

Evaluation in discussion sessions of conference presentations: theoretical foundations for a multimodal analysis

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Abstract

Discussions sessions have not received much attention within the genre of conference presentations. In this paper, we present the theoretical framework that underlies the approach followed to analyse the multimodal expression of evaluation. Then, an example of the application of the study has been considered necessary to understand it. Corpus linguistics provided the indications to collect the corpus, annotate it and find the appropriate software to digitalise the relevant information for the study. Secondly, genre studies and conversational analysis gave the clues to establish a structure in the linguistic expressions found in the discussion sessions of paper presentations. Thirdly, systemic functional linguistics and pragmatics provided the basis for an evaluative scheme that could be applied to the academic discourse of the corpus, considering its multimodal nature. Fourthly, the tools to observe the non-verbal communication associated with evaluative language were found in multimodal discourse analysis studies. All together, the application of these variables led to an original study of discussion sessions, which deployed interesting results.

Key words: multimodal discourse analysis, discourse analysis, discussion sessions, conference presentations, academic discourse, English for Academic Purposes

1 Introduction

To date, little research has been conducted on discussion sessions (DSs) in conference genres. The work of Shalom (1993) is the first one to explore DSs in plenary lectures and poster sessions in an international ecology conference. She provides a description of the chair's speech acts and examines the ideational focus and the main communicative functions of the questions, responses, and comments. On the other hand, the study of Webber (2002) pays full attention to the DSs in workshops in an international medical

conference. In this work, Webber analyses different question types and participants' reactions to the presentation and to the questions and responses. Webber also compares the interactive features of the discussion session with those of the presentation and of casual conversation.

A third study by Ventola (2002, 36–37) describes the structure of the exchange in which the dialogue between the discussant and the presenter is synoptically seen in terms of an adjacency pair sequence. More recently, Wulff et al. (2009) explore the *John Swales Conference Corpus* (JSCC)¹. These scholars look at the DSs that follow research papers presented in an Applied Linguistics conference. First, from a discursive perspective, they analyse the phraseological patterns of the presentations and the DSs. They also examine the discourse management aspects paying attention to the chair's utterances. Finally, they study some contextual features to probe the origin of general laughter in the DSs. When comparing the phraseological patterns of the presentations and the DSs, these authors show evidence of the predominant use of evaluative language in DSs. As they note, "a major function of DSs is to act as an evaluative forum" (ibid. 81). However, their study is limited to the identification of a few lexico-grammatical patterns. They also report the indirectness associated with criticism strategies as in many spoken genres, as well as the common use of positive acknowledgements to react to discussants' comments, rather than straightforward responses.

From our point of view, the major function of DSs stated by Wulff et al. is conclusive, that is, to provide an opportunity for scholars to evaluate the research activity. However, as shown by Querol-Julián (2011), in a study on evaluation in DSs in specialised conference paper presentations, a more comprehensive approach is necessary to consider the multimodal nature of spoken language, and therefore to identify how the linguistic expression co-occurs with kinesics and paralanguage. In this paper, we present the theoretical framework that underlies the approach followed to analyse multimodal expression of evaluation. Moreover, an example of the application of the study has been considered necessary to understand it.

2 An overview of the study

The research presented in this paper is part of a study on evaluation in discussion sessions. To date research on conference presentations (CPs hereafter) (Dubois 1980;

¹ A project that complements the Michigan Corpus of Academic Spoken English (MICASE) in collaboration with the Group for Research on Academic and Professional English (GRAPE) at the Universitat Jaume I.

Räisänen 2002; Rowley-Jolivet & Carter-Thomas 2005; Shalom 2002; Ventola 2002) has focused on the presentation of the research and not much attention has been paid to the discussion that follows it. However, DSs have specific characteristics that define them. During the discussion presenters move from a type of discourse that has been prepared in advance, sometimes even read (monologic presentation), to face a challenging communicative situation that has not been prepared, in which the presenter does not know the directions it can take (discussion sessions). Regarding research, those works that analyse the discussion session provide, to our understanding, a partial examination, since they focus exclusively on the transcriptions of the speech and do not take into account other features of spoken discourse (Dubois 1997; Räisänen 2002; Wulff *et al.* 2009). Finally, discussion sessions are an inherent evaluative forum, as previous studies have confirmed (McKinlay & Potter 1987; Heino *et al.* 2002). Thus, after considering all these aspects, we believe a study on the evaluative features of discussion sessions should aim at shedding some light on this academic interactive genre devising a new methodology to analyse evaluation from a comprehensive perspective, considering not only the linguistic features but also their co-occurrence with kinesics and paralanguage in a multidisciplinary corpus.

Taking into account that the main purpose of the study was to explore the speaker's expression of evaluation in the DSs of two CPs on Linguistics and Chemistry from a multimodal approach, the aim of this paper is to present an explanation of the process of selection of the theoretical framework for the study. To accomplish the aim of the research, a qualitative examination of how speakers express evaluation in two sub-corpora was carried out. We set out to investigate evaluation in spoken academic discourse beyond the traditional linguistic approach inherited from the studies of evaluation in written genres. However, it is the semantic resources of this interpersonal communicative feature that were taken as the point of departure of the analysis. The hypothesis that linguistic evaluation is not always expressed in isolation but co-expressed with other non-linguistic resources was investigated. Moreover, discussion sessions are complex constructs that pursue to establish a dialogue between the audience and the presenter of the paper. This interactive situation has not received much attention yet. The analysis of the structure provided insights into how the interaction is organised, as well as how interpersonal meaning (the meaning created and negotiated between speaker and hearer) emerges in the dialogue.

After the review of the literature, two corpora were compiled and annotated, based on previous studies on corpus linguistics. Then, three research questions were formulated which observed their disciplinary similarities and differences in order to accomplish the main objective of the study. The research questions were:

- 1) How is interaction organised in the discussion sessions?
- 2) Does evaluation, linguistic and non-linguistic, modulate the generic structure of the dialogic exchanges?
- 3) Is linguistic evaluation co-expressed with kinesics and paralinguistics?

The first question derived from the research on discourse analysis, genre studies and conversation analysis and its answer shed light on the macrostructure of the DSs, and established the criteria for the selection of the dialogic exchanges (that is the dialogue between discussant and presenter) that was used in the analysis of evaluation and the generic structure. The second question, grounded on systemic functional linguistics and pragmatics, was based on the hypothesis that the expression of interpersonal meaning, and particularly of evaluative meaning, governs the generic structure of the exchanges, namely, the rhetorical moves that shape the discussant's and the presenter's turns. The third question, which related verbal and non-verbal communication, looked for evidence to confirm or reject the hypothesis that the expression of evaluation is multimodal in nature.

3 Meeting objectives: theory and methodology

Previous literature on the most influential approaches to the study of interpersonal communication has enabled us to design the theoretical framework of the study which was embedded in techniques of corpus linguistics, genre analysis, and discourse analysis, including the theoretical orientations of systemic functional linguistics, conversation analysis, multimodal discourse analysis, pragmatics, and contrastive studies.

Corpus linguistics (Sinclair 1991) provided the criteria to collect the corpus, transcribe and annotate it, and find the most suitable software to digitalise and retrieve the multimodal data for the study in a simple way. *Systemic functional linguistics* (Halliday 1985) and *conversation analysis* (Sacks *et al.* 1974) allowed us to describe the structure of the discussion sessions. It was important to first establish the macrostructure of this genre to understand the dynamics of the interaction. *Genre analysis* (Swales 1990) provided the tools to identify the generic moves of the interaction. In addition *systemic functional linguistics* underlies the appraisal model postulated by Martin and White (2004), which was used to examine linguistic evaluation. This approach was the starting point for the *multimodal discourse analysis* (Kress & van Leeuwen 2001) that entailed the exploration of paralinguistics and kinesics following previous studies based on *conversation analysis* techniques (Schegloff & Sacks 1973). The interpretation of the global expression of evaluation was made from a *pragmatic* perspective (Brown & Levinson 1987). Finally, a

cross-disciplinary approach (Kaplan 1966) underlies the exploration of all these aspects in the discussion sessions of two specialised conference paper presentations on Applied Linguistics and Chemistry.

In the next sections, we focus on the theoretical constructs that helped us to decide on the collection and preparation of the corpora and the selection of the three aspects examined in the study: interactional patterns of DSs, linguistic and multimodal evaluation, and generic structure and evaluation of dialogic exchanges. We illustrate the theoretical basis that supports the approach adopted in the study with an example of the analysis.

3.1 The corpus

The contribution of corpus linguistics to the study of language is not simply the use of authentic language, but the use of data in an electronic form which allows a systematic analysis of the language. Computerised corpora have also influenced the methodology adopted in recent linguistic research which claims for both automatic and interactive techniques (Biber *et al.* 1998). Conversely, the study of academic spoken discourse and of semantic evaluation in particular, has drawn on traditional studies of written discourse (Martin & White 2004). Accordingly, the examination of academic spoken genres is generally based on the analysis of orthographic transcriptions. One cannot overlook, however, that the development of a spoken language corpus is an especially complex job. The main difficulty lies in the multimodal nature of the discourse (Adolphs & Carter 2007). Analysis of speech events, therefore, cannot be performed on the same basis as that of written discourse. Spoken language data are notoriously more difficult to work with than written data. The main problem is to represent in orthographic or other symbolic means what can be heard and watched in a recording of a speech event. The words that appear in an orthographic transcription constitute only a partial representation of the original event. The analyst can capture other features by making other types of transcriptions, such as prosodic or phonetic, and can also take notes of contextual features. However, it is not only the transcription but also the process of data capture itself that is problematic, since an audio recording of a speech event is only an incomplete view of what occurred, not only because of possible technical deficiencies, but also because visual and tactile features are missing (Thompson 2005). Nowadays video recording is the only available tool researchers have to register the physical component of the event.

The cross-disciplinary approach of the analysis made us look closely at the factors that may influence the rhetoric and the performance (linguistically and non-linguistically) of the DSs to shed light on the *tertium comparationis* of the two sub-corpora. Six different

aspects may affect interpersonal meaning in discussion and therefore in evaluation: the purpose of the conference, cultural and personal features, the relationships among the participants, environmental factors, others' turns and the discipline (Querol-Julián 2011). These factors do not operate individually but function as a whole. In the study, attention was paid to two of them, the discipline and others' turns. In addition, there are other aspects that can be managed in the design of comparable corpora; we refer to data selection and corpus size (Sinclair 1991). The size was determined by the qualitative multimodal approach adopted in the study, and the criteria of data selection are described in the next paragraphs.

Two corpora of conference paper presentations were collected, one from a conference on Applied Linguistics² and the other from a conference on Chemistry. From these corpora we created two sub-corpora of 10 discussion sessions (DS) each, following Querol-Julián's (2011) premises about the design and compilation of a multimodal corpus. The selection was made according to two criteria: only one presenter took full responsibility of the event and the number of turns in each DS was similar.

The discussion sessions were transcribed and annotated with the help of the freely available software, ELAN (EUDICO Linguistic Annotator)³ tool, developed at the Max Plank Institute for Psycholinguistics. Figure 1 is an example from a chemistry dialogic exchange in one of the DS, the one we will focus on to illustrate the multimodal analysis of evaluation in section 4 of this paper.

The software provides four different viewers: the video viewer, the wave form viewer, the annotation density viewer, and the time position viewer. In the video viewer, the video recording is shown. In the wave form viewer, the audio recording and its waves appears. In the annotation density viewer you can create as many layers as you need to introduce different types of information. In the study we used up to ten layers: two for orthographic transcriptions, discussant's and presenter's, (see the label given on the left side part in Figure 1, named "trans D" and "trans P"); one for discourse annotation, to identify the generic moves ("genre"); and seven types of annotations of the expression of evaluation, two for linguistic evaluation, discussant's and presenter's, ("ling eval D" and "ling eval P"); and five for non-linguistic evaluation: one for paralinguistic ("paralinguistic"), and four for kinesic features: gesture, head movement, gaze, and facial expression ("gesture",

² The verbatim transcription of the conference has been published as the JSCC by the ELI (English Language Institute, University of Michigan). The Chemistry corpus was recorded at an international conference held at Universitat Jaume I. Both corpora belong to a larger corpus called MASC (Multimodal Academic Spoken Corpus), compiled by the research group GRAPE.

³ <http://www.lat-mpi.eu/tools/elan/>

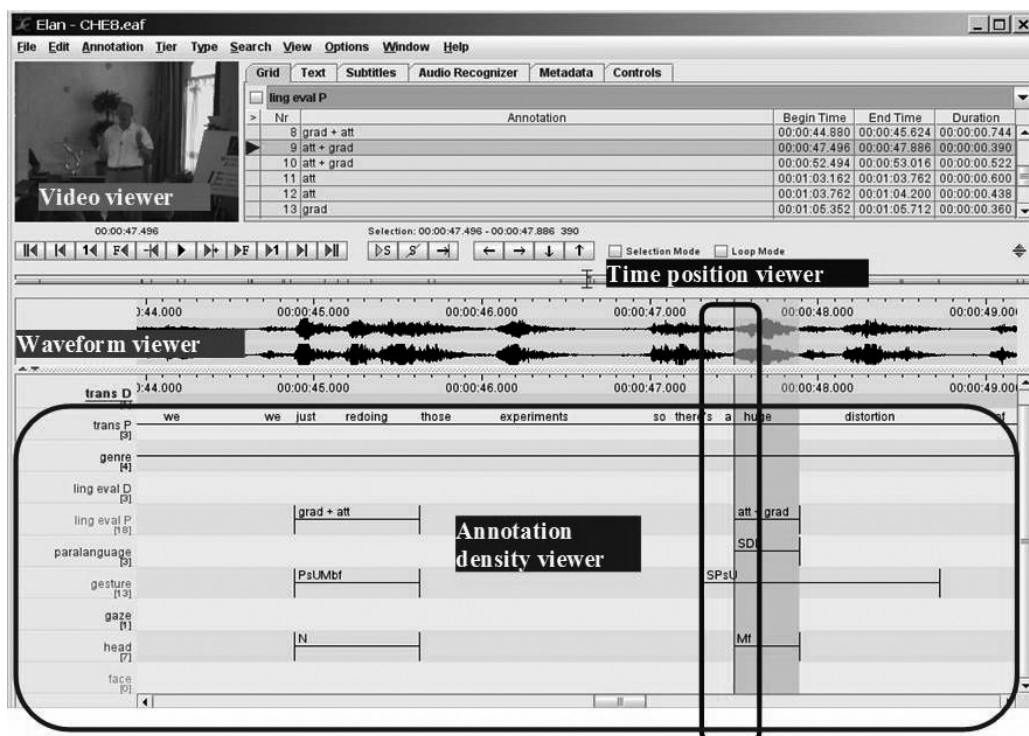


Figure 1. Sample view of multimodal annotation and transcription in ELAN

“head”, “gaze”, and “face”). Finally, the time position viewer shows the position in time of all the data (video, audio, transcriptions and annotations) that has to be synchronised beforehand.

In the example analysed in this paper, as presented in Table 1, we have created 27 different tags to try to describe the whole picture of evaluation through the different annotation. A detailed explanation of the theoretical grounds that support them is given in the following sections.

In the screenshot presented in Figure 1 the presenter, in the move Responding, uses the linguistic evaluative utterance “huge”, annotated as att + grad (attitude plus graduation), which co-occurs with two kinesic features: SPstU (separating palms up) and Mf (head moving forward); and a paralinguistic feature SDL (long syllabic duration).

Transcription of kinesics was a laborious job since the identification of the co-expression with linguistic evaluation was only possible by slowing down the videotape repeatedly to reveal any change. The identification of paralinguistic changes was done by the analysis

Discourse	Genre (moves)	
	FQ	Formulating the question
	OPT	Opening the turn
	R	Responding
	CT	Closing the turn
Evaluation	Semantic evaluation	
Linguistic	att	attitude
	eng	engagement
	grad	graduation
	att + grad	attitude plus graduation
	eng + att	engagement plus attitude
	eng + grad	engagement plus graduation
Non-linguistic	Paralanguage	
	SDL	long syllabic duration
	LO	loudness
	Kinesics	
	Gesture	
	PsUPDis	palms up pointing the discussant
	PsUMs	palms up moving to one side
	PsUMf	palms up moving forward
	PsUMbf	palms up moving back and forth
	PsUMu	palms up moving up
	PUMu	palm up moving up
	CPU	closing palms up
	SPsU	separating palms up
	FMuf	forefinger moving up and forward
	Head	
	N	head nods
	QN	quick head nod
QNs	quick head nods	
Mf	head moving forward	
Mu	head moving up	
Gaze		
LAU	looking at the audience	

Table 1. Annotations and tags

of the sound waveforms in comparison with the surroundings. See full description, compilation, and creation of the multimodal annotated corpus in Querol-Julián (2011).

3.2 Interactional patterns

To understand the interpersonal meaning expressed in the DSs of conference presentations, the analysis of the macrostructure can shed light on how interaction between the participants occurs. Thus, the annotation of the sub-corpora of DSs was essential to identify interactional patterns. Three aspects were considered in the annotation of the macrostructure. All three were assembled in the following string,

speaker: type of turn _ position of the turn ~ addressee

which identifies each of the turns taken as well as the overlapping: the participants (the speaker and the addressee), in the example below discussant (D1) and presenter (P); the type of turns, in the example a question (Q); and the position of the turns, in the example a starting turn (S).

- (1) *D1:Q_S~P: is it possible to use your (xx) (regation) method to uh measure a bond isotope effect for a species that, binds certainly a species a million times more by using substrates [...]*

The exploration of the interactional patterns of DSs was based on systemic functional linguistics and conversation analysis techniques. We focused on the following aspects: the flow of the discussion (Ventola 2002), the type of turns (Sacks *et al.* 1974), the participants, the sequence of the dialogue (Sinclair 1991) and the dialogic exchange patterns. Querol-Julián (2011) observes that DSs is a complex construct where participants accomplish two primary functions, the so called metadiscoursal turns and discoursal turns. She distinguishes three patterns of dialogic exchanges: Comment – Comment, Question – Response, and Comment + Question – Response. The identification of the dialogic exchange patterns enabled the creation of the two sub-corpora of dialogic exchanges where the analysis of evaluation and generic structure was carried out.

3.3 Generic structure and evaluation

Another step of the study was the analysis of the rhetoric structure of the dialogic exchanges, focusing on the generic moves, and how evaluation is expressed. To accomplish this aim, previous studies on genre analysis particularly the move structure

introduced by Swales (1990) was applied within each turn of the three dialogic exchange patterns, Comment – Comment, Question – Response, and Comment + Question – Response. Table 2 shows the generic structure of a Question – Response exchange.

Discussant’s turn: Question	
Move 1 Opening the turn	<i>Announcing the question</i>
Move 2 Formulating the question (obligatory)	<i>Asking a backward question or Asking a forward question</i>
Move 3 Reformulating the question	<i>Ensuring the question is clear</i>
Presenter’s turn: Response	
Move 1 Opening the turn	<i>Reacting to the question or Repeating the question</i>
Move 2 Responding to the question (obligatory)	<i>Making a straightforward response or Expanding the response (optional) Reintroducing the response (optional) Making a roundabout response Reintroducing the response (optional)</i>
Move 3 Expanding the topic of the question	<i>Raising a question and Showing a plea of ignorance and Answering the question</i>
Move 4 Closing the turn	<i>Reacting to the question</i>

Table 2. Generic structure of the Question – Response exchange (Querol-Julián 2011, 252)

Then, a global interpretation of evaluation was made from a pragmatic perspective. Politeness (Brown & Levinson 1987) was the key pragmatic variable considered at this stage. Three types of strategies were examined: positive politeness strategies, making the listener feel good; negative politeness strategies as mitigation or reduction of the authorial voice’s responsibility (Varttala 2002), and self-protection and protection of others’ positive face from a FTA (Face Threatening Act). Other pragmatic aspects also considered in the research were presuppositions (Green 1989) and indirectness (Austin 1962; Searle 1969).

3.4 Linguistic and multimodal evaluation

The core of the study was the analysis of the expression of evaluation. As described above, the multilayer annotation and transcription of the evaluation and the generic structure of dialogic exchanges was done with the ELAN.

For the examination of linguistic evaluation we adopted Martin and White's (2005) appraisal model of semantic resources. This was the most recent comprehensive framework of evaluation developed (see other models e.g. Biber *et al.* 1999; Hyland 2005; Hunston & Thompson 2000), which scope provides important insights into how speakers use evaluation in various ways and from different angles to negotiate and express their positions. The fine grained model enabled us to identify not only the attitudinal meaning but also what is being evaluated and the negotiation of other voices in the discourse. Such a comprehensive analytical framework allowed us to bring to the fore disciplinary differences and similarities between the semantic evaluative resources used in the DSs of the two conferences. The model is articulated in three categories and their subcategories: attitude, evaluation per se; engagement, position of the authorial voice and negotiation with other voices; and graduation, scalability in terms of intensity, amount or prototypicality. However, it was necessary to adapt the model to the corpora since it was designed for the study of written texts. For example, a distinction was defined between intensification and mitigation in graduation, something already noticed by Crawford- Camiciottoli (2009).

The model to analyse non-linguistic resources that co-occur with linguistic evaluation considered the analysis of two aspects: kinesics, and paralanguage. Following previous studies on Multimodal Discourse Analysis and Conversation Analysis we distinguished: a) four types of kinesics: gestures (Kendon 2004; McNeill 1992), head movement (Kendon 2002, Goodwin & Goodwin 1987, McClave 2000), facial expression (Ekman & Friesen 1969, Kendon 1981), and gaze (Argyle *et al.* 1981, Kendon 1967); b) the functions they accomplish in the discourse (Bavelas *et al.* 1989, Kendon 2004, Morris 1977); and c) how they interact with the speech (McNeill 1992). As for paralanguage, we identified three types: two voice qualities and one voice differentiator (Poyatos 2002); as well as the functions they accomplish in the discourse.

The variables analysed, which have been adopted after systemic functional linguistics, conversation analysis, and multimodal discourse analysis studies follow Querol-Julián & Fortanet-Gómez (2012). Figure 2 summarises the model of analysis of evaluation of DSs from the macrostructure of the discourse to the linguistic and non-linguistic resources.

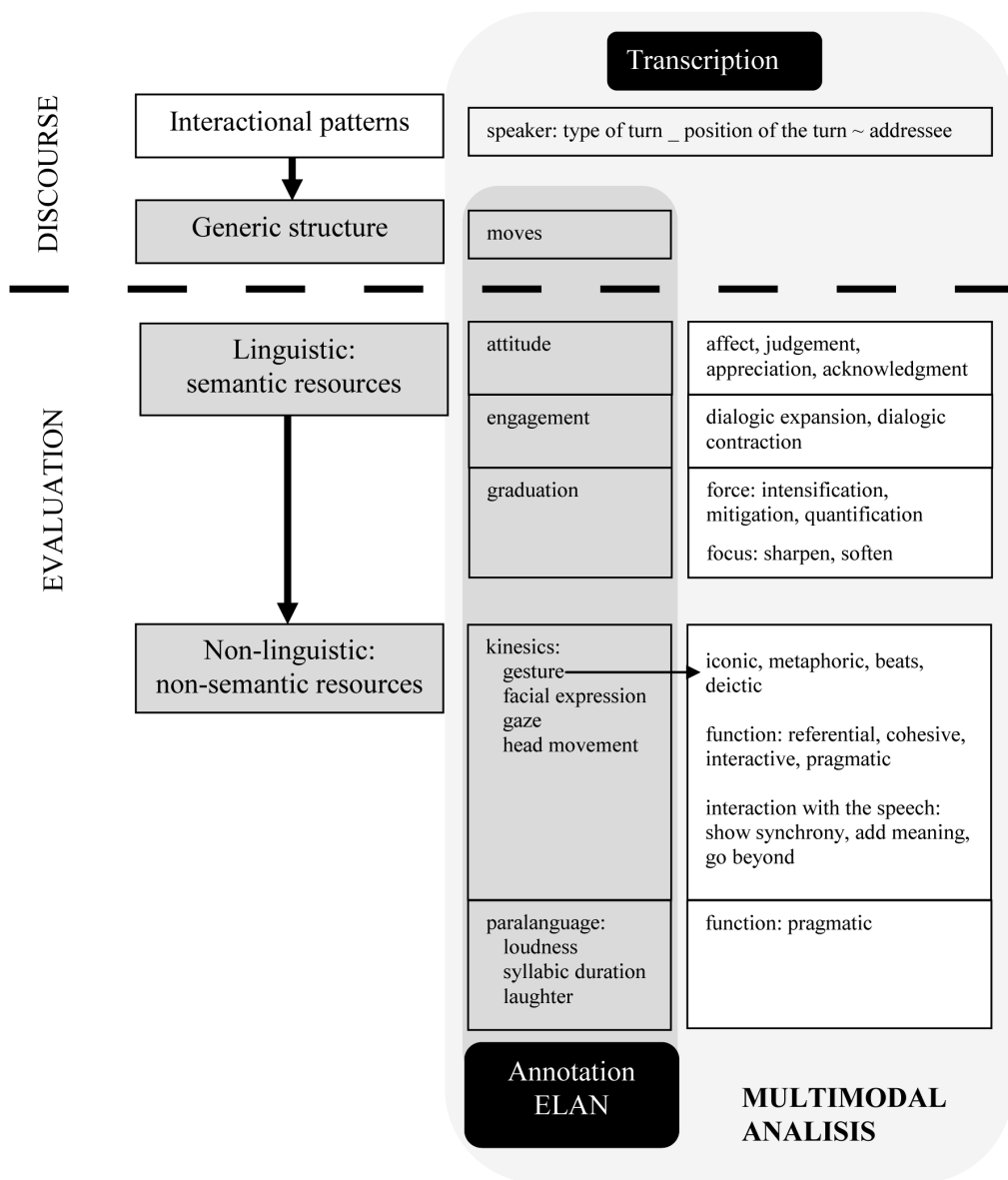


Figure 2. Model to analyse multimodal evaluation

4 Multimodal analysis of evaluation

In this section, we provide an example of the study considering all the variables described above. Table 3 shows the generic structure and the verbatim transcription of an exchange held in the conference on Chemistry, where the expression of evaluation is marked in bold type.

Move	Transcription
Discussant	
Formulating the question (Asking a forward question)	(2) <i>is it possible to use your (xx) (regation) method to uh measure a bond isotope effect for a species that, binds certainly a species a million times more by using substrates and <Presenter: OVERLAP> uh </OVERLAP> if so would it be possible to measure the binding isotope effects for transition state analogs.</i>
Presenter	
Opening the turn (Reacting to the question)	(3) <i>uh that so this is a good question</i>
Responding (Straightforward response)	(4) <i>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.</i>
(Expanding the response)	(5) <i>uh if we, use elevated temperature we can get these kinds of inhibitors to go on and off. and we have measured the five-prime trivial binding isotope effect with (inucile) h. uh it's twelve percent uh we, we just redoing those experiments. so there's a huge distortion of that carbon in the binding isotope effect. uh we can also do the experiment uh u- (xx) details where we, where we measure the, uh the the transition state of the binding on the first excursion in. that turns out to be the same number</i>
(Reintroducing the response)	(6) <i>so we're still working on that but it it's very interesting to see these huge, binding isotope effects with the tight binding inhibitors. uh implying much stronger interaction at the catalytic site as you proposed from this conversion of dynamic to uh thermodynamic capture with an inhibitor.</i>
Closing the turn (Reacting to the question)	(7) <i>good question</i>

Table 3. Generic structure and verbatim transcription of a dialogic exchange from Chemistry

The discussant in this exchange only takes the obligatory move, *Formulating the question*. In Example 2 (see Table 3), the two information-eliciting questions seem to be of the type off-the-topic question (Webber 2002), seeking the answer of the application of the method presented to another type of species. The move is opened with a direct question starting with *is it possible*. In the first question, the description of the species is made with dialogic contraction, unmitigating the authorial voice with *certainly*, and with the double intensification *a million times more*. In addition, the second question based on the affirmative answer of the first one repeats the same structure, though it is mitigated with dialogic expansion expressed by the modal verb *would*.

The first move taken by the presenter is *Opening the turn*. This move can be realised in two ways either by showing his reaction to the question or by repeating the question. In the example, the presenter chooses the first option. He appreciates positively the question with the adjective *good*. The presenter faces forward questions. Thus, his reaction might be seen as evaluating the difficulty implied in the question and judging also positively the discussant. This interpretation gains force with the examination of the gestures and expressions that co-express with the utterance. The presenter points out the discussant with palm up and looks at the audience. It is as if the expression of attitude were addressed to the audience and the discussant gained a higher position among them. See the kinesic expression in Figure 3.



Figure 3. Gaze and gesture co-expressed with *good*

The second move is *Responding to the question*. From the examination of this move, the distinction between two types of responses becomes evident: straightforward and roundabout. Straightforward responses provide simple and easy to understand answers. The presenter, after giving a straightforward response, can choose to expand it, that is, to elaborate it further, and after that to take up the answer. The exchange from Chemistry follows this rhetorical strategy. The presenter opens the move in Example 4 with a straightforward response to answer the two forward questions. The discussant seeks to elicit information on a topic not included in the talk, the possibility of applying the

method presented to a particular type of species (with tight binding isotope effect) and, if so, the possibility of measuring *the binding isotope effects for transition state analogs*.

The presenter opens the response with a general comment on the particularity of the species. He intensifies the adverb *tightly* with *very*. The whole utterance *very tightly* finds semantic synchrony with an iconic gesture of bringing palms up closer to each other (the palms have been positioned facing each other at the beginning of the sentence), as illustrated in Figure 4.



Figure 4. Gesture co-expressed with *very tightly*

The expression of dialogic contraction *of course* presents the proposition as highly warrantable. This introduction could be interpreted as anticipating the positive response that follows. Then, the presenter expresses this with unmitigated authorial voice, *in fact*, showing that they have actually worked on that. This would place the presenter in a higher position, since he seems to have actually done research on the topic, and the response is not going to be just an opinion but it is going to be based on his research. He initially does not express a positive attitude to describe the exploration. The use of negative self-judgement of capacity *we've been trying to do* rather than *we've done* could imply a failure. However, he immediately gets over this initial attitude and uses dialogic contraction, *actually*, to proclaim the authorial voice and to state there are ways to do it. The straightforward response thus gives a positive answer. Moreover, in Example 5, the presenter expands the response to describe two experiments and the findings. The modal verb *can*, in *we can get* and *we can also do* shows that with the procedures described one is able to get the established goals. Thus, the modal verb expresses positive judgement. The first instance of the verb articulates the second part of a conditional sentence with *if*. The modal verb co-occurs with a gesture of palms up facing each other moving to one side. Figure 5 illustrates the gesture.



Figure 5. Gesture co-expressed with *can get*

This gesture can be interpreted as deploying a parsing function (Kendon 2004) showing punctuation of the discourse, since the same gesture, but moving hands to the opposite side, has also been used in the first part of the conditional sentence. Thus, the gesture is marking the discourse structure. Then, the presenter introduces the results of the analysis. He shows positive attitude towards the research process with *just redoing*. He judges positively their tenacity with the verb *redoing*. Here *just* does not convey evaluative meaning mitigating the action but a specificatory or temporal function. Lindemann and Mauranen's (2001, 466) had already noticed this meaning of *just* in their study of functions of this adverb in academic speech. The utterance is also intensified with kinesic beats of moving palms up back and forth and head nods. As a common practice in hard sciences, when feasible, experiments are repeated to check that data are reliable. This is done before disclosing the results to the research community. The presenter thinks it wise to be prudent, to self-protect positive face and in this way avoid possible criticism, making it clear he is giving first findings which he still needs to confirm. He quantifies the results with the intensifier *huge* which co-occurs with long syllabic duration and moving palms up and head forward. On the other hand, the utterance that contains the second *can* in *we can also do* to describe the second experiment, co-occurs with head moving forward and forefinger moving up and forward. See the kinesic expression in Figure 7. This gesture shows semantic synchrony with the intensifier *also*, since it is a common gesture to express addition.



Figure 6. Head movement and gesture co-expressed with *can also*

The presenter describes the results of the second experiment with positive appreciation. The verb *turns out to be* shows they have a particular result especially one that they did not expect. This verb is intensified with palms up moving forward. Nonetheless, the positive polarity of the verb is achieved with the description of the results as *the same number*, which shows similar findings in both experiments. The utterance *the same* is intensified phonetically with loudness up and with a quick nod. The presenter closes the move taking up the positive answer shown in the straightforward response in Example 6. He has expressed it with negative self-judgement of capacity *we've been trying to do* (Example 4). Now, he opens the expression of this rhetorical function once more with self-protection of positive face. The presenter reintroduces the idea that he is talking about on-going work. The temporal adverb *still* intensifies the idea of continuity, which co-occurs with palms up moving forward. Then, he shows a positive attitude towards the experiments with the inscribed appreciation by using *interesting* intensified with *very*. He grades binding isotope effects with *huge* that co-occurs with a gesture of separating palms up, an iconic gesture that shows semantic synchrony with the verbal utterance.



Figure 7. Head movement and gesture co-expressed with *huge*

Then the presenter also appreciates the interaction with the comparative superlative *much stronger*. The adjective is non-linguistically intensified, but it is phonetically stressed while moving one palm up to one side and the head up. In addition, the presenter deploys positive face politeness towards the discussant attributing the authorship *as you proposed*. The utterance is also co-expressed with palms up moving forward, with an interactive function, and head nods, showing positive appreciation.

The last move that the presenter takes in this exchange is *Closing the turn*. The presenter once more shows his reaction to the question with the same expression of positive appreciation used in move 1, which constitutes a positive politeness strategy towards the face wants of the discussant. In Example 7, *good question* co-occurs with a kinesic feature of moving palm up and quick head nods showing pragmatic synchrony with the evaluative meaning of the linguistic expression.

5 Conclusions

The aim of this paper was to explain how the variables used in a study on multimodal evaluation in discussion sessions have been drawn from existing literature. Firstly, corpus linguistics provided the indications to collect the corpus, annotate it and find the appropriate software to digitalise the relevant information for the study. Secondly, genre studies and conversational analysis gave the clues to establish a structure in the linguistic expressions found in the discussion sessions of paper presentations. Thirdly, systemic functional linguistics and pragmatics provided the basis for an evaluative scheme that could be applied to the academic discourse of the corpus, considering its multimodal nature. Fourthly, the tools to observe the non-verbal communication associated with evaluative language were found in multimodal discourse analysis studies. All together, the study of these variables led to an original analysis of discussion sessions. To illustrate the study, we referred to the research carried out by Querol-Julián (2011) (see also Querol-Julián & Fortanet-Gómez, 2012), in which she posed three hypotheses regarding the organisation of interaction, the impact of verbal and non-verbal expression of evaluation on generic structure, and the co-expression of language, kinesics and paralanguage. The methodology described in this paper proved to be successful in order to carry out her research. The variables analysed in this study could also be used with other types of discourse in order to observe the multimodal nature of evaluation in, for instance, research meetings, focusing on academic discourse, or the legal discourse of a trial. In addition, this type of multimodal analysis reflects much more accurately the nature of spoken discourse and could be used both in discourse analysis and in pragmatics. Finally, there can be many pedagogic applications of this analysis. Among them, we would like to emphasize the value of this analysis for teacher training in research presentations, since novice researchers can observe in real presentations how verbal discourse interacts with non-verbal features, which is something that is very rarely taught, especially to non-native speakers of English.

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Vertinimas konferencijos pranešimo klausimų ir diskusijos dalyje: teoriniai multimodalinės analizės pagrindai

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Santrauka

Konferencijos pranešimo klausimų ir diskusijos dalis yra vienas mažiau tyrinėtų konferencijos pranešimo žanro aspektų. Straipsnyje pristatomas teorinis modelis, kurio pagrindu analizuojama multimodalinė vertinimo raiška taikomosios kalbotyros ir chemijos konferencijų pranešimų klausimų ir diskusijos dalyse. Jo pagrindą sudaro tekstynų lingvistikos, žanro ir pokalbio analizės, sisteminės funkcinės lingvistikos, pragmatikos ir multimodalinės diskurso analizės principai. Tekstynų lingvistika pasitarnavo sudarant tyrimui reikalingą filmuotos medžiagos tekstyną, jį anotuojant ir pasirenkant tinkamas analizės priemones. Žanro ir pokalbio analizės principai praverė analizuojant kalbinius vienetus, atliekančius vertinimo funkciją, o sisteminė funkcinė lingvistika ir pragmatika padėjo sukurti vertinimo schemas, naudotos multimodalinėje analizėje, pagrindus. Galiausiai, neverbalinės komunikacijos ypatumų tyrimo priemonės padėjo pasirinkti studijos, taikančios multimodalinės diskurso analizės metodologiją. Straipsnyje taip pat pristatomas multimodalinės vertinimo elementų analizės pavyzdys. Analizė parodė, kad vertinimo raiška konferencijos pranešimų klausimų ir diskusijos dalyje yra iš tiesų multimodali, joje susipina kalbiniai ir kalbą papildantys paralingvistiniai elementai, kurių visuma padeda sustiprinti ir atvirai perteikti kalbėtojo poziciją. Aprašomasis tyrimas gali turėti įvairaus pobūdžio taikomąją naudą. Jo principus galima taikyti analizuojant kitokio žanro tekstus, taip pat mokant jaunuosius tyrėjus sėkmingo prezentavimo meno.

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