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21	may	66	128.6581459	46	claim	15	68.40763
22	say	52	127.4175806	47	need	29	67.414561
23	get	61	127.2653036	48	succeed	11	66.45021
24	work	41	122.587069	49	said	63	64.662718
25	remain	25	120.7118502	50	resign	9	64.604725

YAE FURUTA
SHIKOKU UNIVERSITY, JAPAN.
E-MAIL: <Y-FURUTA@SHIKOKU-U.AC.JP>

The Use of the Pragmatic Discourse Markers *and*, *so* and *okay* in Academic Conference Presentations

MERCEDES QUEROL-JULIÁN[1]
BEGOÑA BELLÉS-FORTUÑO
University Jaume I, Spain

ABSTRACT

In this paper we analyse the use of some pragmatic discourse markers in spoken academic discourse, more concretely in academic conference presentations. We aim at providing insights in the use speakers make of the pragmatic markers "and," "so" and "okay," understanding them as markers of the inferential component within the framing relational function of speaker-hearer and/or speaker-speech. The pragmatic markers are analysed from a multimodal perspective, considering not only the linguistic and semantic meaning but also paralinguistic features, prosodic (intonation, and stress) and kinesics (gestures and body language). The study is conducted on a set of ten conference presentations taken from the MASC (Multimodal Academic and Spoken Corpus). Results drawn from the analysis can be useful for both native and non-native speakers of English when participating or attending international conferences. On the other hand, we look at using the analysis outcomes as well as the multimodal corpus itself for English lecturer/ researcher training courses. This multimodal conference corpus analysis can be brought into the class to show novice conference speakers how to use these pragmatic discourse markers from a holistic approach.

INTRODUCTION

The analysis of spoken academic genres has raised the interest of researchers in the last decade (Swales 2004, Bellés-Fortuño et al. 2008). However, the genre of conference presentations has not been addressed as much as other academic genres, such as for example the lecture (Crawford 2007, Bellés-Fortuño & Fortanet, forthcoming). Seminal for the study of the language of conference presentations has been the joint work of Ventola, Shalom & Thompson (2002) which brought about the study of some discourse features in the language of conferencing

insisting on pedagogical implications that have to be aimed at. Other valuable contributions to the research on conference presentations include studies by Charles & Ventola (2002) and Rowley-Jolivet (2002) who focus on the use of visuals projected on the presentations and the connection with the spoken text. In an attempt to capture some of the cognitive links that tie together the various sessions in a specialised conference, Ventola (1999) introduces the concept of "semiotic spanning." Hood & Forey (2005) analyse the introduction section in plenary presentations considering the analysis of gestures, along with Räisänen & Fortanet (2006) who classify non-verbal communication conveyed by presenters in a specialised conference.

Venturing into the analysis of spoken discourse such as the genre of conference presentations implies some extra difficulties that might not appear when analysing written discourse. It is extremely important which analysis approach to choose so as to take into consideration all aspects beyond the linguistic features such as intonation, speech rate, speaker's idiolectal variation, gestures, etc., for the analysis of spoken discourse. Most of these paralinguistic features, kinesics and prosodics, cannot be addressed to without a multimodal perspective of analysis and a corpus linguistics methodological approach

In this line, the study we present here departs from a multimodal perspective in the analysis of spoken discourse. Bernsen (2002) talks about multimodality in language and speech systems stating that:

> Whereas the enabling technologies for multimodal representation and exchange of information grow rapidly, there is lack of theoretical understanding of how to get from the requirements specification of some application of innovative interactive technology (…). (p. 93)

If this is so, it should be considered that in order to emphasize on theoretical understanding of multimodal representations and to handle innovative interactive technology we should, first of all, distinguish and identify which multimodal output/input representations take part in the analysis, then design the methodology for the analysis, and finally use or design tools for multimodal analysis in corpus linguistics. The corpus under analysis in the study we present here is an audio and video corpus and as such what we have is a tri-modal combination using audio, video and text (transcript).

Therefore, this study aims at analysing spoken academic discourse, concretely, the genre of conference presentations and how some pragmatic discourse markers such as and, so and okay behave, carrying

out a multimodal analysis that will also take into consideration the context of these pragmatic markers as regards non-linguistic features.

Discourse markers
It has been said in literature that a good understanding of the functions of discourse markers and the relationships they establish between different parts of the text is fundamental for the comprehension of lectures (Morrison 1974, Coulthard & Montgomery 1981, Chaudron & Richards 1986). Therefore, we also believe that an understanding of the role discourse markers play in conference presentations discourse can definitely aid the audience to comprehend and facilitate speech content retention.

The focus of our study is the analysis of pragmatic markers understood as operators that affect relations speaker-hearer or speaker-speech. We have taken as the point of departure the discourse markers (hereafter DMs) classification developed by Bellés-Fortuño (2007). The classification is based on the concepts of relational and attitudinal DMs meanings and functions among discourse, considering as well Redeker's (1990) assumptions upon the discourse coherence model on the search for coherent discourse relations. Everyone can become acquainted with three different relational categories between discourse elements in the communicative act that can be detected easily: i) relation part of discourse-part of discourse, ii) relation speaker-hearer or vice versa, and iii) relation speaker-speech. These three element relations can be conveyed in many different ways: prosodic, kinesics, visuals or the most common, the use of linguistic units such as DMs. The main goal of such relations is to express meanings along the discourse utterances.

As a result, Bellés-Fortuño proposes a classification of DMs which is based on the three functional meanings mentioned and the relations they can convey along the discourse utterances. Figure 1 shows how the three functional meanings are distributed according to the three relational functions.

The first meaning refers to the logico-semantic relations (Schiffrin 1987, Fraser 1990, González 2005) DMs express in the discourse; these relations indicate the links between *part of discourse-part of discourse* elements. DMs within this category happen to have lexical or descriptive meaning and are called here micro-markers. Accordingly, categories such as *causal, contrastive, consecutive* or *additional* DMs would be included here.

Meanings	Relational Functions
Internal (ideational)	*part of discourse-part of discourse*
Structural meaning (global discourse structure relations)	*part of discourse-part of discourse*
Attitudinal (interpersonal) meaning	*speaker-hearer and/or speaker-speech*

Figure 1. *DM functional meanings and matching relational functions (Bellés-Fortuño 2007)*

The next DM category would also express *part of discourse-part of discourse* relations. The overall structure of the discourse is signalled through structural relations by means of DMs such as "to begin with." The categories conveying structural relations are for example, *starter*, *organizer*, *topic shifter*, etc. These kinds of DMs will be here referred to as *macro-markers* borrowing Chaudron & Richards' (1986) terminology. Studies on discourse markers in lectures have shown that the presence of macro-markers improves retention and recall in post-lecture tests (Chaudron & Richards 1986; Jung 2003) and that it is generally beneficial for activating content schemata (DeCarrico & Nattinger 1988) and helping listeners to successfully follow the lecture (Khuwaileh 1999).

Those relations between *speaker-speech* and *speaker-hearer* (or vice versa) are conveyed through another type of DMs Bellés-Fortuño calls *operators* (Bellés-Fortuño 2007; Bellés-Fortuño et al. 2008). These markers are more specifically related to conversational, spoken discourse rather than written discourse (Llorente 1996) and have been traditionally called in the literature "pragmatic markers." The possible categories to include here are *attitudinal*, *pause filler*, *elicitation*, *acceptance* and *confirmation check*. These DMs are those which rhetorically signal the speaker's intentions and goal (the illocutionary force), as long as they play a dominant inferential role in the discourse, frequently monitoring proximity between speaker-hearer and speaker-speech.

Under the foundations of the relational functions, Bellés-Fortuño's resulting proposal consists of five different categories keeping homogeneous grammatical categories for each classification of DMs: micro-markers, macro-markers and operators, the DMs classification model shows as follows:
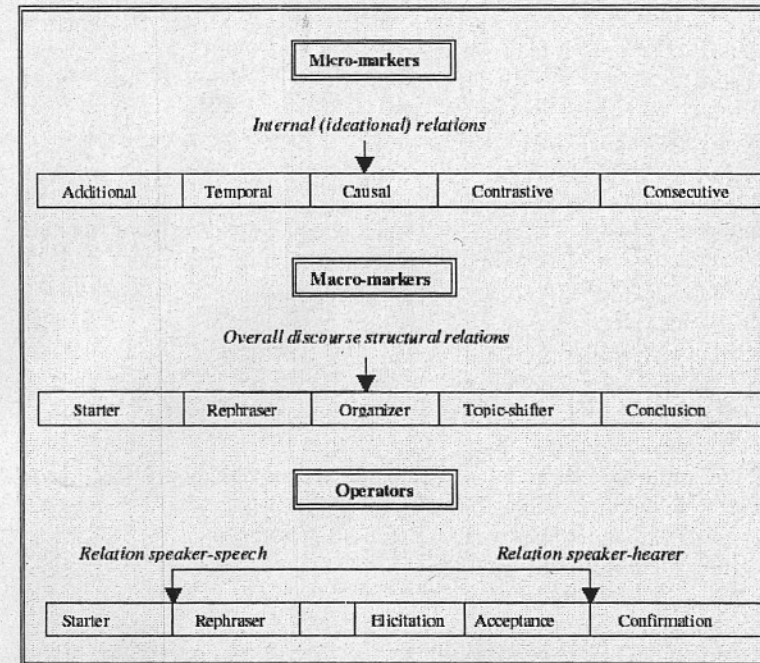
Figure 2. *DMs classification model (Bellés-Fortuño 2007)*

In the present study, the markers "and," "so" and "okay" are analysed as pragmatic markers or operators of the inferential component, used as facilitators or pause-fillers within the framing relational function of speaker-speech. The marker "okay" is also considered as an operator, functioning as an acceptance or confirmation check within the framing relational function speaker-hearer (see Figure 3).
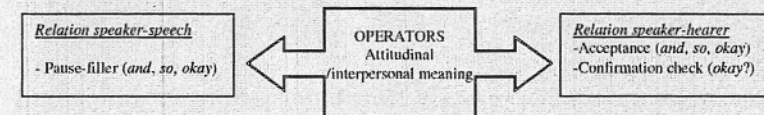

Figure 3. *"And," "so" and "okay" functions as operators*

The aim of this paper is to explore the use of the pragmatic markers and, so and okay from a multimodal perspective, considering not only linguistic and semantic meanings but also paralinguistic features (Baldry & Thibault 2006).

THE METHOD

Our research explores linguistic and non-linguistic features in a set of ten conference presentations in English at a chemistry conference in Spain in 2007. The conference involved experts from all over the world. It was a relatively intimate conference with an audience numbered approximately 50. The conference presentations were audio and videotaped, then transcribed, and annotated. The average length of the presentations was of 28 minutes, and the word count 55,000.

The set of presentations belongs to a larger corpus, MASC[2] (Multimodal Academic and Spoken Corpus), compiled by the research group GRAPE (Group for Research on Academic and Professional English) at Universitat Jaume I, in Castellón (Spain). The compilation of MASC started in 2004 and it is still in progress. It consists of spoken academic events in Spanish and English in the context of the university such as lectures, conference presentations, seminars, guest lectures, and plenary lectures. MASC is a multidisciplinary corpus that includes events from the fields of Linguistics, History, Law, Business, Marketing, Biology, and Chemistry.

An initial analysis of the DMs "and," "so" and "okay" was carried out with the concordancer Wordsmith Tools 4.0 to extract the instances of the aforementioned DMs that perform exclusively a pragmatic function. Transcripts were enough to identify clear examples of pragmatic DMs. However, non-linguistic features were needed to assure a precise identification of the operators. Then the next step was an analysis of any paralinguistic change in the speaker's intonation, and in three aspects related to the speaker's body language: posture, eye contact, and arms/ hands movement. Video data were used to analyse and classify non-linguistic features aligned with the corresponding DM on the transcriptions of the data.

THE STUDY

Quantitative analysis
The linguistic analysis reveals that the use of these pragmatic DMs vary from speaker to speaker. In terms of frequency, only 8.5% of the instances of "and," "so" and "okay" are operators – 118 "and" out of 1600, 20 "so" out 657, and 65 "okay" out of 122. When considering the type of pragmatic functions, whereas 7.4% of "and" are pause fillers, only 3.0% of "so" accomplish this function. It should be remembered here that, from the perspective adopted in the study, "and" and "so" have exclusively the pragmatic function of pause fillers. As for "okay," there is

a significant difference between the three pragmatic functions this DM can fulfil. Whereas "okay" is commonly an acceptance (60%), and as a pause filler frequency is also considerable (36.9%), few instances of "okay" have a confirmation check function, 3.1%.

This analysis also shows that when these DMs have the function of operators they commonly collocate with other linguistic expressions which seem to be empty of any semantic value. In the case of "and" the most frequent collocation is "uh and" (79 examples out of 118), and "uh and uh" (17 out of 117). On the other hand, most of the "and" occurrences have an additional value and therefore function as micro-markers; this usually happens when "and" does not form clusters and has a marked semantic value. These instances of "and" have been disregarded for our analysis. The most common collocation with "so" is "so uh" (7 out of 20); again examples of "so" as consecutive micro-markers or topic-shifter macro-markers are out of the scope of our study. Regarding the use of "okay," as an acceptance the most frequent linguistic form is "okay" (21 out of 39). As a pause-filler "okay" commonly is used followed or preceded by "uh," so we find "okay uh/ okay uh uh" (9 out of 24) or "uh okay" (7 out of 24). Finally, although examples of the category confirmation check are not widely employed in the corpus, "okay" is the linguistic expression used to perform this pragmatic function.

Regarding the position of "and," "so" and "okay" in the discourse, they appear at the three stages/moves in which the conference presentation is structured: introduction of the presenter – by the chair person – presentation of the research – by the presenter – and discussion – by the discussant and/or presenter. However, a higher frequency of these pragmatic DMs is detected during the presentation of the research possibly because speakers use them in the interaction with the visuals employed in the presentation. Comments on the slides and transition from one slide to the other are the crucial points to use these DMs during the conference presentation.

Analysis of non-linguistic features
To this point, we have considered the analysis of the operators "and," "so" and "okay" from a linguistic dimension, disregarding the instances of other discursive functions. The next stage of the analysis is to move beyond language to consider the co-expression of the pragmatic function in the intonation and/or the speaker's position, eye contact, and hands/arms movement. The approach now is based on the analysis of the aforesaid paralinguistic features that co-occur with speech. Verbal production of the DMs, in isolation or in clusters, takes the speaker just

a few seconds, a situation that may complicate the analysis. However, our primary focus when adopting this approach is on the changes that the linguistic items originate in the accompanying non-linguistic features. Table 1 summarises the results of the analysis.

Results reveal that though individual factors influence the extent and nature of the paralinguistic features used in the presentations, speakers have a tendency to raise intonation when using "and," "so" and "okay" as pause fillers and "okay" as acceptance. However, falling-rising intonation accompanies "okay" as a confirmation check. Regarding the body language generalizations are also found. Thus speakers move back and/or forth, move towards the computer; change eye contact (they commonly avoid eye contact with the audience and look at the screen, or somewhere around), and sometimes point at the screen, open arms, or put them down.

Table 1. *Analysis of linguistic and non-linguistic features*

DM	Linguistic form	Pragmatic function	Non-linguistic features			
			Prosodic	Body language/ kinetics		
			Intonation	*Position: body movement*	*Eye contact*	*Arms/ hands position*
and	*and uh (and), and so (uh), um and (so), uh and uh (um)*	Pause filler	Rising intonation			
so	*so uh (so), uh so (uh), so okay so, and uh so, um that so*	Pause filler	Rising intonation			Pointing at the screen
okay	*okay, er okay, mhm yeah okay, okay okay, okay, okay so (uh), okay then, okay uh, uh okay (okay)*	Acceptance	Rising intonation	Moving back and/or forth / Moving towards the computer	Looking at the screen / Looking at the audience	Pointing at the discussant / Opening arms up/down / Arms falling down (stops using a pointer)
	okay uh (uh), um okay (um), okay uh so (uh), and uh okay	Pause filler	Rising intonation			
	okay	Confirmation check	Falling rising intonation			

The co-expression of linguistic and non-linguistic features in the use of these pragmatic DMs are illustrated in the following excerpts extracted from the corpus. In Example 1 (taken from presentation 6), the presenter's speech rate is high. He is speaking fast while describing the slide. The presenter in this situation uses the DM "okay uh," "uh" when changing the slide as a pause filler, and also possibly to recover the normal speech rate during the transition. The rising intonation is accompanied by a change in the position, the presenter moves to the computer, changes the slide while looking at the computer's keyboard for a second, and then he looks again at the screen.

Example 1

(…) in fact was happening in this reaction initially was that you were getting a four plus two, cycloddition followed by, a three three sigmatropic that give you what what's in this case a more stable four member ring because of the strong C double bond O, *okay uh, uh* it'll turn out that they're not quite right either but uh (…)

The following example (taken from presentation 7) illustrates the DM "okay" as an acceptance preceded by a confirmation check. The presenter comments on the content of the slide expressing his position, after that he uses a confirmation check "okay?", which is accompanied by falling-rising intonation, as the question mark indicates, and he looks at the audience. These confirmation check expressions do not normally seek for a verbal response from the audience. "Okay" then is followed by an acceptance "okay" where the presenter moves towards the screen looking at it. Other instances of "okay" fulfilling the function of acceptance are found in the discussion section, where the presenter in not monopolising the floor any more but there is an interaction between presenter and discussant.

Example 2

(..) but that intermediate must be most of the time going on the products based upon what we see from the kinetics it's a contradiction. the contradiction that's there before we do any elaborate theory here. *okay? okay.* so uh things are strange in this system we're getting products that we don't understand we're getting uh contradictory experimental (…)

There are some instances where no changes in the body language are detected but the speaker exclusively accompanies the linguistic choice with an intonation change. There are also instances where the change

only takes place at the level of body language. The following example (taken from presentation 8) illustrates the latter situation. During the discussion section the presenter after listening to the discussant carefully, nodding, keeping eye contact and having his arms on the hips, starts his turn with the pause filler collocation "uh that so." The use of the DM cluster at the beginning of the turn may indicate the presenter is trying to gain time to prepare a possible answer to the discussant's question; an attitude that may be understood as reinforced by the statement that follows it, the appraisal to the question "this is a good question." About the paralinguistic features that accompany the linguistic realization of "uh that so," it is worth mentioning that contrary to most of the examples of "so" as pause filler, the speaker seems not to change the intonation but moves towards the audience and looks at them pointing out the discussant with his left hand.

Example 3

> <DISCUSSANT> is it possible to use the method to uh measure a bond isotope effect for a species that, binds certainly a species a million times more by using substrates and if so would it be possible to measure the binding isotope effects for transition state analogs.
> <PRESENTER> *uh that so* this is a good question uh when things bind very tightly of course they pull on and don't come off so i-in fact we've been we've been trying to do that there are a- there are actually are ways to do that. (…)

The analysis also shows there are some instances where linguistic and non-linguistic realizations do not exactly co-occur. That is, there is a change in the intonation but it is immediately after the verbal production that any change in body language occurs. In example 4 (taken from presentation 1), after changing the slide with the remote control the presenter uses the pause filler expression "uh and uh" with a rising intonation, and after that he introduces the content of the slide moving towards the audience and keeping eye contact with them.

Example 4

> (…) unsymmetric structures so it's not because uh uh uh uh of an exposed negative charge even this very positive charge uh is is uh, uh uh a mixture of two tautomers. *uh and uh* I'd like to address or digress a moment uh and uh worry about uh why a- is this such a strong base uh it's often attributed to the strength of the hydrogen bond. (…)

The exploration of the corpus also shows that in some instances speakers also employ combinations of more than one of these DMs to fulfil a pragmatic function. Thus, we find combinations of "and + so," ("and so uh," "um and so," "and uh so"), "and + okay" ("and uh okay"), and "so + okay" ("so okay so," "okay so uh," "okay uh so uh"). In example 5 (taken from presentation 5), the presenter has changed the slide and she is in front of the computer. After that, there is a silence of two seconds (represented in the transcript with ".") while she moves again in front of the screen, looking down. She positions in front of the screen, raises intonation and looks at the slide while using the pause filler "okay so uh." In this example the presenter employs the pause fillers to facilitate the transition from one slide to the next one.

Example 5

> (…) effects would be predicted to go inverse so that would serve as another check on whether we were thinking about this correctly. *okay so uh* we are looking at at model copper compounds so copper-oxygen intermediates are proposed uh in a wide variety of enzymes (…)

Finally, we must stress the fact that the analysis carried out here is a first approach to highlight the importance of considering pragmatic functions beyond the exclusive analysis of linguistic and semantic features of a language in the spoken academic discourse of conferencing.

CONCLUSIONS

We could conclude that the use of pragmatic markers such as the ones analysed here ("and," "so," "okay") have a relevant role in conference presentations. However, it has been proven that these pragmatic markers in the spoken academic discourse of conference presentations tend to appear as clusters or collocates and not in isolation (e.g. "and uh," "um and so," "and uh okay"), proving that DMs have to be analysed in context and that they can take multi-unit forms.

We have observed a tendency towards a rising intonation when using "and," "so" and "okay" as pause-fillers. This could be due to the fact that the pragmatic marker is also covering a phatic function and not only the function of a pause-filler; by rising the intonation, the speaker is also trying to catch the audience's attention. Body language seems to accompany the use of pragmatic markers such as the ones studied here. A link between the use of pragmatic markers and body language as well

as kinesics is evident. Presenters tend to move back and forth, turn-take eye contact with the audience and shake arms; it is likely that these gestural expressions be the result of the automatic component of social behaviour. In this line, the results obtained from this study could be taken as a reference for future cross- and inter-cultural studies.

We have aimed at showing that the way you say something is as important as how you say it or what to say; in other words, we have taken into consideration the *mise en scene*. Some pedagogical applications can be drawn from the results presented here. Both, native and non-native speakers of English who wish to participate in conferences and do research in English should learn from real examples, analysing and observing them to learn and/or improve both English language use and good conferencing practices. An example of how to make use of this kind of material and research results in language teaching is the on-line activities on academic language designed by Ruiz-Madrid & Querol-Julián (2008). The activities are structured in three sections: writing a research paper, teaching in English, and participating in conferences. Two main features characterize this pedagogical material. On the one hand, it is based on previous research on these three academic genres. On the other hand, most of the activities are corpus based; in this respect a multidisciplinary corpus is used, and for the sections of conference presentations and lectures excerpts of audio, video and transcripts belong to the multimodal corpus MASC.

NOTES

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MERCEDES QUEROL-JULIÁN
UNIVERSITY JAUME I, SPAIN.
E-MAIL: <QUEROLM@ANG.UJI.ES>

&

BEGOÑA BELLÉS-FORTUÑO
UNIVERSITY JAUME I, SPAIN.
E-MAIL: <BBELLES@ANG.UJI.ES>

SciE-Lex: A Linguistic Tool for the Efficient Production of Scientific Texts in English

ISABEL VERDAGUER
ANNA POCH[*]
NATÀLIA JUDITH LASO
EVA GIMÉNEZ
University of Barcelona, Spain

ABSTRACT

Corpus Linguistics has proven to be of great importance in the teaching-learning of a foreign language as the analysis of real texts provides both learners and teachers with information about real language in use. The compilation of a 4-million-word corpus of scientific English has been the starting point of a tool designed to help Spanish scientists to write research papers in English. The analysis of this corpus has allowed us to extract the linguistic defining characteristics of this register so as to create a lexical database, SciE-Lex, which provides the necessary information for the production of native-like scientific texts in English.

The aim of this paper is to present the information on lexical units displayed by SciE-Lex in its earlier stages regarding their Word class, Morphological variants, Equivalent(s) in Spanish, Patterns of occurrence, List of collocates, Examples of real use *and* Notes to clarify usage, *as well as describe the developments which will be implemented in the future in line with the new trends in corpus studies. Not only do these studies emphasize the high frequency of phraseological sequences but also the relevance of controlling multi-word expressions as a device to structure discourse and improve language fluency (Gledhill 2000a; Tognini-Bonelli 2001; Wray 2002; Cortes 2004; Sinclair 2004; Verdaguer & Laso 2006; Biber & Barbieri 2007; Biber, Connor & Upton, 2007; Hyland 2008). Besides, in applied linguistics and second language acquisition there is now great interest in phraseology, which has made evident the necessity to make learners aware of such formulaic chunks in order to become*

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[*] *In memoriam*, Dr. Anna Poch, who contributed actively to this project but sadly passed away on 15 June 2008.