpus of Discourse in English (CANCODE), part-owned by the commercial partner in the FluenCi consortium, Cambridge University Press.

THE PHRASECON AND STRUCTURED LEARNING MATERIALS

The collocations, chunks and phrases chosen for inclusion in the PHRASECON are embedded into Structured Learning Materials (SLMs) to be used by the two academic partners, the Dublin Institute of Technology and UNED, the Universidad Nacional de Educación a Distancia, with their various target groups: immigrant second level students, undergraduates, trainee teachers and prisoners.

These SLMs will allow EFL learners to study the PHRASECON phrases in their natural environment, in their most commonly used fashion. However, learners will also be provided with mini dialogic contexts in which the same phrases are used with differing intonational and prosodic patterns, illustrating different speaker intentions. Accompanying explanatory text will help learners notice the function of the suprasegmental levels of speech exemplified in the mini dialogues.

It is anticipated that the resources of the FluenCi project, when completed, will prepare EFL learners for principled exposure to the world of unscripted dialogue.

BEYOND FluenCi

It is the ambition of the FluenCi project to sensitise EFL learners to the roles of intonation and prosody in L1-L1 English speech communities. Built into the FluenCi project is an investigation of how FluenCi might interact with unscripted L1-L1 speech, as exemplified in DIT's Dynamic Speech Corpus. While the implementation of such a link goes beyond the scope of the FluenCi project itself, in the following section a tripartite structure of unscripted dialogue is proposed which will facilitate the development of this next step towards making natural L1-L1 speech accessible to EFL learners.

THE HIERARCHY OF UNSCRIPTED SPEECH

DIT's Dynamic Speech Corpus is based on a view of unscripted dialogue as having a three-level structure.

The highest level is the turn, defined as a dialogically significant interaction containing at least one 'flow sequence' (see below). This is the level at which both L1 speakers interact in their efforts to achieve the **confluency** described by McCarthy (2006). At this level both speakers interact live in their attempts to steer the conversation and maintain their turn or interrupt the interlocutor. Intonation patterns play a major role in turns, particularly at turn beginning and turn end.

The middle level in L1-L1 dialogues is the flow sequence, defined as a semantically coherent grouping containing at least one 'flow unit' (see below). This is the sequence of speech within a turn where speakers try – no matter how disfluently – to communicate their message to the L1 listener. Native speakers retain the content of a dialogue as a representation of this level when they listen in a top-down fashion. They can re-construct the content of the flow sequence, but will often find it impossible to imitate the exact lexical and phonetic manner in which that content was delivered.

The lowest level of the dialogic hierarchy is the flow unit, defined as a speaker-determined production with tonal coherence or ended by a perceptible pause. This is the level which causes difficulties for the EFL learner in that it operates at the phonetic level – worked out live by the L1 speaker – and is often characterised by monologic **disfluency**. L1 listeners retain the intonationally communicative aspects of flow units while attending to the semantic message of the flow sequence. EFL learners, on the other hand – depending on linguistic ability – tend to struggle with the segmental aspects of the flow unit in their bottom-up approach to informal L1 dialogue, which impairs their ability to listen like a native.

FluenCi aims to help EFL learners notice the role of intonation and prosody in informal speech, as a step towards helping them to cope with free-flow dialogues in a

native speech community. Dealing with that unscripted dialogue in a structured fashion is the task of another project – the Enterprise Ireland funded FLUENT project.

Bibliography

- Brown, G. & Yule, G. (1983). *Teaching the Spoken Language: an approach based on the analysis of conversational English*. CUP.
- Campbell, D., Meinardi, M., Richardson, B., Wang, Y. & McDonnell, C. (2009). DIT's Dynamic Speech Corpus and dialogic fluency. In: *EuroCALL 2009*. Gandia, Spain.
- Campbell, D., Wang, Y. & McDonnell, C. (2008). FS ≠ FS (Formulaicity and Prosody). Proceedings of the 41th BAAL 2008 Conference.
- Cook, G. (1989). *Discourse*. OUP.
- Crystal, D. (2003). *English as a Global Language*. 2nd ed. CUP.
- Erman, B. & Warren, B. (2000). The idiom principle and the open-choice principle. *Text*, 20, pp.29-62.
- FLUENT network. (2008). [Online] Available at: <http://fluent.dmc.dit.ie>
- Hasselgreen, A. (2004). *Testing the Spoken English of Young Norwegians: a study of test validity and the role of 'smallwords' in contributing to pupils' fluency*. CUP.
- Jenkins, J. (2005). Teaching pronunciation for English as a lingua franca: a sociopolitical perspective. In: C. Gnutzmann & F. Intemann, eds. 2005. *The globalisation of English and the English language classroom*. Tübingen: Gunter Narr Verlag, pp.145-58.
- McCarthy, M. (2006). Fluency and confluence: what fluent speakers do. In: M. McCarthy, ed. 2006. *Explorations in corpus linguistics*. CUP.
- McCarthy, M. (2008). Profiling spoken fluency. *The Language Teacher*, 32 (7), pp.32-34.
- McCarthy, M. (2010) (in press). Spoken fluency revisited. *English Profile Journal*, 1 (1).
- Mehrabian, A. (1981). *Silent Messages: implicit communication of emotions and attitudes*. 2nd ed. Belmont, CA: Wadsworth.
- Nation, P. (2001). *Learning Vocabulary in Another Language*. CUP.
- O'Keeffe, A., McCarthy, M. & Carter, R.A. (2007). *From Corpus to Classroom*. CUP.
- Sacks, H., Schegloff, E.A. & Jefferson, G. (1974). A simplest systematics for the organisation of turn-taking for conversation. *Language*, 50 (4), pp.696-735.
- Tatham, M. & Morton, K. (2006). *Speech Production and Perception*. New York: Palgrave Macmillan.
- Wray, A. (2002). *Formulaic Language and the Lexicon*. CUP.



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