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A multimodal approach to analyse evaluation

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Presented by
Mercedes Querol Julián

Supervised by
Dr. Inmaculada Fortanet Gómez

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Objeto y objetivos de la investigación

El interés por el inglés con fines académicos en contextos de investigación ha aumentado en la última década considerablemente. Sin embargo, la mayor parte de los estudios se han centrado en la descripción del discurso de los congresos y no se ha prestado mucha atención a la investigación de la presentación de artículos en congresos, particularmente al discurso de la discusión que sigue a la presentación de la investigación, al turno de preguntas. Este discurso se caracteriza por ser espontáneo e imprevisible, y por tanto un tipo de discurso que los investigadores que han presentado su artículo no pueden fácilmente predecir. Sin embargo, es en los turnos de preguntas donde la comunidad científica puede cuestionar, criticar y alabar la investigación, o compartir conocimiento y experiencias. Esto ocurre en un foro cara a cara donde el investigador tiene que saber cómo responder y reaccionar a los comentarios y preguntas de la audiencia de forma clara y efectiva. Durante estas intervenciones no se juzga sólo a calidad de la investigación sino también el prestigio y la valía de los investigadores. Los aspectos distintivos de los géneros que constituyen las presentaciones en congresos, la presentación de la investigación y los turnos de preguntas, son principalmente dos: el nivel y naturaleza de la interacción que se establece entre el investigador y la audiencia, y el control que el hablante tiene sobre el discurso; sin embargo ambos aspectos están íntimamente relacionados. Los turnos de preguntas son más interactivos ya que hay un intercambio de información con la audiencia, es decir, las preguntas y comentarios buscan la respuesta del investigador. Por otra parte, en esta situación los investigadores tienen menos control sobre el discurso, lo que aumenta la dificultad a responder y reaccionar a los turnos de la audiencia. Durante la discusión los investigadores se mueven de un tipo de discurso en la presentación de la investigación que ha sido preparado con antelación, algunas veces incluso leído, a enfrentarse a un discurso y una situación comunicativa que no ha sido preparada donde el investigador no sabe las direcciones que puede tomar. Uno de los peores miedos de los investigadores

(a veces también de la audiencia) podría ser el no entender el significado que la pregunta o comentario puede esconder, por ejemplo una crítica.

Teniendo en cuenta la dificultad que los turnos de preguntas en las presentaciones en congresos puede tener potencialmente para los investigadores, y la importancia del papel que aparentemente estos juegan en el encuentro cara a cara con la comunidad científica, decidí implicarme en la investigación de esta situación comunicativa académica con el objetivo principal de ayudar a los investigadores en estas dificultades. Por tanto, las principales motivaciones de este estudio pueden resumirse en tres aspectos. Primero, hasta la fecha la investigación de las presentaciones en congresos se han centrado en la presentación de la investigación (e.g. Dubois 1980, 1987; Hood & Foley 2005; Rowley-Jolivet 2002, y Ventola et al. 2002, among others), y sólo dos trabajos examinan el turno de preguntas (Webber 2002 and Wulff et al. 2009). En segundo lugar, la investigación llevada a cabo sobre los turnos de preguntas hace, bajo mi entendimiento, un examen parcial del discurso ya que se pase exclusivamente en el estudio de las transcripciones ortográficas (literales) del discurso y no tienen en cuenta otros aspectos del discurso hablado. Y en tercer lugar, no hay muchos materiales pedagógicos disponibles actualmente basados en la investigación que puedan ayudar a los hablantes (nativos y no nativos) llevar los turnos de preguntas. Hay muchos aspectos del discurso interactivo de los turnos de preguntas que podrían haber sido estudiados; sin embargo, mi elección ha sido el significado interpersonal de la evaluación. Este aspecto no fue seleccionado al azar pero, desde mi limitada experiencia personal en participar y asistir a congresos, las conversaciones mantenidas con colegas más experimentados, y una primera exploración del corpus que se analizará en el estudio, tuve la impresión de que en esta parte del foro la evaluación juega un papel relevante. Esta hipótesis fue confirmada también en los dos trabajos sobre este género antes mencionados.

Esta tesis persigue el diseño de una nueva metodología para analizar el significado evaluativo que se transmite en la interacción en la investigación

y la audiencia, desde una perspectiva multimodal. La expresión de la evaluación se estudia desde una perspectiva global, ya que no se presta atención exclusivamente a la evaluación lingüística, sino que también a aspectos no lingüísticos que co-existen con esta. Por tanto, el análisis aun teorías socio-semióticas del lenguaje y de sistemas no lingüísticos, *paralingüísticos* y *kinésicos*. Tres aspectos subyacen en este estudio: i) la exploración de cómo la interacción entre los participantes del turno de preguntas ocurre, ii) la co-expresión de la evaluación lingüística con los aspectos no lingüísticos, y iii) la estructura genérica de la discusión y su relación con el significado evaluativo. Además, el estudio tiene un componente contrastivo ya que los datos que se estudias perteneces a congresos de dos disciplinas académicas diferentes, Lingüística y Química.

Planteamiento y metodología utilizada

Para lograr el objetivo de la tesis, el marco teórico se baso en técnicas de análisis de genero (Bhatia 1993, Swales 1990) y análisis del discurso, incluyendo las orientaciones teóricas de la lingüística sistémica funcional (Halliday 1978, 1985a), el análisis de conversaciones (Schegloff & Sack 1973), la pragmática (Brown & Levinson 1978, 1987), y el análisis del discurso multimodal (Kress & van Leeuwen 2001). Este marco teórico me permitió identificar la estructura de la interacción, la estructura retórica en la que la interacción se organiza para expresar intenciones comunicativas específicas, y finalmente la expresión lingüística y multimodal de la evaluación la cual articula la retórica de la interacción.

Los enfoques de la lingüística sistémica funcional (Sinclair et al. 1972) y el análisis de conversaciones (Sacks et al. 1974) me permitieron describir la estructura de los turnos de preguntas. Debido a naturaleza interactiva de los turnos de preguntas fue importante establecer la macro estructura de este

género para entender la dinámica de la interacción. Los estudios de género (Swales 1990) proporcionaron las herramientas necesarias para identificar la estructura retórica de la interacción. Además, la lingüística sistémica funcional que subyace en el modelo de evaluación postulado por Martin y White (2004), el cual he utilizado para examinar la evaluación lingüística. Este enfoque teórico me permitió identificar los modos de evaluación semántica, y también la función de estas unidades lingüísticas en el discurso. Este enfoque fue el punto de partida del análisis del discurso multimodal que conlleva el análisis de los aspectos *paralingüísticos* (Poyatos 2002) y *kinésicos* (Bavelas et al. 1989; Kendon 1967, 2004; McNeill 1992) que son co-expresados con la evaluación lingüística. Estudios previos sobre aspectos no lingüísticos (los cuales se basan en técnicas utilizadas en estudios de conversaciones) fueron esenciales en la interpretación de su función y relación con el discurso. La interpretación de la expresión global de la evaluación fue llevada a cabo desde una perspectiva pragmática (Brown & Levinson 1978, 1987).

Respecto a la metodología utilizada, técnicas de la lingüística de corpus me permitieron hacer posible la aplicación de esta metodología. Por una parte, utilicé técnicas computacionales para los procesos analíticos automáticos, por otra parte, técnicas cualitativas rigieron la interpretación de los corpus (Biber et al. 1998). Más precisamente, recopile el video corpus (10 turnos de preguntas de Lingüística y 10 de Química), participé en el proceso de transcripción, y lo anoté. Debido al enfoque multimodal del análisis, utilicé una herramienta informática para la anotación multimodal (ELAN), la cual me permitió sincronizar en el tiempo las transcripciones (ortográfica, *paralingüística*, y *kinésica*), y las anotaciones (estructura genérica y evaluación semántica). Sin esta herramienta hubiese sido imposible analizar la evaluación al nivel multimodal tan completo como fue realizada en este estudio. Sin embargo, también fue necesaria la interpretación cualitativa de los datos para poner de manifiesto los aspectos sobresalientes que definen la evaluación en los turnos de preguntas en las presentaciones en los congresos de ciencias puras y humanas.

Aportaciones originales

Las aportaciones más importantes del análisis se pueden resumir siguiendo las tres preguntas de investigación plantadas, las cuales han guiado el estudio llevado a cabo en la tesis.

La primera pregunta de investigación se centra en la organización de la interacción en los turnos de preguntas, y las similitudes y diferencias en los congresos de Lingüística y Química. El análisis supuso el examen del flujo de las discusiones, los tipos de turnos y los participantes, la secuencia del diálogo, y de la estructura de los intercambios de información entre los hablantes, i.e. la macro estructura. Los resultados han mostrado que, a diferencia de vista sinóptica descrita por Ventola (2002), el flujo de las discusiones es un constructo social complejo donde los participantes tienen dos funciones primarias, lo que he llamado turnos meta discursivos y los turnos discursivos. Además, aunque las funciones principales de los hablantes estén claramente definidas, ellos pueden tomar otras responsabilidades. Estas digresiones parecen encontrar una explicación en la relación existente entre los participantes. Este es un factor influyente que no ha sido considerado en el análisis; sin embargo, podría predecirse que cuanto mayor es la relación, mayores son las probabilidades de encontrar digresiones, comúnmente por miembros de la audiencia e investigadores que toman turnos meta discursivos propios de los moderadores. Más aun, los episodios de solapamientos también han sido tenidos en cuenta en la descripción del flujo debido a la función discursiva que estos juegan en el diálogo. Como era de esperar en ambas disciplinas los turnos discursivos son más frecuentes que lo meta discursivos. Además, la audiencia es sólo un poco más participativa que los investigadores. Por otra parte, parece que también existen similitudes en los tipos de turnos de la audiencia (comentarios), aunque en Lingüística se formulan más preguntas. Asimismo, los resultados también han mostrado la complejidad del diálogo, en lugar de seguir una secuencia de pares (comentario/ pregunta – respuesta)

(Schegloff & Sacks 1973), ocurre en dos turnos o más, donde los participantes toman *follow-up* turnos. Sin embargo la preferencia en ambas disciplinas es de intercambios de dos turnos. En lo que se refiere a su estructura, sólo se han identificado en el corpus tres patrones recurrentes (comentario – comentario, pregunta – respuesta, y comentario más pregunta – respuesta). Los participantes parecen seguir el máximo de relación (Grice 1975) y son relevantes evitando tomar un nuevo turno cuando no es necesario. Por otra parte, los diálogos con más de dos turnos parecen ser más frecuentes en Lingüística. Se puede concluir que, aunque los flujos de la discusión son similares en ambas disciplinas, parece que en Lingüística la audiencia pregunta más y tienden a entablar diálogos más largos. Esto podría explicarse en la naturaleza más interpretativa del conocimiento de las ciencias humanas, el cual implicaría “trabajar más duro” para establecer un entendimiento con el interlocutor (Hyland 2000, 2004).

La segunda pregunta de investigación busca dar respuesta al tema central de la tesis, la expresión de la evaluación en los turnos de preguntas. La evaluación ha sido estudiada a dos niveles, la expresión semántica y la multimodal. Respecto a la evaluación lingüística, la exploración siguió la versión abreviada del modelo de análisis postulado por Martin y White (2005), con la identificación de tres categorías que la articulan y sus subcategorías. Sin embargo, el modelo necesitó ser adaptado al análisis de la evaluación de los turnos de preguntas debido a que el modelo original fue diseñado para el análisis de textos escritos. Este marco teórico me permitió describir no sólo la evaluación lingüística, sino también arrojar algo de luz sobre las similitudes y diferencias disciplinares de la evaluación. Los resultados revelaron ciertas tendencias disciplinares que pueden ser explicadas en la interpretación que Hyland (2000, 2004) hace sobre la evaluación en textos escritos de ciencias puras y humanas. Este observó que el conocimiento en ciencias puras aparece de manera más lineal, y por tanto la comunidad de uso está más familiarizada con la investigación previa. En consecuencia, esto reduce la necesidad de una evaluación explícita, i.e. del uso de la evaluación *attitudinal* como los

resultados del presente estudio han revelado. El elevado uso de *graduation* detectado en Química podría ser una estrategia para expresar evaluación, ya que parecen haber restricciones disciplinares que impiden que los participantes expresen sus *attitudes* abiertamente. Por otra parte, la familiaridad con la investigación previa podría también explicar el menor uso de preguntas, la actitud crítica de la audiencia, y la tendencia de los investigadores a expresar su posición acerca de los comentarios y preguntas. También, el conocimiento interpretativo de las ciencias humanas podría explicar las diferencias encontradas en Lingüística, donde se hacen más preguntas, la audiencia evita la crítica, y los investigadores tienden a no mostrar su posición. Sin embargo, se han encontrado similitudes entre ambas disciplinas en lo que respecta al comportamiento de los investigadores, ya que en general cuando estos muestran su posición rechazan las observaciones hechas por la audiencia. Esta reacción muestra que los investigadores no están dispuestos a echarse atrás sino que reafirman sus posturas y su investigación.

La segunda parte de la exploración ha confirmado la hipótesis que la expresión de la evaluación en los turnos de preguntas es multimodal en el 61% de los ejemplos analizados. Estos resultados son reveladores y están basados en el análisis de los aspectos *paralingüísticos* y *kinésicos* que co-ocurren con la evaluación semántica. La evaluación lingüística en general ocurre con aspectos *kinésicos* y en particular con gestos y con movimientos de la cabeza. Los investigadores en Química parecen preferir estos dos aspectos *kinésicos* más que los de Lingüística. Además, aunque en el corpus también aparecen combinaciones de dos y más de dos aspectos *kinésicos*, la evaluación lingüística coincide normalmente con un solo aspecto. Parece que los aspectos *kinésicos* también buscan la simplicidad para ser relevantes. Otro tema interesante es que la multimodalidad en general aparece con la expresión de *attitude*, es decir en el corazón de la evaluación. Esto muestra el papel significativo que los aspectos no lingüísticos tienen en la expresión del significado evaluativo. La característica más importante considerada en la exploración de la multimodalidad es la función que los aspectos no lingüísticos

tienen en la expresión de la evaluación. En este sentido, los resultados han demostrado que los aspectos *paralingüísticos* y *kinésicos* en general tienen un función pragmática no sólo como intersificadores sino también para expresar la actitud de los hablantes.

Finalmente, en la tercera pregunta de investigación la expresión multimodal de la evaluación fue examinada en relación con la estructura genérica de los diálogos. La hipótesis que el significado evaluativo gobierna la microestructura de estos diálogos fue confirmada. Además el análisis a revelado los movimientos retóricos que subyacen en los tres patrones de diálogos identificados en el corpus, mostrando los movimientos obligatorios y no obligatorios que el hablante puede seguir. En la estructura genérica del patrón comentario – comentario, la audiencia tiene que contextualizar y hacer el comentario, y el investigador ha de responder al comentario (hay tres movimientos opcionales). En el patrón pregunta – respuesta, obviamente la audiencia ha de formular la pregunta y el investigador ha de responder a ella (hay cinco movimiento opcionales). Y en el patrón comentario más pregunta – respuesta, la audiencia contextualiza y hace la pregunta, y el investigador responde la pregunta (hay tres movimientos opcionales). Un movimiento opcional en los tres patrones es un de apertura del turno con una clara metafunción textual. Finalmente, no se han detectado diferencias significativas en la estructura genérica de los diálogos.

Por otra parte, un enfoque pragmático me permitió dar una interpretación de los resultados desde el lado más interpersonal. En este sentido, ciertos aspectos del comportamiento de los hablantes encuentran una explicación en la *politeness* (Brown & Levinson 1978, 1987). Los investigadores y la audiencia usa estrategias de *positive politeness* para mostrar que están de acuerdo con sus interlocutores y para alabar su trabajo; es decir, para hacer que estos se sientan bien y que sus valores son compartidos. Utilizan una actitud positiva para expresar *positive politeness*, la cual es co-expresada con el acento fonético de la unidad lingüística y aspectos *kinésicos* como el contacto visual, un

movimiento de cabeza de afirmación, una sonrisa, y algunos gestos metafóricos. Además los participantes utilizan estrategias de *negative politeness* hacia los *face wants* de sus interlocutores para posicionarse contra ellos. Hay una relación íntima entre las estrategias de *negative politeness* y la protección de los participantes de *positive face* de un FTA. Los investigadores autoprotegen su *positive face* para responder las críticas de la audiencia en un intento de tener sus valores aprobados. Más aun, los investigadores y la audiencia protegen la *positive face* de sus interlocutores cuando expresan una actitud negativa sobre lo que sus interlocutores han dicho. La evaluación lingüística utilizada en general es la mitigación de la voz del autor, i.e. el uso de unidades lingüísticas de *dialogic expansion*. La evaluación semántica ocurre normalmente junto a la aversión de la mirada, la risa, la sonrisa, y la cara seria, el movimiento de cabeza afirmativo e inclinar la cabeza, y diferentes gestos en sincronía pragmática con la unidad lingüística para expresar la estrategia lingüística. Aunque la mitigación de la voz del autor es la forma más frecuente para proyectar la posición de los hablantes, en Química los participantes son consistentes con su tendencia a mostrar una actitud de crítica (la audiencia) y a expresar sus posiciones hacia las intervenciones de sus interlocutores (los investigadores), y también toman total responsabilidad de lo que dicen. Esta interpretación, sin embargo, sería parcial si se considerara exclusivamente los resultados de la evaluación lingüística.

Otros aspectos pragmáticos que me ayudaron a entender la evaluación son las presuposiciones (Green 1989) y el carácter indirecto (Austin 1962; Searle 1969, 1971). Estos podrían ser considerados dos de los más difíciles aspectos de la interacción en los turnos de preguntas. La audiencia puede hacer comentarios y preguntas y presuponer cierta información que da por sentada. Aunque esto no ha causado ningún problema en los diálogos analizados en este estudio, considero que para investigadores noveles las presuposiciones podrían causar un problema ya que si ellos no conociesen los antecedentes más importantes de los que se basan los comentarios y preguntas, sería difícil para ellos dar una respuesta inmediata y apropiada. Además los investigadores y la

audiencia pueden expresar sus intenciones de modo indirecto. Por ejemplo, hay ejemplos en el corpus de preguntas, comentarios, y sugerencias que pueden ser interpretadas como críticas indirectas. La respuesta a estas críticas diferirán dependiendo de si los investigadores entienden el segundo significado o no. Por tanto, de acuerdo con los resultados, las respuestas más comunes serían: los investigadores pueden ignorar la crítica (conscientemente o no), ya que esta no ha sido un ataque directo a sus valores no se espera una reacción en este sentido; o pueden elegir utilizar una estrategia de *negative politeness* para posicionarse contrarios a sus interlocutores. Sin embargo, el carácter indirecto, así como las presuposiciones, pueden causar problemas a los investigadores inexperimentados quienes pueden no entender las intenciones de sus interlocutores.

Los resultados han demostrado que la gran demanda de tiempo y esfuerzo que un análisis multimodal implica vale la pena. Esta tipo de investigación me permitió interpretar la evaluación desde un enfoque más amplio, y posiblemente más cercano a la realidad, mostrando el importante papel que juegan los aspectos *paralingüísticos* y *kinésicos* en la expresión de la evaluación en los turnos de preguntas, una información que hasta la fecha ha sido prácticamente desestimada en los estudios del discurso oral académico; el único trabajo que considera la co-expresión de gestos con la evaluación semántica es el estudio de Hood y Forey (2005).

Conclusiones obtenidas y futuras líneas de investigación

El objetivo de la presente tesis fue desarrollar una nueva metodología para analizar la evaluación en los turnos de preguntas de las presentaciones de artículos en dos congresos de dos disciplinas académicas, lingüística y química. El estudio tiene dos aportaciones importantes. En primer lugar, se da luz a un género el cual hasta la fecha no había recibido mucha atención y el cual, según

mi propia experiencia como joven investigadora, pude originar serias dificultades para los ponentes. Por otra parte, el análisis revela algunas tendencias disciplinares de este género en ciencias puras y humanas. Finalmente, considero que la aportación más destacable de esta tesis al estudio del discurso académico hablado de los géneros de investigación, así como al estudio de la evaluación ha sido el enfoque multimodal adoptado en el análisis. El estudio ha tenido en cuenta la naturaleza multimodal del discurso hablado para examinar la evaluación, teniendo en cuenta tanto la evaluación lingüística como los aspectos no lingüísticos que son co-expresados con esta. Este enfoque ha posibilitado la descripción y la interpretación de este aspecto interpersonal del discurso, proporcionando una visión global de la expresión de la evaluación en los turnos de preguntas de las presentaciones en congresos especializados.

El presente estudio ha revelado resultados importantes en el análisis cross-disciplinario del significado interpersonal de la evaluación en los turnos de preguntas. Sin embargo, la aportación más significativa de esta tesis ha sido el enfoque multimodal adoptado. Considero que este puede tener una repercusión en el análisis del discurso académico hablado, donde tradicionalmente el objeto de estudio ha estado limitado a las transcripciones ortográficas del discurso; en los estudios de lingüística de corpus con el uso de herramientas para la anotación en múltiples capas para sincronizar en el tiempo audio y vídeo con las transcripciones y anotaciones; en los estudios de pragmática, los cuales sólo últimamente han considerado la exploración de textos reales; y finalmente en la investigación del análisis multimodal, donde he abierto el estudio limitado al análisis de conversaciones al estudio de los géneros de investigación académica.

A la luz de los resultados del estudio, los esfuerzos para futuras líneas de investigación podrían tomar varias direcciones. Un aspecto importante podría ser tomado en la confirmación mediante un análisis cuantitativo de las diferencias disciplinares detectadas en el estudio. Esto posibilitaría el hacer generalizaciones de sobre la investigación. Por tanto, una mayor variedad de

disciplinas de ciencias puras y humanidades que la Lingüística y la Química necesitarían ser examinadas. Mi humilde aportación es simplemente un estudio preliminar que introduce un nuevo enfoque para dar luz, y abrir una nueva línea de investigación, en la exploración de la evaluación del discurso académico hablado desde una perspectiva multimodal. Además, considero que una de las sugerencias más importantes que puede hacerse es la ampliación del uso de estudios multimodales para el análisis del discurso desde diferentes perspectivas, incluyendo la pragmática sones este es muy valioso.

Otras sugerencias de futuras líneas de investigación que podrían considerarse más viables a corto plazo en una escala menor, y que han sido directa o indirectamente mencionadas durante el estudio, son la exploración completa de los aspectos no lingüísticos que emergen en el discurso los cuales proporcionarían una descripción más completa de cómo la evaluación es expresada en los turnos de preguntas en los tres modos, i.e. evaluación semántica, *paralingüística*, *kinésica*, y multimodal. En segundo lugar, sería revelador la ampliación del alcance del estudio y considerar ambos participantes en la interacción, para ver cómo los miembros de la audiencia que formulan las preguntas y hacen los comentarios reaccionan a la evaluación y reacciones de los investigadores a los dirigen sus preguntas y comentarios. Este tipo de investigación podría arrojar luz sobre la naturaleza interactiva de la situación comunicativa de los turnos de preguntas, para mostrar la influencia de la evaluación en el discurso de los interlocutores. Por otra parte, en este estudio se ha adoptado un enfoque prosódico para interpretar el significado evaluativo durante el diálogo, en lugar de examinar unidades lingüísticas de modo aislado. Sin embargo, también sería interesante ir más allá del diálogo y considerar la prosodia de toda la discusión mantenida con cada investigador. Ya que durante el análisis he observado que parece haber conexiones entre los diálogos mantenidos con diferentes miembros de la audiencia. No me refiero únicamente a relaciones con el contenido sino a la influencia de la evaluación que un diálogo puede ejercer sobre otro. Esto complica más aún la situación, pero tengo la impresión que en una situación comunicativa tan interactiva

como la estudiada en la tesis, las cosas no ocurren aisladamente sino que tienen consecuencias en el contexto inmediato. Esta reflexión me lleva a la última sugerencia. Otra línea de investigación que podría llevarse en este mismo sentido sería un estudio etnográfico que mostrase otros aspectos que influyen en la evaluación aparte de los estudiados en la tesis (la intervención del otro participante en el diálogo y la disciplina académica). Consideraría aspectos culturales y personales, así como la relación entre los participantes.

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List of acronyms and abbreviations

CA	Conversation Analysis
CDS	Chemistry Discussion Sessions Corpus
CH-E	Chemistry exchanges
CL	Corpus Linguistics
CP	Conference Paper Presentation
CPP	Conference Proceedings Presentations
D	Discussant
DA	Discourse Analysis
DS	Discussion Session
EAP	English for Academic Purposes
EFL	English as a Foreign Language
ELT	English Language Teaching
ESL	English as a Second Language
FACS	Facial Action Coding System
FTAs	Face Threatening Acts
JSCC	John Swales Conference Corpus
LDS	Linguistics Discussion Sessions Corpus
L-E	Linguistics exchanges
MASC	Multimodal Academic Spoken Corpus
MDA	Multimodal Discourse Analysis
MICASE	Michigan Corpus of Academic Spoken English
P	Presenter
SFL	Systemic Functional Linguistics

Introduction

Introduction

The interest of English for Academic Purposes in research settings has increasing received attention in the last decade. Most of the studies, however, focus on the description of conference discourse and not much attention has been paid to the research of conference paper presentations, particularly to the discourse of the discussion that follows the presentation of the research. This discourse is characterized for being spontaneous and unpredictable, and therefore a type of discourse that presenters cannot easily foresee. However, it is in the discussion sessions that the scientific community can question, criticize and praise the research, or share knowledge and experiences. This happens in a face-to-face forum where the presenter has to know how to respond and react to the discussants' comments and questions in a clear and effective way. During these interventions it is not only the quality of the research that is judged but also the presenters' prestige and worth. The distinctive features of the genres that constitute conference paper presentations, the presentation of the research and the discussion session, are mainly two: the level and nature of the interaction that is established between the presenter and the audience, and the control the speaker has over the discourse; nonetheless, both aspects are closely related. Discussions sessions are more interactive since there is an exchange of information with the audience, that is, the discussants' questions and/or comments seek the presenters' responses. On the other hand, in this situation presenters have less control over the discourse, what increases the difficulty to respond and to react to the discussants' turns. During the discussion presenters move from a type of discourse in the lecture that has been prepared in advance, sometimes even read, to face up to a discourse and a communicative situation that has not been prepared in which the presenter does not know the directions it can take. One of the worst fear presenters might have (sometimes also discussants) is not to understand the second meaning of a question or comment, for example a hidden criticism.

Bearing in mind the difficulty that discussion sessions in conference paper presentations can potentially have for presenters, and the important role that it apparently plays in the face-to-face encounter with the scientific community, I decided to get involved in the research of this academic communicative situation with the main objective of helping presenters with these difficulties. Thus the main motivations of the present study can be summarized in three aspects. First, to date research on conference presentations focuses on the talk (e.g. Dubois 1980, 1987; Hood & Foley 2005; Rowley-Jolivet 2002, and Ventola et al. 2002, among others), and only two works examine discussion (Webber 2002 and Wulff et al. 2009). Secondly, research on discussion sessions make, to my understanding, a partial examination of the discourse, since the study is based exclusively on the transcriptions of the speech and does not have into account other features of spoken discourse. And thirdly, there are not many pedagogical materials available based on research to help speakers (native and non-native) to manage discussion sessions. Many aspects of the interactive discourse of discussion sessions that could have been explored; nonetheless, my choice has been the interpersonal meaning of evaluation. This feature was not selected at random but, from my limited personal experience in presenting and attending conference paper presentations, the conversations held with more experienced colleagues, and the first exploration of the corpus, I had the impression that in this part of the forum evaluation plays a relevant role. This hypothesis was confirmed by the works on discussion sessions already mentioned.

The present thesis aims at devising a new methodology to analyse the evaluative meaning conveyed in the interaction between discussant and presenter, from a multimodal perspective. The expression of interpersonal meaning is studied from a global perspective, since attention is not paid exclusively to linguistic evaluation, but also to non-linguistic features that co-occur with it. Thus, the analysis is framed by the theories of socio-semiotic language and of the non-linguistic systems, paralanguage and kinesics. Three aspects underline the present study, i) the exploration of how interaction among

the participants of the discussion session occurs, ii) the co-expression of linguistic evaluation with non-linguistic features, and iii) the generic structure of the discussion and its relationship with evaluative meaning. In addition, the study has a contrastive component since data from two different disciplines are examined, Linguistics and Chemistry.

The thesis is divided into six chapters. The first three chapters examine the theoretical framework and review the empirical research relevant to this study: discourse analysis and genre (Chapter 1), evaluation (Chapter 2), and corpus linguistics (Chapter 3). The other three chapters include the empirical study: the methodology employed in the analysis (Chapter 4), the results and discussion of the findings (Chapter 5), and the final conclusions (Chapter 6).

The study of evaluation in discussion sessions requires a multi-faced approach as described in the first chapters. Chapter 1 provides an overview of the concept of discourse analysis introducing the theoretical framework of the study through four sections. Discourse analysis allows the understanding of the structure, the linguistic and non-linguistic features, the rhetoric of the speech, as well as the social and contextual factors of the interaction. All these make discourse analysis a suitable tool to examine discussion sessions, an academic communicative situation where interpersonal meaning has a crucial role. The chapter starts with the description of three discourse analysis approaches to the study of interpersonal communication: Functional Systemic Linguistics (Halliday 1985), Conversation Analysis (Sacks et al. 1974) and Pragmatics (Brown & Levinson 1987), that are of particular interest for the analysis of linguistic features and the structure of the interaction. The multimodal nature of discussion sessions requires the review of updated literature on multimodal discourse analysis which will shed light on the examination of non-linguistic features, the second section focuses on this issue. The section is opened with the discussion of different approaches to multimodality and the definition of the term. Then the most salient studies on the four kinesic features considered in the present study are reviewed, gesture, head movement, facial expression,

and gaze (Ekman 2007, Kendon 2004, McNeill 1992); as well as the most widespread concerns on paralanguage (Poyatos 2002, Trager 1958). The third part of the chapter deals with contrastive discourse studies. The importance of *tertium comparationis* (Chesterman 1998) in these studies is stressed, and contrastive studies in academic discourse are reconsidered from cross-cultural to cross-disciplinary perspectives. The chapter is closed with discussion on the the concept of genre (Swales 1990) and two related issues genre chain (Räsänen 1999) and genre networks (Swales 2004a), that will be useful to position conference paper presentations and discussion sessions in the field of academic spoken discourse. Then, I review the most relevant studies on these two genres that can make a valuable contribution to the present thesis, being of major interest two studies that pay attention to kinesics and/or paralanguage in conference paper presentations (Räsänen & Fortanet 2006, Rendle-Short 2006).

In Chapter 2 the concept of evaluation is reviewed with the perspective that attributes to evaluation only interpersonal functions rather than considering also textual functions. Then, I describe three of the most influential models of analysis in the field, those by Biber et al. (1999), Hyland (2005), and Thompson and Hunston (2000); as well as their similarities and differences with the appraisal model (Martin & White 2005), the one adopted in the present study. This systemic theory provides the tools to explore the semantic resources that construct interpersonal meaning. The model is extensively elaborated with many categories and sub-categories, in the section I have stressed and given a detailed account only on those aspects that are relevant for the analysis; thus, a simplified version of the model is used as the framework for the examination of semantic evaluation. The third part of the chapter is devoted to the review of the few studies that have focused on evaluation in academic spoken discourse. It seems that more attention has been paid on teaching genres than on research genres. In addition, only one work makes a multi-layered exploration of interpersonal meaning in the introductory section of conference plenary lectures (Hood & Forey 2005). This work is commented

in the last section of the chapter where I examine the limited literature on non-academic discourses, where evaluative meaning has been considered when it co-occurs with other non-linguistic features.

Chapter 3 pays attention to the experimental approach adopted in the study to make the analysis, corpus linguistics. The chapter is organised in four sections. First the concept of corpus linguistics is reviewed. Then, an overview of the current spoken corpora is provided, both of general English and of academic English. I stress the role of small specialised corpora as the MASC (Multimodal Academic and Spoken language Corpus), the source of the data for the present study. In the third section, I deal with aspects related to corpus design (such as size and representativeness) and techniques for the analysis. Finally, the last section accounts for considerations in the development of spoken corpora.

The explanation of the methodology followed in the study is described in Chapter 4. This chapter consists of three sections. In the first section of the chapter, the motivation behind the present study is explained and the research questions that guide it are formulated. The second part focuses on the corpus used in the analysis, aspects considered in the design, the description of the two corpora, and the four steps to make the corpus ready for the analysis (collection, transcription, and annotation of data, and the creation of the multimodal annotated corpus). The last section of the chapter deals with the nature of the experimental design used, that is, a qualitative study of the structure of the discussion sessions and of evaluative meaning. This part accounts for the description of the framework used to explore linguistic and non-linguistic evaluation and the software that has made possible the multimodal analysis of the data, the ELAN.

Chapter 5 is devoted to the presentation of the results obtained in the study and their discussion. Results are presented following the three research questions formulated in the study, thus the chapter is divided in three sections. The first

part focuses on the interaction in discussion sessions, that is, the analysis of the macrostructure. The second section portrays findings of the semantic evaluation and the co-expression with non-linguistic features. The chapter is closed with a discussion on the generic structure of the dialogic exchanges and its relationship with evaluative meaning.

Finally, the general conclusions drawn from the research are presented in Chapter 6, as well as possible pedagogical applications of the study, the limitations of the investigation, and suggestions for further research. Conclusions are followed by a list of references and appendices, two of them in CD-Rom format.

CHAPTER 1

Exploring spoken discourse

CHAPTER 1

Exploring spoken discourse

This study investigates how evaluation is conveyed in the presenters' discourse in the discussion sessions that follow specialised conference paper presentations of two academic disciplines. The purpose of the present chapter is to describe the theoretical framework of the investigation. On the one hand, an overview of spoken discourse analysis gives insights into three aspects: interpersonal communication, multimodality, and cross-disciplinary studies. On the other hand, discussion sessions can also be considered as part of the family of spoken research genres.

The chapter is organised as follows. Section 1.1 considers three of the most influential approaches to the study of interpersonal communication. There is a close relationship between evaluative features and the interpersonal resources deployed in the exchange structure of the interaction presenter – discussant. Section 1.2 attempts to lay out the foundations for the argument of this thesis that the expression of evaluation is expressed not only with language but also with non-linguistic modes of expression. The multimodal nature of language in interaction is foregrounded here. In Section 1.3, also makes a brief introduction to contrastive discourse analysis, since the data under examination demands a cross-disciplinary study. Finally, Section 1.4 concentrates on the concept of genre and provides a rationale for the thesis by discussing up-to-date investigation on the research genre of conference paper presentations and their ensuing discussion sessions.

1.1 Approaches to the study of interpersonal communication

Discourse analysis emerged in the mid-1960s from the development of several

disciplines (linguistics, sociology, anthropology, social psychology, and communication among others). It has been broadly described as the study of natural language (both written and spoken) paying attention to the organisation beyond the sentence level, and how it is influenced by the social setting. Discourse has been conceptualised from a variety of perspectives, which draw from different disciplines, but it embodies the idea that language reflects more than linguistic structures, it is also the social practices, relations, and identities of those who use it (Slembrouk 2006). Van Dijk (1997) established three fundamental aspects that need to be considered when analyzing discourse: language use (how, who, when, where, and why), the communication of beliefs (within the context of an event or situation), and interaction (among the participants of the social setting). All three dimensions should shed light on not only the systemic description of the language but also to explain its use. Furthermore, van Dijk (1977,1980) also developed the concept of the macrostructure of a text as the content of a text based on the hierarchical sequencing of functional episodes, an interesting aspect to be also considered when analysing discourse.

Over the years, linguists have developed a good number of approaches to discourse analysis based primarily on the discourse type and the purpose of the analysis. These include systemic functional linguistics (Halliday 1978), pragmatics (Austin 1962, Brown & Levinson 1987, Grice 1975, Searle 1976), conversation analysis (Sacks et al. 1974), ethnography (Hymes 1972), interactional sociolinguistics (Goffman 1981, Gumperz 1982) as well as critical discourse analysis (van Dijk 1996, Fairclough 2001) among others. Three of those approaches are of particular significance for this study, establishing the basis for the understanding of interpersonal meaning, particularly how presenters express evaluation in discussion sessions: systemic functional linguistics, conversation analysis, and pragmatics. Systemic functional linguistics theory explores the ways in which interpersonal meanings are encoded in a whole range of grammatical and lexical choices, and “how they pattern and flow across the texts” (Hood & Forey 2005: 293). This theory also

provides a semiotic framework to explore meaning-making beyond the language. Conversation analysis techniques are useful for the analysis of the dialogues between the presenter and the discussant. Finally, pragmatics, the study of intentional human action, aims at helping in the interpretation of interactive linguistic and non-linguistic features. In the following subsections I will discuss all three approaches.

1.1.1 Systemic Functional Linguistics

Systemic functional linguistics (hereinafter SFL) is associated primarily with Halliday (1978, 1985). SFL is a theory of meaning as choice, in which “a language, or any other semiotic system, is interpreted as networks of interlocking options” (Halliday 1985a: xiv). It is social semiotic theory of language that centres around the idea of language function rather than language form. Meaning is of paramount importance in interpersonal communication, what is said and why. However, language is more than a medium for conveying information, how speakers choose to express meanings has a fundamental effect on the interaction. Two concepts are explored in this section from the systemic standpoint: lexico-grammatical resources that express interpersonal meaning, and the concept of exchange structure.

Interpersonal resources

In 1970 Halliday distinguished three meta-functions of the language in social activity: the *ideational metafunction* to represent experience, the *interpersonal metafunction* to establish relationships, and the *textual metafunction* to organise the text. In his words, the *ideational* level is realised through transitivity patterns, the *interpersonal* level through mood and modality, and the *textual* level through thematic choices. The exploration of the interpersonal level and the resources speakers use at this stage of the discourse are of particular interest to the analysis of the discussion sessions, since they play a major role in constructing interaction. However, interpersonal resources are only one of the set of resources which constitute the three metafunctional levels of meaning

according to SFL. Because of the scope of the present study I am going to focus exclusively here on the interpersonal level, even though language use realises all three kinds of meaning simultaneously (see e.g. Martin et al. 1997, Eggins 2004, Halliday & Matthiessen 2004, Thompson 2004).

Recently Thompson and Muntigl (2008) have described three systems of lexico-grammatical resources speakers may choose from when communicating with their interlocutors: *mood* and *speech function*, *modality*, and *appraisal*. The major set of choices in interpersonal grammar is found in the system of *mood*. In every clause the speaker chooses between imperative and indicative; and within indicative, between declarative or interrogative (polar yes/ no or *wh*-interrogative). Another less frequent mood choice is exclamative. Regarding *speech functions*, speakers may choose between four options: they may take on the role of giver or demander of information or of goods and services. That is, every clause functions as a statement (giving information), a question (demanding information), a command (demanding goods and services), or an offer (giving goods and services). As Thompson and Muntigl note, other speech functions can be seen as sub-categories of these four basic functions. Though there is a predominant unmarked match between speech functions and mood: declaratives function as statements, interrogatives as questions, and imperatives as commands (offers are not realised by a specific mood); the match is not absolute, since instances of commands in imperatives but also in declaratives, and questions in interrogatives but also in declaratives and imperatives can be found. These form-function mismatches combine two kinds of meaning which serve specific interactional purposes. In other approaches, such as pragmatics, those form-function mismatches have been described as *indirect speech acts* (see Section 1.1.3 of this chapter). It is important to note that the effect and reason for particular choices in the system *mood* and *speech function* will depend on contextual factors. In the discussion sessions it is likely to find not only presenters as givers of information and discussants as demanders of information (which are the established speech

functions) but also discussants who take the role of givers of information. Furthermore, form-function mismatches are also expected to appear.

The second system of interpersonal choices described by Thompson and Muntigl, which play a crucial role in interaction, is *modality*. Modal resources involve modal operators but also other kinds of expressions including lexical verbs, adjectives, adjuncts, nominalisations, clauses, and other less direct wordings. *Modality* covers two semantic areas depending whether it relates to propositions or proposals (Halliday 1994: 89): propositions as utterances which exchange information (i.e. statements and questions), and proposals as utterances which exchange goods and services (i.e. commands and offers). The former type is *modalisation*, which adjusts the validity of the proposition in terms of probability (she *must be*) or usuality (she's *always*); the latter type is *modulation*, which adjusts the strength of the proposition in terms of obligation of the addressee (you *must*) or inclination of the speaker (I'm *keen to*). These resources allow the speakers to make a wide range of gradations regarding how they take interpersonal commitment and accept interpersonal responsibility for the validity or strength of their utterances. There is a further modal category, *ability* (*can/ be able to*), but it is marginal in terms of negotiation of the validity or strength of an utterance. As will be described later, modality is also considered a signal of engagement in the third type of interpersonal resources postulated by these authors, the *appraisal* system (Martin & White 2005).

The *appraisal* model considers the linguistic expression of the speaker's evaluation of entities, propositions and proposals. Synoptically the model captures evaluation from the analysis of three systems: *attitude*, the assessment itself; *engagement*, the negotiation of the intersubjectivity of the assessment; and *graduation*, the amplification or tone down of the assessment. Evaluation undoubtedly constitutes an essential aspect of the interpersonal discourse (Mauranen & Bondi 2003: 269). Linguistic evaluation, the semantic resources the speaker chooses to evaluate, is one of the central aspects at the core of the

present study. The appraisal model and other models of evaluation will be dealt with extensively in Chapter 2.

Exchange structure

The lexico-grammatical resources described above are used in communication to build up sequences of conversation structure. SFL goes beyond the concept of *adjacency pair* used in Conversation Analysis (see Schegloff & Sacks 1973) as a question is followed by an answer, a greeting is followed by a greeting, or an offer is followed by an acceptance. The broader view suggests that “social action seems to be organised alongside interactional ‘slots’ that can extend across any number of conversational moves extending beyond the pair” (Thompson & Muntigl 2008: 113). The analysis of how the interpersonal meaning is produced entails not only the identification of the lexico-grammatical resources but also the study of how these resources pattern in an exchange of moves in sequence.

Sinclair et al. (1972) define exchange as the basic unit of interaction. Basic because it consists at least of the contribution of two participants, which combines to form the largest unit of interaction, the transaction. Sinclair et al. also suggest three major types of exchanges: eliciting, directing, and informing; whose initial moves functions are respectively to request a verbal response, to require non-verbal response, and to provide new information. On these grounds, the structure of discourse in the classroom situation has been described by Sinclair and Coulthard (1975). They draw a model based on Halliday’s (1961) rank scale description of grammar. The ranks in the model are lesson, transaction, exchange, move, and act. A lesson is made up of a series of transactions, which in turn is made up of a number of exchanges. Exchanges are made up of moves, which in turn are made up of acts. The teaching exchange is expressed in terms of three elements: Initiation (I), Response (R), and Feedback (F). The structure follows the relationship

I(R)(F)¹ where at least an Opening move (I) may be followed by an Answer move (R), followed in turn by a Follow-up move (F). Coulthard and Brazil (1992) propose to abandon the labels Opening, Answering, and Feedback, and talk instead in terms of Eliciting, Informing, and Acknowledging. Sinclair and Coulthard (1992) note the same structure occurs in job interviews, and in broadcast interviews (see Pearce 1973 for the analysis of broadcast interviews).

The work of Berry (1981a,b) is pioneering in the research of exchange structure from a SFL perspective. It has been followed by a number of researchers in the field (Martin 1992, 2000; Muntigl 2007; Thompson & Muntigl 2008; O'Donnell 1990, 1999; Ventola 1987). This author takes as a point of departure early Sinclair and Coulthard's (1975) structural description of discourse in the classroom situation (see Willis' 1992 for comparison of the two models). Berry (1981a) points up the unusual evaluative function of the Follow-up move outside the classroom. She goes beyond to elaborate Sinclair and Coulthard's model to account for the difference between the evaluative Follow-up in the classroom, and acknowledgment in everyday discourse. Among other contributions, Berry proposes the distinction between information-based exchanges (involving propositions) or *knowledge exchanges*, and goods and service exchanges (involving proposals) or *action exchanges*; as well as the distinction between *primary knower* and *secondary knower* (Berry 1987).

For the study of discussion sessions the analysis of the exchange structure from an SFL perspective is interesting to understand how the interaction generates interpersonal meaning. In the discussion sessions one is likely to find a *primary knower*, the presenter, and a *secondary knower*, the discussant, in a series of *knowledge exchanges* which may be made up by moves, which in turn may be made up by acts.

¹ Parenthesis indicates optionality

1.1.2 Conversation analysis

Conversation analysis (CA) emerged in the early 1960s in California when Garfinkel developed a research policy that he called ethnomethodology. He focused on the common sense reasoning practical theorising in everyday interactions (see Garfinkel 1967, Heritage 1984). Garfinkel (1967, 2002) studied social order as an empirical achievement, and demonstrated that social order is created in interactions between the participants. His work is akin to the work of Goffman (1967) and Gumperz and Hymes (1964) who reflect on the relationship between activity, social order, and language. In early studies (e.g. Schegloff 1968, Sacks 1972, Sacks et al. 1974) CA described social order as a social practice where turn-taking and repair secure interpersonal understanding. At this time, data were mainly telephone conversations collected in everyday interaction. Later, CA has expanded considerably out of sociology into other fields such as communication, psychology, anthropology, and applied linguistics. New studies also try to understand speakers' participation in multimodal interactions where gestures, gaze, talk, and body's placement in space demonstrably affect the interaction (Goodwin 1981, 2003).

While CA grew out of ethnomethodology there are some differences between them. In 1988, Atkinson already notes a tension exists between the specific treatment of conversation's sequential order (in CA), and more general interests in mundane reasoning (in ethnomethodology). Have (2002) sees the distinction between ethnomethodology and CA from a methodological perspective. Whereas CA is seen as relying on mediated observation through recording, ethnomethodology is seen as relying on direct observation of the researcher. CA has been criticised claiming that its reliance on the rigorous analysis through rending practices loses an insight into interactants' everyday mundane reasoning and competences (Crabtree 2001). How participants categorise themselves (see Schegloff 2007) and the world around them provides rich insights into everyday reasoning. As Day and Wagner (2008)

note, these significant critiques ensure the opportunity for closer collaboration between ethnomethodology, which has changed its initial concern with conversation as such, and shows interest in human social activity in general, and CA in their more applied approaches of research (see Gardner & Wagner 2004, Crabtree 2004, Richards & Seedhouse 2004). Three aspects define CA: turn-taking organisation, sequence organisation, and repair organisation which are described in the following sub-sections.

Turn-taking organisation

Perhaps the aspect of interactive conversation that most distinguishes it from other kinds of discourse is turn-taking, the switch in roles from addressee to speaker and vice versa. Sacks et al.'s (1974) pioneering work on the microanalysis of turn-taking in conversations note the investigation of a turn organised activity needs to examine the shape of the turn-taking organisation device, and how it affects the distribution of turn for the activity on which it operates. These authors state a model to analyse turn-taking should be able to reflect on a list of facts they observe in conversations (see Sacks et al. 1974: 700-701). The comparison of such a list of facts with those that occur in other speech-exchange systems would shed light on the differences between conversations and other kinds of interpersonal communication; for example, the ordering of turns in the discussion sessions is likely to be pre-specified. They note that speakers in conversations speak mainly one at a time, that speaker change occurs quite smoothly, that overlapped speech is brief, and that transitions between turns occur with very little gap and no overlapping. However, as Psathas (1995: 35-36) comments, the system of turn-taking they described seemed to be independent of the context or what is called *context free*. In this system, no importance is granted to the content or topics of the conversation, the size of the turns, the length of the conversation, the number of parties, the speakers and the times at which they spoke, or the settings. In Psathas' words, turn-taking is relevant to the context and sensitive to whatever is occurring in it. Therefore, contrary to Sacks et al.'s description the system appears to be *context sensitive*. And it is when considering the context that

ethnomethodology plays a crucial role in the observation of the interaction and the contribution to the analysis of a most 'mundane reasoning'.

Sacks et al. (1974) propose the description of the turn-taking system for conversation in terms of two components: the turn constructional component, and the turn allocation component. The constructional component refers to a set of unit-types (sentential, phrasal, and lexical constructions) the speaker may use to start out to construct a turn. On the other hand, turn-allocation techniques available to speakers can be of two types: those provided by the current speaker who selects the next speaker, and those in which the next turn is allocated by self-selection. The system of turn construction seems to be governed by a basic set of rules providing the allocation of the next turn, and coordinating transfer to minimise gap and overlap. The rules apply recursively to all transition-relevant places, and are hierarchically organised: other-selection goes before self-selection, which goes before continuation. Turn-taking organisation is clearly useful for this study where the discourse is highly interactive. However, the exchange structure proposed by SFL will need to be reviewed.

Sequence organisation

The second core idea of CA is that utterances in interactional talk are sequentially organised. For conversation, any utterance in interaction has been produced in progression of the talk where it occurs, after the preceding one, while at the same time creating a context for the next utterance. The concept of *adjacency pairs* (Schegloff & Sack 1973) is the major instrument for the analysis of sequence organisation. As introduced in section 1.1.1, instances of adjacency pairs are: question-answer, greeting-greeting, offer-acceptance/refusal. The basic rule of adjacency pairs as noted by Schegloff and Sack (1973: 296) is: "[...] given the recognizable production of a first part, on its first possible completion its speaker should stop, and a next speaker should start, and produce a second pair part from the pair type of which the first is recognizably a member."

Adjacency pairs, however, can be more complex than that. In many cases a third part is added to the pair format as an acknowledgment or evaluation by the first speaker of the second speaker's utterance (Have 1999). A new sequence can be inserted in the one already started, for example a request for clarification or specification (Schegloff 1972). Accordingly, a sequence expansion may occur, that is, a sequence format may be followed through, restricted, expanded, or broken off, and the parties need to negotiate on the basis of turn-by-turn (Jefferson & Schenkein 1978). CA literature has also identified pre-sequences, adjacency pairs that function as a preparation for a next pair which have implications for what can follow (Sacks 1992, Schegloff 1980). Examples of pre-sequences are pre-invitations, pre-requests, and pre-announcements. Another type of sequence structure is that of repeating cycles of similar sequences, such as question-answer sequence in an interrogation or interview. Sacks says about it: "A person who has asked a question can talk again, has, as we may put it, a reserved right to talk again, after the one to whom he has addressed the question speaks. And, in using the reserved right he can ask a question. I call this rule the chaining rule" (Sacks 1972: 343, cited in Have 1999). CA and SFL share a common standpoint in this respect going beyond the simple description of sequence organisation. The capacity of these approaches to analyse the sequential patterning of the interaction is useful for this study that aims at the analysis of an interaction which traditionally has been described to follow the adjacency pair question-answer.

Repair organisation

The third key aspect considered in CA is repair organisation. It describes how parties deal with problems in the interaction's progress, such as mishearing or misunderstanding. The phenomenon has been analysed as sequentially structured (see e.g. Jefferson 1974, 1987; Schegloff et al. 1977; Schegloff 1979, 1987, 1992). Three aspects describe repair: who initiates repair, who resolves the problem, and how it unfolds within the turn or sequence. Speakers use different types of repair sequences. In self-initiated self-repairs, sometimes speakers cut off the current utterance to re-start it correcting an obvious

mistake, or using a different utterance. A speaker can also use the transition relevance place to initiate self-repair. Another type of repair sequence appears when a recipient demonstrates some kind of misunderstanding, after that the original speaker initiates repair of his or her previous turn. When another participant initiates repair it is commonly done in the next turn, by a next turn repair initiator. This is quite often done by a short expression such as ‘huh?’, ‘what?’ and the like. The original speaker has the opportunity to self-repair by clearly repeating the utterance or producing a new one commonly preceded by ‘I mean’ or a similar expression. Another speaker may also offer an understanding of the target utterance in the form of ‘you mean X?’ causing the original speaker’s acceptance, rejection, or rephrasing (Burt 1999). Repair strategies may be found in discussion sessions, especially cases of mishearing possibly caused by the settings (i.e. no microphones were available to the audience).

1.1.3 Pragmatics

Linguistic pragmatics, or the pragmatics of language use, is broadly interpreted as the study of understanding intentional human action, involving “the interpretation of acts assumed to be undertaken in order to accomplish some purpose” (Green 1989: 3). Pragmatics encompasses all sorts of means of communication including non-verbal ones. It is essential to distinguish between what a sentence means, and what a speaker intends to convey by the utterance of that sentence (Grice 1957). In this section, I will make an overview of the pragmatic approach to understand natural language, through a brief introduction to four concepts broadly discussed in pragmatics: speech acts, presuppositions, implicatures, and politeness. I turn attention to questions of what speakers intend to accomplish when saying what they say, and in saying it in the way they say it, and at the point of the discourse at which it is said.

Speech acts

One of the key philosophical traditions that shaped pragmatics is Speech Act Theory, first advanced by Austin and Searle in the 1960s. This theory focuses mainly on the description of the processes and conditions that have to be met for an utterance to be interpreted as carrying a particular function. Within the speech act theory the term function refers mainly to the notion of illocutionary force (Austin 1962; Searle 1969, 1971). Austin (1962) divides utterances into three components or acts: *locutionary act*, an act of saying something; *illocutionary act*, doing something by means of the locutionary act performed by the speaker; and *perlocutionary act*, acts which have an effect which is not a consequence of the performance of the illocutionary act. Sometimes a sentence contains linguistic expressions or intonation that serve to indicate the illocutionary force of the sentence. In this study, special attention is paid to the linguistic and non-linguistic expression of the illocutionary force. In pragmatic theory the notion of indirectness is associated to the syntactic form of a sentence. The illocutionary force is related to the linguistic form of an utterance: declarative-assertion, imperative-order/request, interrogative-question. However, as Austin and Searle note most utterances are indirect, that is, the illocutionary force is not reflected in the sentence form. These are named *indirect speech acts* or form-function mismatches following SFL terminology.

Presuppositions

Presupposition is a phenomenon broadly discussed by philosophers and linguists. This term is used to refer to propositions whose truth is taken for granted in the utterance of a linguistic expression. The standard examples of presupposition are *existence presuppositions* of defined descriptions as in “instances taken from the corpus were enlightening for our study”, where “the speaker/s use corpus analysis approach in the study” is presupposed. Another type of presuppositions is *factive presuppositions* which are associated with expressions that take a sentential subject or object, or cleft constructions. A presupposition is semantic material which is taken for granted, entailed

(semantic approach) or assumed (pragmatic approach), and not asserted in a declarative sentence, questioned in a question, or ordered in an imperative (Green 1989). Presupposition is not a semantic property inherent in lexical items but a pragmatic property of utterances in context (Morgan 1973).

Implicatures

Grice (1975) affirms that the speaker's words often convey more than literal meaning. He argues that the listener interprets the meaning of an utterance with reference to the *implicatures* that derive from the *Cooperative Principle* (1975: 45): "Make your conversational contribution such as is required, at the stage at which it occurs, by the accepted purpose or direction of the talk exchange in which you are engaged". Grice describes four categories, or maxims, of this principle, and gives examples of their applications in both linguistic and non-linguistic domains. The maxims (Grice 1975: 45-46) are:

- | | |
|-----------|--|
| Quantity: | I. Make your contribution as informative as is required.
II. Do not make your contribution more informative than is required. |
| Quality: | I. Do not say what you believe to be false.
II. Do not say that for which you lack adequate evidence. |
| Relation: | I. Be relevant. |
| Manner: | I. Avoid obscurity of expression.
II. Avoid ambiguity.
III. Be brief (avoid unnecessary prolixity).
IV. Be orderly. |

Grice notes that speakers value the maxim of Quality much more highly than the other maxims since violating it may be considered a moral offence, whereas violating the others is, at worst, inconsiderate or rude. Sperber and Wilson (1982, 1986), however, have taken the maxim of Relation as central. In conversation, these maxims are often flouted, and the hearer is forced to derive meaning on the basis of the divergences from a maxim. When flouting a

maxim the speaker may choose or not to make it explicit, by informing the hearer either explicitly or implicitly. The use of the maxims is the basic mechanism by which utterances are used to convey more than their literal meaning. Although there is a strong claim that the Cooperative Principle governs conversational interaction, there are also detractors of this theory (see Levinson 1983 for discussion). Keenan (1976), for example, affirms that the maxims do not universally govern human talk exchanges, and notes the lack of Quantity maxim in Malagasy speakers. More recently, Adolphs (2008: 27) stresses the lack of consideration of natural language in the formulation of the Cooperative Principle. In her words, corpus studies have shown that many speech acts are 'conventionalised in nature', for that reason it would not be necessary to refer them to the maxims.

Politeness

I will conclude this overview of pragmatics introducing politeness phenomena. Politeness phenomena are the strategies for maintaining or changing interpersonal relations. Participants in a conversation can choose to be polite or they can be intentionally rude disregarding others' feelings and wishes. Lakoff (1973) describes three rules or principles to be polite: 1. Don't impose, 2. Offer options, and 3. Encourage feelings of camaraderie. Green (1989) summarises the principles as follows. Rule 1 is the most formal politeness. It is appropriate to situations in which there is an acknowledged difference of power and status between the participants. Formal politeness is impersonal since not imposing means not giving or seeking personal opinions, and avoiding personal references. In terms of language use it means avoiding emotional language as well as topics of conversation that are considered taboo. Rule 2 is more informal politeness. It is appropriate to situations in which the participants have similar status and power, but are not socially close. Offering options means expressing oneself in such a way that one's opinion or request can be ignored without being contradicted or rejected. Rule 3 is for friendly or intimate politeness. It is appropriate to intimate or close friends. In intimate politeness any topic is welcome. In contrast to informal politeness the principle here is not

only to show interest in the other by asking questions and making personal remarks, but also to show regard and trust by being open about details of one's own life. Participants use intimate forms of address, including nicknames and even epithets.

Brown and Levinson (1978, 1987) provide a different perspective on politeness phenomena. Two key concepts in Brown and Levinson's framework are *face* and *face threatening act*. These authors (1987: 61) define face as "the public self-image that every member wants to claim for himself". They maintain that face is made up of two wants: *negative face* as the freedom to act unimpeded, and *positive face* the satisfaction of having one's values approved of. Brown and Levinson (1987) argue that face respect is not a right, because face is vulnerable. Therefore, to engage in interaction is to risk losing face. Maintaining face requires the cooperation of others since it is defined in terms of others' actions and value systems (Green 1989). Brown and Levinson believe it is the speaker's and addressee's interest to "maintain each other's face" (ibid.: 60). This is difficult, however, since there are acts which threaten one or both aspects of an individual's face. They are called face threatening acts (FTAs). To calculate the risk in an interaction, Brown and Levinson consider three factors: social distance, social power, and culture of the interlocutors. On the basis of this calculation, speakers determine whether they can forego trading in face, and perform the act without apology or mitigation, or whether they should choose a *positive politeness* strategy (making hearer feel good and that his/ her values are shared) or a *negative politeness* strategy (hedging, apologizing, offering options or asserting a desire to avoid interfering with hearer's freedom of action).

Pragmatics is concerned about how the way in which something is said reflects the speakers' attitudes toward and beliefs about the topics, and referents of an ongoing discourse (Green 1989). Choices are made on a syntactic construction, but also on intonation (Cutler 1977, Olsen 1986, Schmerling 1976, Ward & Hirschberg 1985), phonology (Cutler 1974: 117, Zwicky & Sadock 1975: 26-

27), as well as which language to use (Gumperz 1976). A speaker performs a particular communicative act to pursue specific goals, getting the addressee to have a certain belief or attitude about events or attitudes in the real world. This direct connection between politeness and the expression of attitude is clearly useful for this study that is concerned precisely with this interpersonal meaning and its realisation not only linguistic but also non-linguistic.

The above discussion has revealed that discourse analysis that aims at giving an insight into interpersonal communication needs to take into consideration different approaches. In addition, natural communication relies on multiple modes of expression in a combination of linguistic and non-linguistic features (Haiman 1998), an aspect that is extensively discussed in the next section.

1.2 Multimodal discourse analysis

A landmark in this thesis is Kress and van Leeuwen's (2001: 4) idea of discourse, "discourses are socially constructed knowledges of (some aspect of) reality". As these authors argue, their definition does not move 'explicitly' away from two assumptions which support much of the work carried out in discourse analysis: that discourses relate to language, or even that they exist in language; and that discourses 'just exist', irrespective of any material realisation. My approach, as Kress and van Leeuwen's, adopts both positions: the existence of discourses separated from their mode of realisation, and also the idea that "discourses appear in the mode of language, among many others".

Over the last decades, it has become increasingly evident for researchers that to understand communication patterns, the analysis of language alone is not enough (see e.g. Baldry 2000; Iedema 2003; Kress 2000, 2003; Kress and van Leeuwen 1996; van Leeuwen 1996). All of them highlight the recognition that all discourse is inherently multimodal. Scollon and Levine (2004: 3) argue that "a monomodal concept of discourse is distorting, and therefore, now that we

can, we should open up the lens to discover a fuller view of how humans communicate”.

There are two approaches to multimodality that appear to be the most widespread currently (Constantinou 2005). One approach remains faithful to the origins of multimodality in social semiotics, which evolved from Hallidayan SFL and extended by the work of Kress and van Leeuwen (1996). The other approach is less connected to the systemic origins of multimodality and appears to be initially motivated by a “critical inclination towards mediated representations” of discourses, and is methodologically closer to both Discourse Analysis (DA) and Critical Discourse Analysis. This approach often employs the same tools that can be found in SFL approach, but uses them as a means to examine the effects of the representations under study. In Constantinou’s words (*ibid.*: 603):

[T]he SFL-inspired work begins with an interest in the generation and development of multimodal systemic theory [...], whereas the work that is continued in the spirit of DA begins with an ‘object’ of analysis, and deploys and constructs analytic categories concerning multimodal semiosis that are intended to illuminate some aspect(s) of the object under scrutiny.

These approaches complement each other since both aim toward the same broad objective of study, the phenomenon of multi-semiotic meaning making, and serve to the academic community, both to develop analytical frameworks and tools, and to use those tools. In addition, Baldry and Thibault (2006) argue the term multimodality covers a diversity of perspectives and possible approaches. It is not a single principle or approach, but Multimodal Discourse Analysis (MDA) is currently shaping work in Critical Discourse Analysis, Ethnographically-based Discourse Analysis, Mediated Discourse Analysis, Systemic-functional Discourse Analysis, among others. In this respect, Ventola et al. (2004) note some multimodality research takes the approach of adapting models already developed for language. Other research looks into fields

outside linguistics, such as musicology and typography, which provide models of specific meaning-making resources other than language; or film theory where language has always been treated together with other kinds of semiotics.

Some books (edited volumes and monographs) have, explicitly and centrally, focused on multimodality and MDA as a key concern after Kress and van Leeuwen's *Multimodal discourse* (2001). For example, the work of Granström et al. (2002) represents selected perspectives on multimodality relevant to language and speech systems covering three areas of multimodal communication: studies of human-to-human communication, multimodality in alternative communication mediated by machine, and communication between humans and systems. Scollon and Levine (2004) explore the relationship of discourse and technology within the domain of multimodality, acknowledging the influence of communication technologies on discourse analysis is twofold: the role of technology in multimodal discourse and the impact of technologies on meaning making. MDA is considered in three contexts: social (inter)actions, educational social interactions, and in workplace contexts. Another volume concerned about MDA is O'Halloran's (2004). Following clearly a SFL approach, three sites of multimodal study are represented here: three-dimensional objects in space, electronic media and film, and print media. Ventola et al. (2004) also contribute to MDA with a collection of papers exploring multimodality in printed media, human interaction, education, film and subtitling, translation, museum exhibitions, and medical discourse. In Baldry and Thibault's monograph (2006), multimodality is explored in scientific printed pages, websites, and television advertisements. Finally, Royce and Bowcher (2007) focus on multimodality in research areas such as writing and graphology, genre, ideology, computational concordancing, and cross-cultural and cross-linguistic issues. As the editors remark, the interesting contribution of the volume is the emphasis on the educational implications of multimodal discourse in first and second language contexts.

The foregoing review shows MDA has been applied to a considerable number of modes and contexts. Multimodal studies embrace two main areas: multimodality in language and language systems, and multimodality in other systems. The study of multimodality in language and language systems focuses its attention often on interaction. Interaction is examined from two standpoints, human-to-human interaction and human-machine interaction. The present study focuses on the former. Definitions of multimodality in this area can be very general, backing up on theoretical models of human information exchange. Other definitions can be based on a particular application framework. Fundamentally, multimodality is the use of two or more of the five senses for the exchange of information. Modern studies of multimodal communication, however, have their roots in the work of psychologists and linguists during the past 50 years, made possible by the advent of film and video analysis techniques. The present thesis takes, as its point of departure, studies of human-to-human communication involving speech and gestures and other bodily communication.

One cannot narrow down the analysis of speech exclusively to the interpretation of its linguistic features. Spoken data is multimodal in nature, hence non-linguistic information also contributes to give meaning to the communicative event. The non-linguistic message that accompanies the linguistic message has an effect on the interpersonal meaning of the communication (Cook 1995). As commented above, the theoretical standpoint for much significant work in MDA has been SFL. Nonetheless, the multimodal or semiotic nature of the interaction has received much attention of CA scholars who have been concerned about the communicative value of what they called “somatic behaviour” (Allen & Guy 1974) to refer to ocular and facial behaviour as well as head movement. In interpersonal communication, research has shown how various semiotic systems such as speech, gesture, body position, and eye gaze are simultaneously deployed in interaction; for example, aspects such as the relationship between speech and gesture (Kendon 1980, 1981a, 1982, 1997; McNeill 1992; Muntigl 2004; Streeck 1993, 1994),

speech and gaze (Goodwin 1979, Kendon 1990a, Streeck 1993), speech and body position (Kendon 1985), or speech, gesture, gaze, and body position (Goodwin & Goodwin 1992, Martinec 2001) have been studied.

Ray Birdwhistell (1952, 1970) was one of the linguists who first actually attempted to extend the boundaries of linguistics concern beyond the study of the purely segmental aspects of speech. Birdwhistell coined the term 'kinesics' to suggest a discipline to parallel linguistics, which would be concerned with the analysis of visible bodily motion, including gestures. George Trager in the development of his work on what he called 'paralanguage' (Trager 1958) sought to show how the methods of structural linguistics could be applied to such things as intonation, voice quality, and the non-articulated sounds which speakers sometimes employ in spoken utterance. A contemporary, the anthropologist Edward T. Hall (1959), became engaged in the study of spatial patterns in human communication, including the study of interpersonal distance in face-to-face interaction, which he called 'proxemic'. In collaboration with Hall, Trager developed the idea that communication comprised a complex of structured codes in the modalities of voice, body motion, spatial patterning, and even the use of physical objects and the physical environment (Hall & Trager 1953).

More recently, Fernando Poyatos (1983) claims the lack of autonomy of the verbal language, and the idea that what truly gives the spoken words their total meaning is paralanguage and kinesics. In his words, paralanguage is made up of the non-verbal voice qualities (pitch, rhythm, etc), voice modifiers (pharyngeal control, labial control, articulatory control, etc), independent sounds (clicks, hissing sounds, hesitation sounds, etc), and silences by which consciously or unconsciously the speaker supports, emphasises, or contradicts the linguistic, kinesic, and proxemic messages. In addition, kinesics is defined as the systematic study of body movements (gestures and manners) and/ or their resulting positions (postures) learned or somatogenic whether isolated or combined with linguistic and non-linguistic structures which have

communicative value either consciously or unconsciously. Poyatos' (1983) work on non-verbal communication underpins on what he calls the *basic triple structure*² referring to the three co-systems *language-paralanguage-kinesics*.

A final work worth mentioning for the contextualisation of the study in multimodality in human-to-human interaction is Norris' (2004) *Analyzing multimodal interaction*. In this book, Norris looks at language alongside gaze, gesture, posture, image, and other modes that feature in everyday interaction. The work of this author draws on a wide range of theoretical tools (discourse analysis, interactional social linguistics, mediated discourse analysis, and multimodality) to propose a methodological framework for the analysis of human interaction. Norris refuses to term gesture, gaze, or posture non-verbal or non-linguistic modes of communication as if they were subordinated to language, since these modes can play a superordinate or equal role to the mode of language in interaction. She uses the term *embodied* modes to refer to language and to gesture, gaze, or posture, showing these modes are generally of an equal value. She also defines the concept of *disembodied* modes to refer to the material world that people utilise in interaction (music, print, layout, etc). Norris shows in a systematic manner that all interaction is multimodal and offers a set of tools which resolve some questions about interaction, as well as methodological resources. She raises questions about the relation of mind, sign, context, and identities. Although in the present study the term *embodied* modes is not used, there is an agreement with the value given by Norris to kinesic features.

This thesis follows an MDA approach to examine how evaluation is co-expressed in the three systems described by Poyatos, *language-paralanguage-*

² Poyatos (1983: 130) represents the complex of interpersonal communication systems of face-to-face interaction where the basic triple structure is completed with another three more strictly bodily activities: chemical messages (natural or artificial body odors), dermal activities (such as flushing), and thermal reactions (rise or fall of body temperature). This author also argues that these six systems are always subject to two basic dimensions of face-to-face communication, namely, proxemic (spatial relationship between the two persons) and chronemic (temporal length of each activity or combination of them).

kinesics. In the following subsections, I provide a narrow overview of the two non-linguistic systems, kinesics and paralanguage, discussing exclusively those aspects that have been considered in the analysis. The linguistic aspects have been pointed out briefly when describing SFL lexico-grammatical resources to express interpersonal meaning (see Section 1.1.1 of this chapter), and will be extensively discussed in Chapter 2 where I explore the concept of semantic evaluation and the appraisal theory.

1.2.1 Kinesics

There are four aspects that belong to the realms of kinesics which I consider can contribute to the study of evaluation in discussion sessions: gesture, head movement, facial expression, and gaze. In the following subsections I will review the most influential research done on these kinesic features. My aim in doing so is twofold: to find expertise to make the best approach to examine them in the corpora under scrutiny in the thesis, and to find out research evidence that these non-linguistic modes are employed to express evaluation. Most of the work reviewed on kinesics, and also on paralanguage (as I will discuss in Section 1.2.2), and that constitutes the landmark of the present study, is done on conversation analysis, an area of interpersonal interaction widely explored by scholars who generally belong to multidisciplinary backgrounds such as anthropology, psychology, psychiatry, and sociolinguistics.

Gesture

The word *gesture* is currently used as defined in the Oxford English Dictionary (2nd edition, 1989) as “a movement of the body or any part of it, that is expressive of thought or feeling”. Longman Dictionary of Contemporary English (3rd edition, 1995) also defines it as “a movement of part of your body, especially your hands or head, to show what you mean or how you feel”. Both definitions coincide in the use of gesture to express thoughts, what you mean, and feelings. In a study concerned for speakers’ evaluation of what they say and what their dyads in the discussion say, the study of gestures then should be

a must since it seems to be another mode, apart from language, to express evaluation. Back to the definitions, Longman Dictionary is more specific in the parts of the body whose movements are particularly considered gestures, hands and head. This coincides with the results found in the field that show hands movements are frequently synchronised with head movements. Nonetheless, a general approach to study gesture focuses on hands and arms, although head movements may also appear in the analysis and interpretation. In the present study, and following the general tendency of researchers in the field, the term gesture refers exclusively to hands and arms movements.

Gesture is one of the kinesic features that has received most attention by scholars. The natural human behaviour to classify things in order to understand them has produced a significant number of gesture taxonomies. The most influential approaches to the study of gesture are those by Efron (1941), Ekman and Friesen (1969), McNeill (1992), and Kendon (2004). These works see gesture as an activity of major importance to the understanding of the speaker's speech, which has a significant social meaning. Efron (1941)'s work may be one of the first twentieth-century attempts to explore the relationship between gesture and speech. However, Efron does not develop a typology of gestures but presents three perspectives in which gestures may be examined: a *spatio-temporal* perspective, in which gestures are described in terms of their movement characteristics; an *interlocutional* perspective, which deals with the interactional functions of gestures, whether gesturing involves the other person or not; and a *linguistic* perspective, which deals with the ways in which gesture may convey meaning, specially in relation to speech. This author recognises that for a comprehensive understanding, gestures must be analysed from several perspectives. Efron's work had a great influence on Ekman and Friesen (1969). These scholars offer a classification of the different types of what they call 'non-verbal behaviour' (referring to movement or position of the face and body). They consider five categories: i) *Emblems*, first described by Efron, defined as "those non-verbal acts which have a direct verbal translation, or dictionary definition, usually consisting of a word or two, or perhaps a phrase"

(ibid.: 63). ii) *Illustrators* “are movements which are directly tied to speech, serving to illustrate what is being said verbally” (ibid.: 68). iii) *Affect displays* which are mainly comprised of facial expressions of emotions. iv) *Regulators* which “are acts which maintain and regulate the back-and-forth nature of speaking and listening between two or more interactants” (ibid.: 82). And v) *Adaptors* which are “movements [...] first learned as part of adaptive efforts to satisfy self or bodily needs or to perform bodily actions or to manage emotions or to develop or maintain prototypic interpersonal contacts or to learn instrumental activities” (ibid.: 84). Their work includes, among other aspects, studies of: how observers judge attitude, personality, or emotional state from the bodily and facial attitudes, and movements of people in social interaction.

McNeill’s (1992) work on gestures in narratives mainly focuses his interest on the relationship between gesture and speech. This approach is of relevant importance for the present study where the point of departure to the analysis of kinesics is speech, linguistic evaluation. McNeill affirms that the close synchrony between gesture and speech indicates that the two systems operate as an inseparable unit. It seems gestures are tightly intertwined with spoken language in time, meaning, and function. McNeill credits the discovery of a single unit of speech and gesture to Adam Kendon (1972, 1980) who emphasises speech sounds and gestures in linking gestures with language. McNeill’s contribution links gestures with semantic and pragmatic content. In his words, gestures are an integral part of language as much as are words, phrases, and sentences. Gestures display images that cannot always be expressed in speech, as well as images that the speaker thinks are concealed. Therefore, speech and gesture must cooperate to express the person’s meaning.

As the author stated, he is interested only in the spontaneous gestures used by the speakers and in their words. He defines his domain of interest by an ordering of gestures. This ordered range of gestures was first described by Kendon in 1983, and published in 1988. McNeill calls it in his honour, *Kendon’s continuum*. The continuum is: Gesticulation → Language-like

Gestures → Pantomines → Emblems → Sign Languages. As one moves from left to right obligatory presence of speech declines, the presence of language properties increases, and idiosyncratic gestures are replaced by socially regulated signs (McNeill 1992: 37). He describes these five items of the continuum as: i) *Gestures (gesticulation)* are idiosyncratic spontaneous movements of the hands and arms accompanying speech. ii) *Language-like gestures* are similar to gesticulation but they are grammatically integrated into the utterance, as in the example “the parents were all right, but the kids were [gesture]”, where the gesture fills the grammar slot of an adjective. iii) In *pantomime* the hands depict objects or actions, but speech is not obligatory. There may be either silence or just inarticulate onomatopoeic sound effects (‘whoops!’ ‘click’ etc.). iv) *Emblems* are the familiar “Italianate” gestures, mostly insults but some of them praise, and virtually all attempts to control other people’s behaviour (Kendon 1981a). They have standards of well-formedness (e.g. the OK sign), a language-like property that gesticulation and pantomime lack. And finally v) *Sign languages* are “full-fledged linguistic systems with segmentation, compositionality, a lexicon, a syntax, distinctiveness, arbitrariness, standards of well-formedness, and a community of users”.

In the present study the focus of interest is only on *gestures*, the most idiosyncratic expressions that accompany speech. In this respect, McNeill proposes four types of gestures: i) *Iconic* gestures bear a close formal relationship to the semantic content of speech. ii) *Metaphorics* like *iconics* are pictorial, but the pictorial content presents an abstract idea rather than a concrete object or event. iii) *Beats* look like beating musical time. Unlike *iconics* and *metaphorics*, beats tend to have the same form regardless of the content (McNeill & Levy 1982). The beat indexes the word or phrase it accompanies as being significant (Morris 1977), not for its own semantic content, but for its discourse-pragmatic content. iv) *Deictics* are the familiar pointing. Apart from the function of indicating objects and events in the concrete world, they also play a role where there is nothing present to point at

(McNeill et al. 1993). It seems most pointing gestures in narratives and conversations are of this abstract kind. This author identifies a fifth type of gesture, *cohesives*. These gestures are quite eclectic about their form. They can consist of iconic, metaphoric, deictic gestures or even of beats. *Cohesives* link parts of the discourse “thematically related but temporally separated”, as the cohesive speech function defined by Halliday and Hasan (1976). Gestural cohesion is achieved by repetition of the same gesture, the repetition signals the continuity.

Kendon’s contribution to the study of gesture is dated in 1972. However, I am particularly more interested in two aspects covered in a work published more recently (2004), which shed light on the identification and interpretation of gestures: the review Kendon makes of the units of gestural action, and the pragmatic function of gestures. Nonetheless, the study is underpinned on his 30 years of research in the field. The foregoing approaches to the study of gesture have shown that most scholars accept that speakers use gestures in several different ways to accomplish different functions in the spoken discourse. However, as Kendon notes, to have a better appreciation of the significance of this, we need to know how and when speakers deploy gestures as a part of their utterances. Only after this appreciation we will have ideas of how speech and gesture functions in relation to one another. Kendon looks at aspects of how gesturing and speaking are organised in relation to one another. The units of gestural action he considers are the *gesture unit* and the *gesture phrase*. These are defined in terms of how the body parts involved in gesturing are posed and moved. Speech is analysed in *tone units*, following Crystal and David (1969), “packages of speech production identified by prosodic features which correspond to units of discourse meaning” (Kendon 2004: 108), and how these units are related in time. In the same way, gesture phrases are “units of visible bodily action identified by kinesic features which correspond to meaningful units of action such as a pointing, a depiction, a pantomime or the enactment of a conversational gesture” (ibid.: 108). Kendon looks at the coordination in time of gesture phrases and tone units in any discourse as well as at the relationship

of meaning between these two aspects of utterance action. He notes that speakers create ensembles of gesture and speech to attain the semantic coherence between them. This does not imply gesture and speech express the same meaning, since they are often different. However, the meanings interact in the utterance, resulting in a more complex unit of meaning. Note the term utterance is used to refer to the ensemble of actions, whether composed by speech, gesture, or both. The spoken component is referred to as *locution*. The gestural component is analysed in terms of the gestural units.

Kendon defines a *gesture unit* as the “excursion from the moment the articulators begin to depart from a position of relaxation until the moment when they finally return to one” (ibid.: 111). Within the course of such excursion one or more phases can be distinguished where articulators (i.e. hands and forearms) reach points of furthest remove from the position of relaxation (this is sometime called ‘home position’, Sacks & Schegloff 2002). A prototypical gesture passes through three phases (see also Kendon 1980). The phase of the movement that is closer to the apex, the main part of the gesture. This phase is called *stroke*. The phase of movement leading to the stroke is named the *preparation*. And the phase of movement that follows the stroke is referred to as the *recovery* or *retraction*. The *gesture unit*, or the entire excursion, may contain one or more gesture phrases. It is a common practise to identify the *strokes* of such gesture phrases, which are picked up by casual observers, as ‘gestures’. In this respect, Kendon claims that to understand properly how speakers organise their gestural and speech components in the utterance it is important to take into consideration the phases of gesture units and gesture phrases. McNeill (1992) describes three rules governing how speech and gesture synchronise. The synchrony rules refer to the stroke phase, anticipation refers to the preparation phase, thus only the stroke phase of the gesture is integrated with speech. The synchrony rules are: i) *Phonological* synchrony rule where the stroke precedes or ends at the phonological peak syllable of speech (Kendon 1980). That is to say, it is integrated into the phonology of the utterance. ii) *Semantic* synchrony rule where speech and

gesture present the same meaning at the same time. McNeill identifies three possible complications: pauses, multiple gestures, and gestures that correspond to more than one clause. And iii) *Pragmatic synchrony* rule when gestures and speech co-occur performing the same pragmatic function, which limits speakers to one pragmatic reference at a time.

The final aspect I consider enlightening for this thesis is the functions gestures have in dialogic discourses. As research has noted (see e.g. Clark & Schaefer 1989, Clark & Wilkes-Gibbs 1986) monologue can be autonomous, but dialogue in conversation is collaborative. That is, dialogue requires social processes. Most scholars divide gestures in two broad groups (Efron 1941, Ekman & Friesen 1969, Kendon 1987, McNeill 1985): *stereotyped gestures* that can be used with absence of speech, and *conversational gestures* which are deployed with speech and do not have stereotypic forms. For the purpose of the present study I am interested in conversational gestures. Within conversational gestures there is another widely accepted distinction: *topic gestures* and *non-topic gestures*. The former are most of the conversational gestures which depict events, objects, actions, or ideas directly related to the topic of conversation. The latter are some gestures that have been described as strokes of hand that do not seem to depict anything specific, but they have an abstract relationship with the topic, such as emphasis or syntactic contrast. Efron (1941) and Ekman and Friesen (1969) call them *batons*, Freedman (1972) terms them *speech primacy movements*, McNeill and Levy (1982) *beats*. In this context, Bavelas et al. (1989, 1992) suggest that most of these non-topic gestures are direct references to the other person in conversation, maintaining the interaction required by dialogue rather than conveying meaning within the dialogue as other gestures do. Bavelas et al. (1989, 1992, 1995) call them *interactive gestures* and propose they have the function of helping the interlocutors coordinate their dialogue. According to these authors, interactive gestures share two key characteristics of form and meaning “[a]t some point the finger(s) and open palm(s) are oriented directly at the other person; [a]nd the paraphrased

meaning of the gesture in the context in which it occurs includes a reference to “you”, the person in the dialogue” (ibid.: 1995: 395).

Interactive gestures are likely to be found in the corpora of discussion sessions, since these gestures may play a relevant role in the analysis of *engagement* (see full discussion of engagement system in Chapter 2). Accordingly, literature review of interactive gestures can help to understand its potential connection with this evaluative linguistic system. Bavelas and her colleagues make a comprehensive analysis of interactive gestures and propose four broad functions these gestures may perform, assuming a total of twelve specialised functions (ibid.: 395-397): i) *Marking the delivery of the information*. A speaker may mark the status of the information being delivered. In the *general* case the speaker metaphorically hands over new information related to the main topic, the gesture “looks as if presenting an object to the other person” (McNeill & Levy 1982: 290). A common variation occurs when the speaker delivers *shared* information. The speaker marks gesturally that the addressee is probably already aware of the information being delivered –it is part of their common ground (see discussion about interactive gestures as markers of common ground in Holler (2010)). The gesture can be paraphrased “as you know”. Another variation occurs when the information is the beginning or end of a *digression* from the main point. The gesture indicates “you should know I’m going off (or coming back to) the main point”. Finally, the speaker may mark the information being delivered is *elliptical*, that is “irrelevant details are being left to the listener to fill in mentally”, as for example in “he was busy right then, with his chem lab or, you know, whatever”. ii) *Citing the other’s contribution*. A second set of function is to cite the addressees. *Generally* citing occurs when the speaker mentions something the addressee has said earlier. The gesture can be paraphrased as “as you said”. Speaker’s *acknowledges* is the addressee’s indication of understanding or following. iii) *Seeking a response*. Speakers may elicit addressees’ responses in several ways. They may seek *help* in finding the right word or phrase. Speakers may also seek evidence of *agreement* with a point just made, or that the addressee is *following* the

speaker, this is the equivalent of “you know?”. iv) *Turn coordination*. These gestures assist the process of turn exchange. Speakers may *take* the turn, *give* the turn, or mark the turn is *open* to either person.

Another approach to the functions gestures may accomplish is made by Kendon (2004) who identifies three types of functions referential, interpersonal, and pragmatic. Gestures that have a *referential* function may provide a representation of any aspect of the content of an utterance. *Interpersonal* gestures are those gestures that show how the interaction is organised. For example, there are the gestures that regulate turn-taking. As this author notes, interaction functions have often been acknowledged (Kaulfers 1931, Goodwin 1981, Streeck & Hartege 1992) but there is not a systematic discussion on them. These gestures can be identified as Bavelas et al.’s *interactive* gestures. It is, however, *pragmatic* gestures that are of especial interest for the present study, since these are likely to be found accompanying evaluative language.

Kendon (2004) describes the *pragmatic* function of gestures distinguishing three kinds: performative functions, modal functions and parsing functions. There are gestures which show the move or speech act the speaker is engaged in. Those are called *performative* functions. Gestures have *modal* functions if they show how the utterance is to be interpreted. And finally, *parsing* functions of gestures show punctuation in the discourse, or mark its logical components (see Kendon’s (1995) study of gestures as illocutionary and discourse structure markers). Kendon remarks he suggests a typology of functions of gestures, not a typology of gestures. Accordingly, it is the context that determines the function of the gesture not the gesture itself. He illustrates this idea in the following example (ibid.: 2004: 225):

[A] gesture in which an open hand, held so the palm faces downward or obliquely away from the speaker and is moved laterally in a ‘decisive’ manner [...], may be done so that is understood as an act of rejection or denial. In such a case we would say that it is a

performative. However, it may also be used as a way of expressing an implied negative and, in some contexts, in virtue of this, it may serve as an intensifier for an evaluative statement. As such it would be seen as a *modal* gesture. But this same gesture is also used in contexts where it serves to indicate that the speaker using it had come to a finish in a line of argument. It may mark the point at which the speaker is ready to proceed to deal with something else. As such it might be seen as a *parsing* gesture.

In his study, Kendon illustrates some of the ways in which speakers use gestural expression from the analysis of four different gesture families. A gesture family is a group of gestures that have certain kinesic features in common. For the families he studies the kinesic features are hand shape and hand orientation. Within a given gesture family different gestural forms are distinguished according to the movement pattern employed in performing them. Kendon focuses his attention on two families of gestures of 'precision grip' and two gesture families of the open hand. In the first group, he studies the G-family or 'finger bunch' (all the fingers are brought together so that their tips are in contact), and the R-family or gestures that use the 'ring' hand shape (only the thumb and index finger are put into contact at their tips). The gestures of the G-family appear to mark the topic of the speaker's discourse, but it is also used when the speaker is asking certain kinds of questions or demanding an explanation or justification for something. The R-family gestures are used in contexts in which the speaker is indicating that they mean to be very precise about something, that what they are saying is 'exact' some way, and that it demands attention for this reason. In the second group of gestures, the open hand gestures, two families are examined the Open Hand Prone or 'palm down' family, and the Open Hand Supine or 'palm up' family. In Kendon words, the terms of contexts of use of the two families are quite different. Open Hand Supine family gestures are used in contexts where the speaker is offering, giving or showing something, or requesting the reception of something. On the other hand, gestures of the Open Hand Prone family are used in contexts where something is being denied, negated, interrupted, or stopped, whether explicitly or by implications. He notes the use of these gestures (with 'horizontal palm') in four contexts. I consider two of them particularly relevant to the study of

discussion sessions: when universal statements are made, which exclude all other possibilities; and when an extreme assessment is made, whether positive or negative. The use of universal statements would close up a possible heteroglossic space in the discussion, and extreme assessments are part of the attitudinal system.

These gestures contribute to the significance of the utterance, of which they are a part, in different ways. They can show the kind of move being undertaken by a turn, indicating that it is a question, a denial, or an offer. In such cases the gestures have *performative* functions. On other occasions by topicalizing with a G-family gesture, or making precise with a R-family gesture, the speaker may mark up some features of the discourse structure, and in such cases the gestures have *parsing* functions. Kendon (2004) also describes gestures that operate on the verbal component of the utterance. He notes this with gestures of the Open Hand Prone family which can function in ways similar to a negative particle, but which can also serve as intensifiers since they can transform an evaluative statement into a superlative one. In these cases the gestures have *modal* functions.

He also observes that the way in which pragmatic gestures achieve these functions is partially by combining with the verbal or contextual meaning of the utterance, but also (as in the intensifying functions of Open Hand Prone of ‘horizontal palm’ gestures and head shakes) by reaching beyond the bound of the current utterance to operate in relation to the implied dialogue within which the utterance is embedded. In other cases, as in some gestures in the Open Hand Supine family, the gesture serves as an additional move, adding meaning beyond the meaning in the verbal component. Kendon (*ibid*) notes, however, the pragmatic functions of gestures are not new. They were recognised many centuries ago by Quintilian who remarked that we use our hands in speaking “to demand, promise, summon, dismiss, threaten, supplicate... question or deny...” (XI, III.85-87 cited in Kendon 2004: 226).

Head movement

The second kinesic feature closely connected with gesture is head movement. Several studies have focused on the relationship of movements of the head to the speech production process. Many are the work of Hadar and his colleagues who propose motoric functions for head movement during speech. Hadar et al. (1983) observe that the head moves almost constantly during speech and stillness occurs in pauses. Accordingly, head movement correlates with speech parallel to the relationship of manual gestures to speech. They also found a correlation between rapid head movements and primary peak of loudness.

Head movements have been attributed the functions of regulating turn-taking (Duncan 1972), marking semantic and syntactic boundaries of concurrent speech (Kendon 1972), and indicating encoding difficulties (Dittmann 1972). Hadar et al. (1984a) determine that head movements co-occur most significantly between sentences or clauses, and are associated with taking or bidding a turn. Hadar et al. (1984b) also identify head movements following speech dysfluencies³, which they found to be of greater amplitude and velocity. In contrast, short pauses are more often accompanied by slower movements, postural shifts, or stillness. The power of head movements to control interpersonal interaction even in the absence of speech has been described by Kendon (1990b). In earlier research, Kendon (1972) studied head movements in the context of speech and noted that particular patterns of movements vary according to the discourse function of the utterance. Kendon was the first to observe that some head movements are connected to the discourse structure of the utterance. He also observed a temporal alignment of manual gestures and head movement, which varies, “at times the onset of manual gestures precedes the head movement and at other times the reverse” (ibid.: 1972: 195).

In addition to the role of head movement in the speaking process, listeners have also been observed to synchronise their head movements with the speech of the

³ They define a dysfluency as a pause in speech longer than 0.2 second.

speakers. Kendon (1970) found in his research one listener who raised and lowered his head to match the rise and fall of the speaker's pitch. Listener nods have been of particular interests to other researchers. Dittmann & Llewellyn (1968) observed that listeners tend to nod and vocalise at boundaries of the speaker's phonemic clauses. These researchers postulate that the temporal alignment (nods precede vocalisation) allows the listener to signal the start of a response without interrupting the speaker. From the beginning, the term backchanneling included the head nod as a prototypical example (Yngve 1970). Backchannel signals were initially identified in Yngve's study of turn-taking and were defined as vocal or gestural expressions of the listeners that do not signal their desire or intention to take the floor. Following Yngve, Duncan (1972) considers listener head nods as backchannels. Erickson (1979) has discussed head nods as forms of listening response-behaviour that occurs at points in conversation where the speaker signals the relevance of some action by the recipient. Goodwin (1980: 304) sees these head nods would seem similar to verbalisations such as *yeah*, *mm hm*, and *uh huh* and might, like them, be considered signals of acknowledgment. A final contribution is Maynard's (1987) study of head nods that occur during conversations among Japanese speakers. Although the most frequent head nod was that used by listeners as backchannels, speakers nod also functions to mark a clause boundary or end of turn, to fill a turn-transition phase, and to signal emphasis or affirmation. Maynard also observed that, in general, Americans nod much less frequently in conversation than Japanese. The scope of this thesis extends beyond the examination of the evaluative expression of the presenter when performing the role of speaker including also his evaluative expression when acting as listener.

A key work for the present study is the research undertaken by McClave (2000). She studies linguistic functions of head movements in the context of the speech of American English speakers. McClave's work presents evidence that head movements carry semantic meanings beyond the familiar nods for affirmation and shakes for negation. These movements may signal their

meaning in the absence of speech, and therefore they are considered emblems⁴. There are, however, many head movements that, co-occurring with speech, pattern with it. McClave shows head movements have semantic, discourse, and interactive functions. Speaker's head shakes correlate with verbalisations expressing inclusivity, intensification, and uncertainty. She also identifies narrative functions, recognising speakers' change the position of their heads at the beginning of direct quotations, and for alternative or items in a list. Some head nods may show an interactive function as backchanneling requests, and lexical repairs are often kinesically marked. Now, I will discuss McClave's findings of those head movements that co-expressed with speech may potentially convey evaluative meaning.

McClave (2000) observes lateral sweep that co-occurs with concepts of *inclusivity* such as "everyone" and "everything". Birdwhistell (1966: 185) calls these sweeps *pluralisation markers* since he found lateral sweeps of hand, arm, and/or head co-occurred with plural nominal forms such as "we" or "them", and phrases such as "all of them". McClave notes, however, the broader concept is needed to include lateral sweeps co-occurring with lexical items such as "whole" which are not considered as plural forms. As in the following example, where in a discussion about meditation, the speaker says (ibid.:861)⁵:


And that made me put the whole situation in perspective
 \longleftrightarrow

Inclusivity seems to be related to two of the systems that form appraisal theory, to engagement but also to graduation. In the example, "whole" and the head movement would be considered as graduating the utterance, since it is not just "the situation" that has to be put into perspective but "the whole situation".

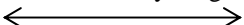
⁴ As we have already seen, an emblem is a conventionalised form and a well understood meaning in a particular culture that is equally well understood in the absence of speech (Efron 1941, Ekman & Friesen 1969).

⁵ \longleftrightarrow indicates duration of the lateral head movement or head shake.


McClave, as other researchers, finds that head shakes can also express *intensification* when they co-occur with lexical choices such as “very”, “a lot”, “great”, “really”, and “exactly”, among others. Goodwin (1980) interprets these head shakes as appreciation of something “out of the ordinary”. They have been considered *assessment markers* since they occur with evaluative utterances such as “It was so good” (Goodwin & Goodwin 1987). Schegloff (1987) notes that evaluation characteristically includes verbal intensifiers, accordingly he refers to the synchronised movements as *intensifiers*. More recently, Kendon (2002: 173-174), in his study of some uses of the head shake, argues that contrary to previous interpretations which treat this head shake differently from negation in association with evaluative statements, head shakes are also giving expression to a negative. In these cases, he postulates they are expressing “the implied negative that is often present in evaluative statements, whether positive or negative”. Furthermore, Kendon suggests head shakes used in this way function as *intensifiers* exclusively because of their reference to an implied negative. For example, a speaker describing her visit to a school in China declares:

The children were charming



In Kendon’s words, here, the head shake has the effect of intensifying the evaluation, as if the speaker had said “really charming” or “so charming”. The head shake has this effect because it implies that the children could not have been more charming. He supports his suggestion with the observation that speakers often do not use explicit negative when they make an extreme positive evaluation, but they often use head shakes. In the following example the speaker is describing the gardens she had seen in Japan.

I never saw anything more beautiful in my life



Kendon (2002: 175) argues that extreme evaluations “often imply the idea that the object being evaluated is ‘more than you can know’”. This negative, however, is sometimes made explicit but, as he says, it is also often implied, and this is expressed by the head shake that is often associated with expressions of extreme evaluation. In this example, the speaker is describing his experience during the time he spent in Germany. He found that Germans were very kind to him “so kind indeed, that is not possible to conceive of greater kindness” (ibid).

and the actions that I have had from the Germans, you cannot imagine


Furthermore, this scholar notes there is also an implied negative when people use the comparative superlative. For instance, when saying that something is the best, the implication is that nothing can equal it. In such cases, Kendon observes a head shake is also used. The speakers also use head shakes when they express evaluations using the absolute superlative, conveying similar implications that when the speakers use the comparative superlative. The first example is a comparative superlative co-occurring with head shake where the speaker refers to a famous baseball game.

that was done ten years ago that was (...) absolutely fantastic


The interpretation is that “there can be no another baseball game more fantastic than this one” (ibid: 176). The following example is the co-occurrence of absolute comparative and head shake when the speaker describes an aunt she used to visit as “very very old” and shakes her head to imply that her aunt was “as old as it is possible to be or that there can be no others who are older” (ibid).

she was very very old


Kendon's research accounts for the so-called *assessment* head shake in the idea that "by using it the speaker can refer to or bring into play one or other of the *negatives* that are so often implied in extreme evaluations" (ibid). In this way, Kendon can explain why the head shake can serve as an *intensifier*. The foregoing account is particularly relevant to the present study where evaluation is under examination. I notice that the head shakes described above may serve a similar function to the linguistic *graduation system*, described in the appraisal theory.

Uncertainty is the next concept that McClave (2000: 862) observes head movements can convey. "Affirmative statements are often marked verbally as uncertain by 'I guess', 'I think', 'whatever', 'whoever', and similar expressions". These examples are considered in the appraisal theory expressions of engagement belonging to the realms of modality. McClave notes they are also kinesically marked by head shakes. The interpretation given to these head movements is that the speaker is not negating the statement but acknowledging another possibility or missing piece of information.

The last aspect I consider interesting for the aim of the present study, from those covered by McClave, is the identification that head movements often function to mark switches from indirect to direct discourse. My interest is aroused because one of the strategies described in the engagement system that shows the highest degree of openness of the discourse to other voices is the use of direct quotes. McClave observes that the speaker's head adopts a new orientation immediately preceding or coinciding with the beginning of a quote. In extended quotes the head often returns to the neutral position, oriented towards the listener. The change in orientation of the head marks "the speaker's change in footing from narrator to that of a character of the narration" (ibid: 863)⁶.

⁶ McClave describes head movements in direct quotes as one of the speaker's narrative functions, being the others: expression of mental images of characters, deixis and referential use of space, lists or alternatives.

Facial expression

Face is a primary tool for transmitting expressions of emotion. Research, mainly in psychology and psychiatry, has shown a strong linkage between emotions and face behaviour. One of the most well known researchers of facial action is Paul Ekman. In his words, “[e]motion is a process, a particular kind of automatic appraisal influenced by our evolutionary and personal past, in which we sense that something important to our welfare is occurring [...]” (2007: 13). Ekman has demonstrated that emotional expressions are universal (ibid.: 1972). He reconciled his findings with anthropologists’ findings, such as Birdwhistell’s (1970), that claim cultural difference in the expressions, by coming up with the idea of display rules. Ekman proposes these are rules, socially learned and often culturally different, about the management of expression. He found innate expressions in private, and managed expressions in public.

Ekman and Friesen (1978) develop a way of locating and evaluating the facial expression of individuals. Their tool is called the Facial Action Coding System (FACS), which is now being used extensively to measure facial movements. Computer scientists are working on how to make this measurement automatic and speedy (Ekman 2007). FACS separates the face into three areas: the lower face including cheeks, nose, and mouth; the eyes and eyelids area; and the brows and forehead area. The FACS technique identifies which emotions are been expressed in the three different areas. Based on the six primary facial expressions categorised by Ekman (1972) (sadness, happiness, anger, surprise, disgust, and fear), one can classify where certain emotions are found in the face. Research in this area has revealed sadness and fear are best identified from the eyes and eyelids area. Anger is not perceived from one area alone, it is usually expressed in the cheeks, mouth, brows, and forehead. Disgust can also be found in different regions, being commonly expressed in the lower region of the face. Happiness can be found accurately from the lower face and from eyes and eyelids. Finally, surprise is perfectly identified from all three areas.

Using FACS Ekman has identified the facial signs that betray a lie (1985) in the interpretation of what Ekman and Friesen (1969) have called *micro expressions* (Haggard and Isaacs (1966) term them *micro-momentary facial expressions*), very fast facial movements revealing an emotion a person is trying to conceal. Micro expressions are not observable in normal conversations but need to be recorded and then played back at a slow pace; however, “[t]hese very brief fleeting emotions can give another person ‘an intuitive feeling’ about what another is truly feeling” (Richmond & McCroskey 2000: 91). Micro expressions, nonetheless, are determined by the context. Ekman (2007: 215) defines four dimensions of context: i) the nature of the conversation exchange; ii) the history of the relationship between the person being evaluated and the evaluator; iii) speaker turn, whether the person being evaluated is speaking or listening; and iv) congruence, whether the emotion shown in the micro expression contradicts the speaker’s simultaneous speech, the sound of his or her voice, or his or her gestures and posture. When the person is listening, whether it fits with what the analyst is saying and with what the person being analysed says in his or her turn.

Most studies of the face have considered it solely from the point of view of its role in emotional expression. The focus of interest of these studies has been upon facial patterns as symptoms of affective state, lacking a systematic knowledge of how the face functions in social interaction. Kendon (1981b) demonstrates, in his analysis of some functions of the face in kissing round, how the behaviour of the face can be studied within social interaction as well as how this behaviour integrates with other aspects of behaviour. The present study does not deal with situations where emotions (as the six categories categorised by Ekman) are expressed, since in the dialogic situations examined there are no changes of emotions, but the study is interested in those micro expressions that may reflect the presenter’s attitudes towards the discussant or what he or she says, or towards what the presenter her- or himself is saying.

Gaze

Many scholars (e.g. Argyle & Kendon 1967, Duncan & Niederehe 1974, Field 1981, Kimble & Olszewski 1980, Nichols & Champness 1971, Strongmana & Champnessa 1968) have been interested in gaze. They have found gaze serves many functions in our communicative exchanges. The most comprehensive description of patterning of gaze in conversation was a study taken by Kendon (1967). He describes the patterning of gaze with respect to phrases and phrase boundary pauses. His observations help to shed light upon the main functions of gaze in social interaction. He notes eye-contact is sought for in interaction since “we can only be sure we are being effective in what we do if we know that the other is taking account of it” (ibid.: 59). Kendon suggests any discussion on gaze direction must distinguish between monitoring functions and regulatory and expressive functions. Later categorisations of the different functions of gaze have acknowledged Kendon’s suggestion (see e.g. Argyle et al. 1981).

Speakers can give expression of their feelings and attitudes through changes in gaze-direction. Kendon (1967) observes how a speaker tends to look away at points of high emotion, this aversion of eyes might function as a ‘cut-off’ act, but also as an indication to the hearer that the speaker is embarrassed or over-aroused. He also observes the aversion of the eyes is often accomplished by dropping the lids loosely, that occurs in association with point-granting signal, as indicating the speaker is not going to challenge further what the other has just said. Argyle et al. (1981: 20) also note among others the function of gaze to communicate interpersonal attitudes. They postulate the signal that is sent also depends on the facial expression accompanying the gaze, “it may be suggested that the intensity of the attitude communicated is a joint product of the length of gaze and the intensity of the expression.” Argyle et al. also observe aversion to express negative attitudes.

Another aspect relevant to the purpose of the thesis is findings that reveal the speakers can show engagement with the hearers through gaze direction (see

e.g. Argyle & Cook 1976; Goffman 1963; Geoffrey 1981; Goodwin 1979, 1981, 1994; Heath 1984; Kendon 1967; Psathas 1990). In face-to-face interaction gaze may not always be continuous. Kendon (1990a) notes in conversation there is a big difference in the time the speakers gaze at the hearers, and eye contact is very brief at times. He also observes (ibid: 1967) speakers tend to look away from the hearers at the beginning of an utterance but gaze steadily at them towards its termination. Hearers, on the other hand, look at the speaker more than the speakers look at them, because of the interactional constraint that requires a speaker to look at a hearer who is looking at them (Goodwin 1981).

1.2.2 Paralanguage

As David Crystal notes (1975: 164) observations of people's everyday reactions to language suggest that paralanguage or paralinguistic phenomena, "far from being marginal", are often determinants of behaviour in an interaction. He refers to the following quote as the most widely-quoted phrase to support this idea: "It's not what he said, but the way that he said it which upset/ surprised/... me". Following the same thought, Archer and Akert (1977), among other researchers on paralanguage, note it is often the way something is said that sends the true meaning, not the words used. The actual verbal message means very little without the vocal cues that accompany it, and many times the entire meaning is only determined by the way something is said (Richmond & McCroskey 2000). Accordingly, paralanguage can be seen as how something is said rather than what is said. Shözt (2002) notes a terminology problem appears to distinguish in the speech between linguistic information, and all other type of information. Speech signal necessarily contains other information besides linguistic. Such information is referred to as paralinguistic, extra-linguistic, and non-linguistic (see Shözt's discussion). In the present study paralanguage and paralinguistic activities are used without distinctions, following Trager (1958) and Poyatos (2002) among others.

Trager (1958) classifies all paralinguistic activity as falling into one of several categories. One of the categories is the *voice set* which is described by Trager as the ‘setting’ of an act of speech. This contextual background involves several of the speaker’s personal characteristics, including aspects such as age, gender, present condition of health, state of enthusiasm, fatigue, and sadness and other emotions. He even considers ostensibly irrelevant aspects such as social status or education level. Voice set is intimately related to who the speaker is. Such information, according to Trager, helps to interpret the speaker’s words more accurately. Trager distinguishes two other categories of vocal cues that he considers are the actual objects of study of paralinguistics. The first category is *voice qualities*. It includes tempo, resonance, rhythm control, articulation control, pitch control, glottis control, vocal lip control, and pitch range. Change in voice qualities can signal very important messages to others. Closely related to voice qualities are *vocalisations*. In Trager’s words (1958), vocalisations are audible vocal cues which are not linguistic and may or may not be accompanied by words. There are three kinds of vocalisations. The first type is *vocal characteriser* which refers to non-articulated sounds such as laughing, crying, whimpering, giggling, snickering, and sobbing. Many audible chants are also considered characterisers as well as groaning, moaning, yawning, growling, muttering, whining, and sighing. Trager’s second type of vocalisation is called the *vocal qualifier*. Vocal qualifiers are similar to vocal qualities but whereas vocal qualities usually modify an entire utterance, vocal qualifiers regulate specific parts of the utterance. Vocal qualifiers include intensity, pitch height, and extent. The vocal cues that vary the speed, loudness, or softness during the utterance are also qualifiers. The last vocalisation is the *vocal segregate*. Some of these non-articulated sounds have been described as non-words that are used as words. These cues include vocalisations such as *shhh*, *uh-huh*, and *uh-uh*, as well as many common filler sounds such as *uh-uh-uh*, *er*, *ah*; and even seeming words as for example *and-ah* and *you know*.

Other approaches to the study of paralinguistics show similarities and differences with Trager’s categories. For instance, Poyatos (2002) distinguishes

three categories: qualities, qualifiers, and differentiators. Paralinguistic *primary qualities* include timbre, resonance, loudness, tempo, pitch (level, range, registers, intervals), intonation range, syllabic duration, and rhythm. These voice qualities are always present in the human voice. Accordingly, they are the basic components of our voice and their communicative and grammatical functions. The second category is paralinguistic *qualifiers* or *voice types* (see also Poyatos 1991). They modify syllables, longer speech segments, and a whole deliverance. He differentiates ten types of qualifiers: breathing control, laryngeal control, esophageal control, pharyngeal control, velopharyngeal control, lingual control, labial control, mandibular control, articulatory control, and articulatory-tension control. Qualifiers operate due to cultural, circumstantial, and personal reasons. Poyatos also acknowledges the communicative relevance of many physiological and emotional reactions, describing the third category, the so called paralinguistic *differentiators*. Differentiators include laughter, crying, shouting, sighing and gasping, panting, yawning, coughing and throat-clearing, spitting, belching, hiccupping, and sneezing.

Another categorisation of paralanguage is described by Roach et al (1998). They distinguish between prosodic features and paralinguistic features. They refer to the work of Crystal (1969) when considering prosodic features are characterised by variations in pitch, loudness, duration, and silence; whereas paralinguistic features are vocal but independent of those four variations for their identification. Roach et al (1998) suggest a gradient based on the categories proposed by Crystal and Quirk (1964) and Laver (1980), with prosodic features signalling linguistic information at one end, and features such as voice quality and non-linguistic noises on the other paralinguistic end. A further division of paralinguistic features is made into voice qualities, due to different modes of phonation, such as modal voice, falsetto, whisper, creak, harshness and breathiness; and voice qualifications, which are non-linguistic vocal effects such as laughing, giggling, tremulousness, sobbing and crying.

Prosodic features are further divided into tempo, prominence, pitch range, rhythm, tension, pause, and intonation.

A key concept in the study of paralanguage is intonation. Intonation can be defined as the systemic use of pitch in a language. Following Crystal (1975) intonation is used to segment and structure stretches of language, showing contrasts of meaning which are sometimes as clear-cut as the contrasts signalled by phonemes or word-order. Speed, rhythm, and other tone-of-voice variations are not used as systematically for the purpose of indicating that a restructuring of the utterance has taken place, as are contrasts of pitch (and also those contrasts in loudness generally referred to as 'stress'). It is for this reason that sometimes intonation and stress systems are taken separately from other paralinguistic characteristics, considering them more central features of language.

Traditionally intonation has been described as having two main functions grammatical (Halliday 1985a) and emotional or attitudinal (O'Connor & Arnold 1973). Discourse intonation (DI) is an approach to the analysis (and also teaching) of everyday speech. DI was pioneered by David Brazil who co-worked with John Sinclair and Malcolm Coulthard (1980) to publish one of the most influential works in English Language Teaching (ELT), and also in academic research, *Discourse intonation and language teaching*. This approach sees intonation as discourse in function rather than as grammatical or attitudinal, "[t]he significance of intonation is related to the function of the utterance as an existentially appropriate contribution to an interactive discourse" (Brazil 1984: 46). Speakers make intonation choice depending on their perception of the understandings they share with their hearers (Brazil 1997), such their biographies and the purpose of their talk. Despite the relationship between intonation and syntax, in terms of purpose, these are two different areas of choice (Brazil 1995). DI provides a tool for analysing and interpreting speakers' significant intonation context-referred choices within four systems: *prominence*, *tone*, *key*, and *termination*. Each of these systems

adds interpersonal meaning to the discourse between speaker and hearer(s). All four systems contain a total of thirteen choices summarised in Table 1:

System	Choices
Prominence	prominent/ non-prominent syllables
Tone	rise-fall, fall, level, rise, rise-fall
Key	high, mid, low
Termination	high, mid, low

Table 1. Choices in the intonation systems (Brazil 1997: vii)

Speech can be divided into units with one or two *prominences*. The most common is to find two-prominence tone-unit or ‘maxims’. The first *prominence* is non-*tonic* (onset), and the second is *tonic* (the location of the tone). Unlike other descriptions, DI does not attribute any significance to the location of boundaries. The second intonational system is *tone*. As described in Table 1, speakers make a choice of five *tones*. About *key* and *termination* speakers can place prominent syllables (low, mid, or high) in relation to the previous prominence. These choices on the *onset prominence* make up the *key* system, whereas on the *tonic prominence* they comprise the *termination* system. Cauldwell (2002) summarises the interpretation of the choice of these two systems. Low key adds meaning that could be paraphrased as “this tone unit has an equitable relationship with what has gone before”, and high key adds “this tone unit has a denial of expectation relationship to what has preceded’ or ‘this is discourse-initial”. Low termination also adds meaning such as “this is discourse-final”, and high termination adds “this is something I want you to give judgment on”. Though DI seems to disregard the attitudinal aspect of intonation, one can see the attitudinal function in it, since the key system enables the speaker to project a valid contrast to bring into opposition a pair of possibilities and simultaneously exclude one of them. In doing so, on a particular occasion, speakers may show feelings or anticipate feelings in their hearers.

The study of assessment in everyday conversations (Goodwin & Goodwin 1987, 2000; Goodwin 1980; Goodwin 1986) shows linguistic evaluation is often accompanied by paralinguistic indicators. Goodwin and Goodwin (1987: 7) observe that, in addition to using linguistic expressions such as assessment adjectives, “participants can also display their involvement in an assessment through [...] intonation and also through recognizable nonvocal displays”. However, there is not a systematic description of the paralinguistic features used in evaluation. Those aspects that have been described in the studies above mentioned are: pitch, speed or tempo, loudness, syllabic duration, intonation, and silence (Roach et al.’s *prosodic features*; or *primary qualities* following Poyatos, except for silence which is not considered by him as a voice quality). In the corpora under scrutiny, it is also likely to find laughter (Poyatos’ *differentiator* or Trager’ *vocal characteriser*). However, a comprehensive study of assessment should also consider kinesic aspects, following the approach and evidences discussed in this section. In this respect, the study of Goodwin (1980) distinguishes between overt evaluation and embedded evaluation. The evaluation is overt when the speakers use evaluative words that explicitly tell the hearers how they are assessing. However, the speakers may choose to avoid explicit verbal evaluation and rely on the competence of the listeners to figure out from their kinesic and intonational markers something that goes beyond their actual words, embedded evaluation. A third type of evaluation is also described when the speakers display their assessment not only with words but also kinesically or/and paralinguistically. This last complex construct of evaluation is the focus of study in the thesis.

1.3 Contrastive discourse studies

Contrastive discourse studies in the academic discourse have traditionally focused on contrastive rhetoric. Particularly, contrastive rhetoric has had a significant impact on teaching of second language writing thanks to the work of Kaplan (1966). Kaplan’s research was pioneering in the study of cultural

differences in the writing of students of English as a Second Language (ESL), and English as a Foreign Language (EFL). Numerous works have been conducted in both ESL and EFL since Kaplan's seminal article "Cultural thought patterns in intercultural education" was published in 1966 (see review in Connor 1996, 2002). However, proliferation in the instruction of writing genres, as well as consideration of the social context beyond linguistic text analysis are placing new demands on the research methods of second language writing cross-culturally (Connor & Moreno 2005). Contrastive studies benefit from corpus linguistics. Johansson (1998) discusses the importance of corpora for contrastive research and in translation studies. Corpus design in this context should be done with special attention. Nowadays, advanced contrastive studies rely more frequently on the use of comparable corpora. As Connor and Moreno say (2005: 157) "[i]t is understood that apples should not be compared with oranges". Putting it into more academic words, James stresses the importance in contrastive studies to compare items that are comparable:

The first thing we do is make sure that we are comparing like with like: this means that the two (or more) entities to be compared, while differing in some respect, must share certain attributes. This requirement is especially strong when we are contrasting, i.e. looking for differences –since it is only against a background of sameness that differences are significant. We shall call this sameness the *constant*, and the differences *variables* (James 1980: 169).

Translation studies call this sameness *equivalence* or *tertium comparationis* (Chesterman 1998). The term is now broadly used in contrastive studies. *Tertium comparationis* can be found at any level of textual organisation. Contrastive analysts need to apply appropriate *tertium comparationis* both to the design and to the analysis of the research to build up comparable corpora that will provide data for meaningful cultural comparisons. There are many cross-cultural studies that have focused on the use of corpora for comparing academic writing genres in various languages, for example several features related to research articles in English and Spanish (Moreno 1998), and English and French (Dressen & Swales 2000), or journal abstracts in English and

French (van Bonn & Swales 2007). However, to my knowledge not much research has been done on cross-cultural differences in spoken academic genres. Scollon and Scollon (1981) study cross-cultural interaction between Athabascan native Americans and North American native speakers of English in the classroom setting. More recently Bellés-Fortuño (2008) focuses on the different use of discourse markers by native lecturers in North American and Spanish universities.

The new rhetoric (Perelman & Olbrechts-Tyteca 1969) extends Kaplan's traditional contrastive rhetoric which focuses on cross-culturality, and embraces interdisciplinary contrastive studies. Cross-disciplinary differences have been a common topic of analysis from different perspectives in the studies of academic genres. In academic writing, for example, the works of Johns and Swales (2002) or Monk (2004) provide general insights on the topic. Of interest for the thesis are those cross-disciplinary studies which focus on evaluation. However, few works have focused on disciplinary differences of the interpersonal meaning. Hyland (2000, 2004) examines engagement, the ways writers explicitly address their readers. He finds differences in the ways that disciplinary communities use engagement. In general, the more discursive soft-fields use over twice as many reader-oriented markers as hard-sciences texts. This author suggests the reasons for this disciplinary difference in that scientific knowledge tends to be more specialised. Research involves large investment of money and expertise, which makes research to be concentrated in few laboratories and scientists locked into specific areas of research for many years. Thus, knowledge emerges in a more linear way than in the soft-fields, and the community is more familiar with previous research. Writers are able to rely far more on general understanding, shared background and the acceptance of proven quantitative methods. This, consequently, reduces the need for the same degree of explicit evaluation and engagement as compared to the soft-sciences, reinforcing a view of hard-sciences as an impersonal, inductive enterprise. Charles (2006) investigates the construction of stance in reporting clauses in theses of Social Sciences (Politics) and Natural Sciences

(Material Sciences) showing the superficial objectivity and impersonality of Natural Science. In addition, Fortanet (2008) analyses evaluative language in peer review referee reports in Linguistics, and Business Organisations. Evaluative language is more frequently used in Business Organisations reports, in which she found a significant higher amount of evaluative patterns used to express non-conventional indirect requests, a type of indirect requests that seem to pose decoding problems.

As for spoken academic genres, whereas a considerable number of studies have focused on the description and interpretation of a genre in a specific discipline (e.g. Olsen & Huckin 1991, Flowerdew 1992, Gonzales 1996, as well as those works on CPs reviewed in section 1.4.3) not much work has been done to bring to the fore neither differences between two or more disciplines nor disciplinary differences regarding evaluation. An exception is the work of Poos and Simpson (2002) who explore the use of hedging in a corpus of academic spoken English. They take two prototypical examples of hedging *kind of* and *sort of* to study the relation of speaker gender and academic disciplinary context. They observe that hedging in spoken academic language has more to do more with academic discipline and less with gender, being highest in humanities and lowest in physical sciences. Although results seem to share the disciplinary tendency found by Hyland and Charles in written texts, Poos and Simpson (2002) conclude that further research is needed in the field. The aim of this thesis is to contribute to fill in this research gap, by analysing evaluation in two academic disciplines, Linguistics and Chemistry.

1.4 Genre studies

The different approaches explored in Section 1.1 provide mechanisms to describe social interaction; however, as Thompson and Muntigl (2008: 122) note, from a SFL position, “the choices made in a particular interaction make sense against the background of repeated patterns of choices across other

instances of interactions of the same genre or similar genres". In the next section, I will deal with genre analysis which is particularly concerned about the context of the interaction and the relationship between the participants. Accordingly, genre analysis suits to explore the language used in specific settings and for specific purposes.

1.4.1 Register and genre

In the late 1950s and early 1960s, Malinowski and Firth described the relationship between language and its social construction. They also claimed that language was context sensitive and their variation was due to the contextual situation in which communicative events occur. The Malinowskian-Firthian contextual considerations later developed into systemic linguistics. From this early notion which viewed language in terms of a "context of situation" (Firth 1957: 182), in the 1960s early systemicists presented a linguistic theory comprising the following levels and interlevels (see Halliday 1961, Halliday et al. 1964): substance-phonology-form-context-situation. Substance, form, and situation were primary levels; phonology and context were interlevels. However, though systemicists agree on the necessary consideration of the level of context when studying language use in situations, there is not a systematised presentation of what they mean by contextual level. A coherent description of context and situation and their relation to the level of form was given by Gregory (1967):

By situation is meant the study of extra-textual features, linguistic and non-linguistic, which have high potential relevance to statements of meaning about the texts of language events. By context is understood the correlations of formally described linguistic features, groupings of such features within texts and abstracted from them, with those situational features themselves constantly recurrent and relevant to the understanding of language events (Gregory 1967: 177-178, cited in Ventola 1987: 22).

In the early contextual theory of language, *register* has been seen as variation of language according to its uses in different situation types (Ellis & Ure 1969,

Gregory & Carroll 1978, Halliday et al. 1964: 87). Some linguistic patterns have been seen to correlate with specific features of the situation type, the context of situation. This correlation has been argued in terms of three variables: *field* (the content, what is 'going on' or the type of activity), *tenor* (the role of participants in terms of relationship), and *mode* (the rhetorical medium in which language is transmitted) (see Halliday 1977: 200-203). These contextual values correlate systematically with the ideational, interpersonal, and textual component of semantics. The view of language as a social semiotic construct has been put forward by Halliday (1978, 1984, 1985a). He suggests that field, tenor, and mode build up the extralinguistic semiotic construct of the situation.

In the 1980s a new category was incorporated into the analysis of texts in contexts, *genre*, understood initially as "each of the linguistically realised activity types which comprise so much of our culture" (Martin 1985: 250). The concept of genre is complex. Some scholars use the term *register* instead (Halliday 1978, Biber et al. 1999). As Biber notes (2006: 10) referring to *register* and *genre* "both terms have been used to refer to varieties associated with particular situations of use and particular communicative purposes. Most studies simply adopt one of these terms and disregard the other." Biber observes research studies attempt to distinguish between genre and register at two levels: the object of study and the characteristics of language and culture that are investigated. Regarding the former, *register* refers to a general kind of language associated with a domain of use such as legal register, scientific register, or bureaucratic register. In contrast, *genre* refers to a culturally recognised message type with a conventional internal structure. With regard to the second level, *register* studies have focused on lexico-grammatical features, showing how the use of particular words, word types, and grammatical features vary systematically according to the situation of use. In contrast, *genre* studies here have focused on socio-cultural actions.

The notions of register and genre within the systemic approach are considered linguistic abstractions on the semantic level. Register and genre are proposed to

be semiotic systems of language. The difference between these systems is that language is a ‘denotative’ semiotic system in Hjelmslevian terms, whereas genre and register are ‘connotative’ semiotic systems (for discussion see Martin 1984, 1985). Hjelmslev (1943) defines connotative semiotics as semiotic systems that have another semiotic system as their expression plane. Genre and register are systems on a semiotic communication plane which has no expression. They are forced to use other semiotic planes for their realisation. Hence, genre uses register as an expression plane and register in turn uses language for its expression (Martin 1985). The framework shares Halliday and Hasan’s framework of the three levels of semiotic abstraction of language: discourse semantics, grammar and lexis, and phonology/ graphology. Ventola (1987) in her study of the structure of social interaction in service encounters also considers the language strata of paralinguage and non-verbal expression. The framework is introduced in Martin (1984, 1985) and Ventola (1987, 1988). Relationships between the realisations of the three planes for spoken language (genre, register, and language) are represented in Figure 1.

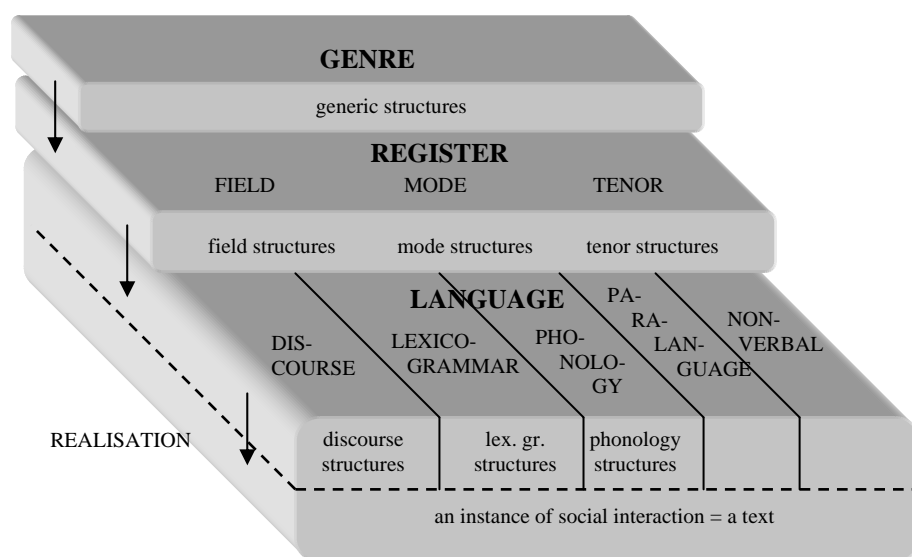


Figure 1. The semiotic communication planes (Ventola 1987: 58)

Coming back to the concept of register, Martin (1992) refers to it as the level of analysis comprised of the social context categories of field, mode, and tenor.

These register categories correlate with metafunctions as ideational is to field, as textual is to mode, and as interpersonal is to tenor. In this study I am mainly concerned with interpersonal meaning, accordingly tenor is the register variable most relevant to this discussion. Halliday (1985b) describes tenor as follows:

Tenor refers to who is taking part, to the nature of the [communicative] participants, their statuses and roles: what kinds of role relationship obtain, including permanent and temporary relationships of one kind or another, both the types of speech roles they are taking on in the dialogue and the whole cluster of socially significant relationships in which they are involved. (Halliday 1985b: 9-12)

According to Martin and White (2005), Halliday's ideas were developed through the 1980s mainly by Poynton, whose pioneering work on gender, affect, naming practices and amplification of the nominal group was the foundations of the development in the 1990s of the appraisal theory (Poynton 1984, 1985, 1990a, 1990b, 1993, 1996). Two key tenor variables were identified: power and solidarity. Power has to do with the reciprocity of choice to be the critical variable (Poynton 1985). Appraisal power affects "who can express feelings and who cannot, what kinds of feelings are expressed, how strongly they are expressed, and how directly they are sourced" (Martin & White 2005: 30). Solidarity in Poynton's words is based on two principles of proliferation and contraction. The main concern of solidarity in appraisal is "the better you know someone the more feelings you will share and the less you need to say to share them" (Martin & White 2005: 31). Appraisal is extensively described in Chapter 2.

Regarding the concept of genre, Bakhtin in his essay *The problem of speech genres* (1986) introduces the idea of language as a product of social relations. Bakhtin argues that speech genres are "determined by the nature of the given sphere of communication, semantic (thematic) considerations, the concrete situation of the speech communication, the personal composition of its

participants, and so on” (ibid.: 1986: 78). Bakhtin describes a dialogic nature of speech genres and classifies speech genres into *primary speech genres* (in daily communication, such as conversations) and *secondary speech genres* (in more complex, and comparatively highly developed communication, as organisers of culture communication, such as discourse in institutions or professions). However, as Bakhtin argues, though the secondary speech genres reflect complex cultural communication, the primary genres govern acceptable locutions and provide the starting point for the secondary genres.

In recent years, genre theory has been developed on the grounds of discourse analysis, constituting at present a major trend to analyse academic and professional discourses (Swales 1990, 2004a; Bhatia 1993, 2004).

1.4.2 The concept of genre

One of the pioneering works in genre theory is Swales’ *Genre Analysis: English in Academic and Research Settings* (1990). Swales defines genre as:

[...] a class of communicative events, the members of which share some set of **communicative purposes**. These purposes are recognised by the expert members of the parent **discourse community**, and thereby constitute the rationale for the genre. This rationale shapes the schematic structure of the discourse and influences and constrains the choice of content and style. [...] In addition to purpose, exemplars of a genre exhibit various patterns of similarity in terms of structure, style, content and intended audience (Swales 1990: 58, my emphasis).

According to Swales (1990), genres can be recognised by recurring structural patterns, which can be analysed according to a series of rhetorical moves and steps. These are determined by the communicative purpose of the participants within an interactional context. The communicative purpose, thus, is the basic parameter to identify genres, as many scholars agree. It shapes textual and rhetorical features and restricts language choice, Seliman (1996: 30) remarks that “[w]hile the communicative goal is the controlling factor in a genre, the

conventionalised knowledge of linguistic and discursive resources is the medium used to achieve the communicative goals". However, as Swales later argues, genre identification and, hence, identification of communicative goals is not an easy task (Askehave & Swales 2001, Swales 2004a). The problem comes up because it is difficult to allocate one single purpose or several underlying purposes in genres. On this matter, genre theory has advocated a 'context-driven procedure' (Askehave & Swales 2001: 208) for genre analysis. This procedure stresses the complexity entailed in the concept of purpose when interpreting language use on social basis, in line with Bakhtin's (1986) view of dialogic nature of genres. This approach was originally developed for the study of academic research articles, but it has been later applied to other types of academic discourse, both written and spoken.

Social constructivism situates genre in the social actions and practices of everyday life (Miller 1984). Furthermore, the new rhetoric gives special attention to genre's social side. In this context, Freedman and Medway (1994) revise the concept of genre from this perspective:

Traditional definitions of genre focused on textual regularities. In traditional literary studies the genres –sonnet, tragedy, ode, etc.– were defined by conventions of form and content. [...] Current genre studies (which incidentally tend to concentrate on non-literary texts) probe further; without abandoning earlier conceptions of genres as 'types' or 'kinds' of discourse, characterized by similarities in content and form, recent analyses focus on tying these linguistic and substantive similarities to regularities in human spheres of activity. In other words, the **new term 'genre'** has been able to **connect** a recognition of **regularities in discourse types with a broader social and cultural understanding of language in use.** (Freedman & Medway 1994: 1, my emphasis)

Communicative purpose and social nature are essential considerations in genre studies. There are several aspects of genre-based studies that have come to the fore in recent years. One of them is the relationship between different genres. Bhatia (2001, 2002) analyses the concept of genre with the description of four

levels: i) *rhetorical* or *generic values*, independent of any grounded realities of social context; ii) *genre colonies*, loosely grounded in broad rhetorical contexts; and iii) *individual genres*, narrowly grounded in typical sociorhetorical contexts. And iv) *sub-genres*, which show linguistic and other discursual features that seem to be shared by most disciplines, or to be realised differently in different disciplines. Bhatia also includes the idea of generic values combination to explain any form of use of language, often identified as individual genres. This combination is possible when the generic values are firmly grounded in specific rhetorical contexts. It is common to find concrete rhetorical values in related genres. However, as Bhatia notes, in practice, these generic values are used in various permutations and combinations to construct a variety of genres. For example, descriptions and evaluations often combine to textualise many promotional genres, including advertisement, reviews, brochures and the like. The concept of *genre-mixing* has been widely studied by this author in previous works on genres in English for specific purposes (Bhatia 1995, 1997).

There are other types of relationship between genres, Räsänen (1999) and Swales (2004a) talk about *genre chains*. Such relationships are examined from the perspective of their chronological ordering, “especially when one genre is a necessary antecedent for another” (Swales 2004a: 18). This succession of genres can be conceived of as chains. Genre chains contain both occluded and non-occluded genres (Swales 1996⁷). Genre chains can be short like an invitation to speak in a colloquium, or more elaborated like Räsänen’s chain for her crash-safety conference proceedings presentations (CPP) represented in Figure 2.

⁷ Swales (1996) calls occluded genres to those which are “out of sight” to outsiders and apprentices. Those genres perform essential roles in the administrative and evaluative functioning of the research world (e.g. external evaluation, evaluation letter for tenure and promotion, book or grant proposal reviews, review of articles submitted to refereed journals, among others).

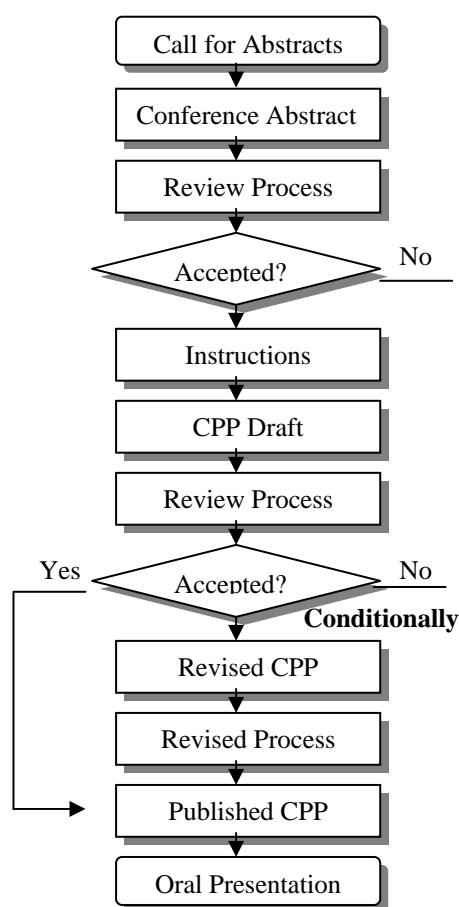


Figure 2. The genre chain in crash-safety CPP (Räsänen 1999: 112)

In the context of genre-based studies, a final worth mentioning concept is that of *genre networks* understood by Swales (2004a) in the Bakhtinian notion of intertextuality “[...] each utterance is filled with various kinds of responsive reactions to other utterances of the given sphere of speech communication” (Bakhtin 1986: 91). Intertextualists have explored in their pioneering works different types of intertextuality (Devitt 1991). Fairclough (1992) makes a valuable distinction between *manifested intertextuality*, over traces of an early text on a later one (e.g. quotation, citation, paraphrase, and the reproduction of rhetorical structure) and *constitutive* or *generic intertextuality* (Devitt 1991). The latter refers to “the use of early generic forms, or the use of the linguistic and rhetorical features associated with those genres, to strengthen or modify the genre exemplar under construction” (Swales 2004a: 21). Accordingly, genre network thus includes “the totality of the genres available for a particular

sector (such as the research world) as seen from any chosen synchronic moment” (ibid.: 22).

As acknowledged by Berkenkotter and Huckin (1995) among others, the concept of genre is thus necessary to understand the diversity of professional and specialised discourses, since the different genre typologies show relationships between textual choices and social practices, and the conventions of specific discursal communities’ norms and values. Academic spoken genres are of special interest in the context of this study. A common classification of spoken academic discourse has been drawn on the relationship between the speaker and the audience. In this respect, Giménez-Moreno (2000) distinguishes three broad categories: i) *expository genres*: lecture, paper presentation, poster presentation, etc.; ii) *interactive genres*: the interview, the speech, the workshop, the negotiation, the academic meeting, etc.; and iii) *teaching genres*: the tutorial, the seminar, and the academic lecture. However, as Fortanet points out (2005) this classification seems to mix up the speaker-audience relationship and the purpose of the utterance. Fortanet reconsiders Giménez-Moreno’s taxonomy according to the unique criterion of the relationship between the participants. To accomplish this aim she proposes to include the tutorial and the seminar within the interactive genres, and the academic lectures within the expository ones. In addition, Fortanet (2005) suggests a new taxonomy of spoken academic genres (see Figure 3). Rather than considering interaction, she draws on the Swalesian definition of genre and organises spoken academic discourse according to the purpose pursued. Fortanet makes up three categories: i) *classroom genres*, ii) *institutional genres*, and iii) *research genres*. Within the research genres she differentiates between *conference genres* and *other research genres*.

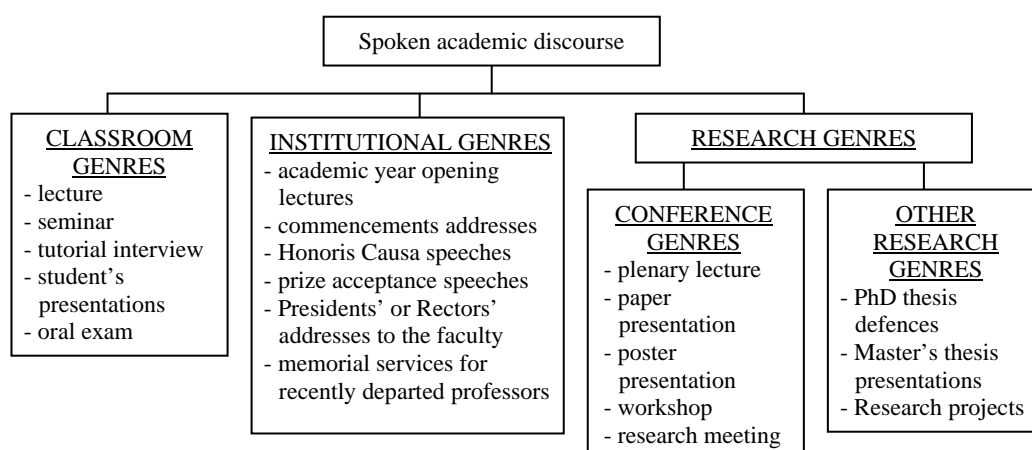


Figure 3. Classification of academic genres according to their purpose (Fortanet 2005: 32)

This criterion was already considered when compiling the Michigan Corpus of Academic Spoken English (MICASE) (Simpson et al. 1999) where spoken academic events at the university were classified in two big groups: classroom events and non-classroom events. Classroom events include academic lectures, discussion sections, lab sections, seminars, and students' presentations. Obviously, Fortanet's institutional genres and research genres would fall into Simpson et al.'s bigger category, non-classroom events⁸.

1.4.3 Conference paper presentations

Academic genres studies focused their attention initially on written genres; nonetheless, the exploration of spoken academic genres, despite a belated commencement, provided rich insights about the dynamic and multimodal nature of spoken academic discourse and presented a challenge to academic genre studies. The interest in the several categories of the spoken academic discourse has significant differences. Classroom genres, particularly academic lectures, have received most of the researchers' attention in this field (see e.g. Chaudron & Richards 1986, Crawford-Camicciottoli 2003, Flowerdew 1994, Fortanet 2006, Strodt-López 1987, Thompson 2004). In comparison, research

⁸ Simpson et al. (1999) use the term *event* to refer to what other researchers above mentioned call *genre*.

genres especially conference genres have not been so widely explored. One clear example of this situation is found in the MICASE, one of the first academic spoken corpus ever compiled, and made freely available online by the English Language Institute (ELI) at the University of Michigan. MICASE, which has more than 150 speech events, does not include in its original data conference genres. It has not been until recently (2009) that a sister corpus of conference paper presentations has been uploaded on the ELI corpora website⁹, the *John Swales Conference Corpus* (JSCC), a project that complements the MICASE thanks to the collaboration of the Group for Research on Academic and Professional English (GRAPE) at the Universitat Jaume I. I will describe JSCC in more detail later since it is part of the corpus analysed in the thesis.

The conference event includes a sequence of social actions, that is, genres which are in communication with each other. Thus, it is important for the study of conferences to consider them as social discourse events comprising interrelated conference genres i.e. plenary lectures, paper presentations, poster presentations, among others. This is related to the concept of genre network (Swales 2004a) as these genres are available for the particular sector of academic conferences and may occur simultaneously. On the other hand, the concept of genre chain (Räsänen 1999) is also present in the conference event where for example the succession of the conference paper presentation and the discussion session can be conceived of as chains. In addition, the context of situation determines different stages of the discourse unfolding, how register factors are realised (field, tenor, and mode) (Ventola 2002). Räsänen defines conferences as “[...] sites for publishing research results and an open ground for confrontation, discussion, and ratification of meaning” (ibid.: 69). Such functions and the predominance of face-to-face interaction lead to consider the importance of interpersonal management and politeness features, which arise throughout the entire event, e.g. presenters need to establish and maintain a

⁹ <http://micase.elicorpora.info/> [Accessed 06/09/2010]

rapport with their audience, and discussants must deal with potentially face-threatening acts during the interaction (Ventola et al. 2002).

Ventola (2002) presents a synoptic view of the generic structure of conference paper presentation (CP) and the ensuing discussion session (DS) may be accounted only theoretically, since both CP and DS are always realised dynamically as they unfold in contrast to a 'static' view of discourse. Ventola means by a synoptic view in this context "the way discourse is seen to unfold situationally appropriately and in an expected way (linguistically and non-linguistically)". Figure 4 represents Ventola's dynamic view of the flow of a paper presentation and its discussion.

Ventola (1999) proposes a new term to describe the complexity of conference discourse, *semiotic spanning*. Semiotic because "all modes of meaning realisation may be involved: written/ spoken texts, visuals, actions, etc." (ibid.: 2002: 43). She notes "[w]e should aim to go beyond textual cohesion and coherence and focus on how texts are interrelated semiotically" (ibid.: 1999: 101). Links of semiotic spanning are formed between actual discourse dynamically unfolded and the discourses the discussant has previously experienced. In Ventola's words semiotic spanning can be seen functioning between various instances of genres affecting the speech event, as part of the other kinds of genres at conferences, and between the presented paper and its source materials as well as with the final written version of the paper. Ventola suggests the notion of multimodal spanning "allows to view conferences as multimodal events which have links to the past and to the future" (ibid.: 2002: 44). She affirms neither the concepts of intertextuality nor genre can adequately cover those aspects. Whereas intertextuality is mostly used to refer to linking between written texts, the notion of genre seems to refer to the relation of texts of the same kind. From my point of view, both views are too narrow for the study of CPs where we also need to consider other modes (e.g. visuals) and genres that play a role in the conference.

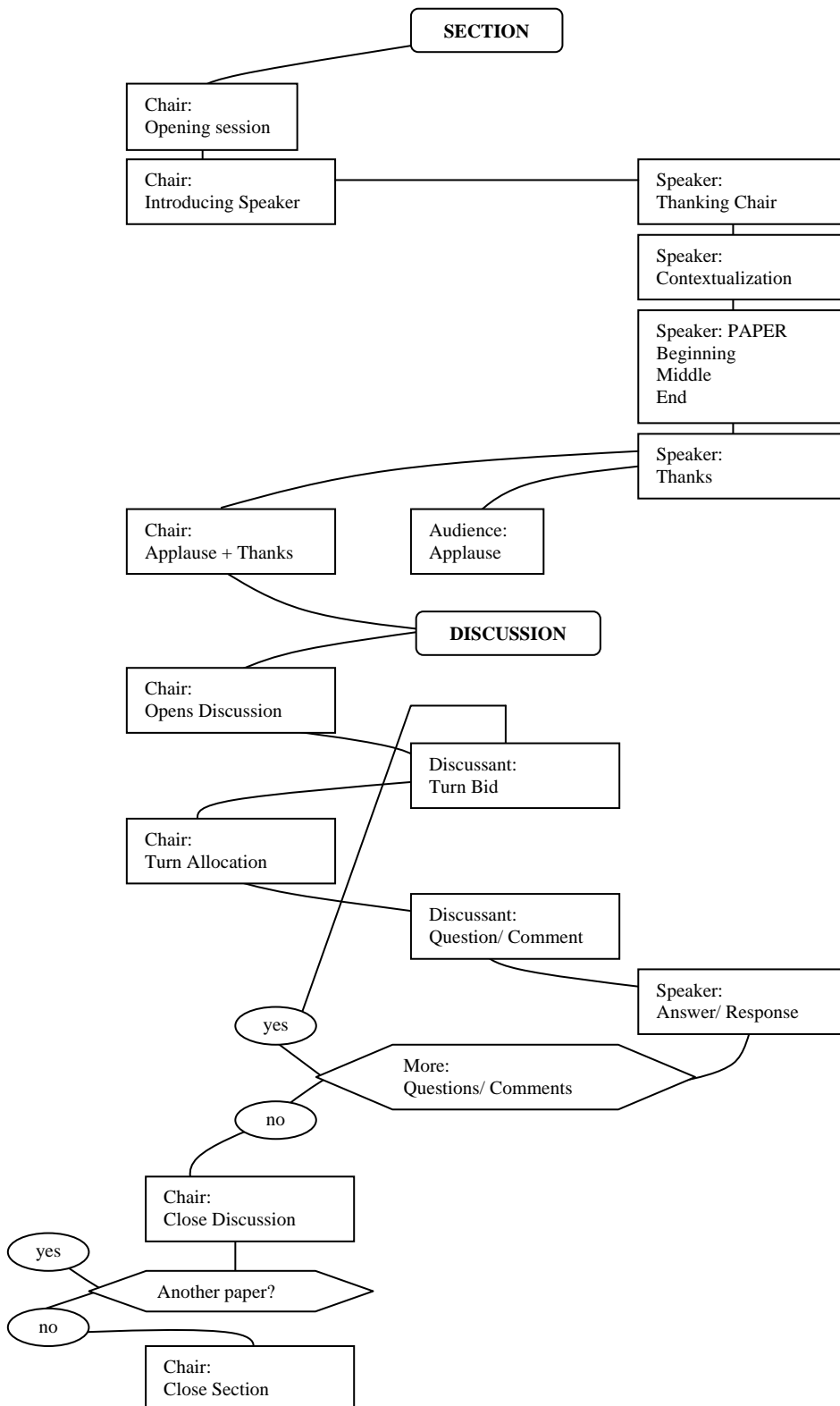


Figure 4. Tentative dynamic view of the flow of a Paper Presentation Section and its Discussion (Ventola 2002: 35)

Research into the field of CP from a discorsal perspective was started by Dubois in the 1980s who explored biomedical presentations. However, the key work in the study of conferencing is *The language of conferencing* edited by Ventola et al. (2002). Since Dubois' time to the present, scholars have investigated several aspects of CPs such as: i) genre and contextual insight (Dubois 1980a, 1997; Räisänen 1999, 2002; Rowley-Jolivet & Carter-Thomas 2005a, 2005b; Rowley-Jolivet 1998, 1999; Shalom 2001, 2002; Ventola 2002), ii) speaker-audience interaction (Thompson & Collins 1995, Thompson 1997, Vassileva 2002, Webber 2005), iii) language (Heino et al. 2002; Ruiz-Garrido & Fortanet-Gómez 2008; Ventola 1999; Webber 1997a, 1997b, 2006), iv) narrative discourse (Thompson 2002), v) the use of humour (Frobert-Adamo 2002), and vi) chair's discourse (Shalom 1995). The complex multimodal semiotics of CPs has not been overlooked by scholars who have explored the use and interaction with slides (Carter-Thomas & Rowley-Jolivet 2003), and other visuals during the presentations (Dubois 1980b, 1982, 1985a,b; Cassily & Ventola 2002; Rowley-Jolivet 2002a, 2004a, 2004b), or the use of handouts (Bellés & Fortanet 2004, Yakhontova 2006, Yakhontova & Markelova 2010).

Much to the interest of the present study is those works which aim at disclosing speakers' verbal and non-verbal communicative behaviour. However, research on multimodal language systems in human-to-human interaction in the field of spoken academic discourse is limited to date. Even the wide exploration of classroom genres has not paid much attention beyond the linguistic features of lectures. There are only a few studies concerned about these aspects. English's (1985) work of kinesics in academic lectures already points out the importance of the understanding of non-verbal behaviour for the comprehension of lectures. Pozzer-Ardenghi and Roth (2005) explore the use of gestures in lectures to decrease the ambiguity of projected photographs enhancing their understanding. More recently Crawford-Camicciottoli (2007) considers non-verbal behaviour to describe the whole picture of business studies lectures.

Regarding spoken research genres, even fewer works have explored the multimodal dimension. Seminar presentations have received Rendle-Short's attention (2005, 2006). She focuses on how presenters embody the shift from talk to silence. Rendle-Short observes presenters choose from a number of available resources, including talk, prosody, body position, gaze direction, and gestures, to indicate to the audience that they are moving into a period of silence. Hood and Forey (2005) study the introduction of plenary presentations at a language testing conference. They frame a multi-layer exploration of interpersonal meaning paying attention to the generic staging, to the semantic expression of attitude, and to the co-expression of attitudinal language and gesture. These researchers identify ways in which phases of discourse foreground interpersonal over ideational meanings, how resources of appraisal can represent negotiation of speaker's position and can encourage a sense of solidarity around shared attitudes and values, and how gesture can function, together with language, to encourage an alignment of the audience with the speaker. Hood and Forey note that it is only when these resources are considered together that one can see the complex nature of the rhetorical strategies employed by the speakers in solving tensions and in helping to construe a positive relationship of solidarity with their audience. Regarding CPs, to my knowledge, only the work of Räisänen and Fortanet (2006) pays attention to kinesics in CPs and DSs (see discussion on the study in Section 1.4.4 in this chapter).

To conclude this section, I find worth introducing a final reflection made by Wulff et al. (2009), drawing on Gilbert and Muljay's (1984) dual concept of empiricist as opposed to contingent repertoires in scientific discourse¹⁰. Wulff et al. suggest the continuum represented in Figure 5.

¹⁰ Empiricist repertoires are objective, carefully modulated and depersonalised accounts e.g. research papers. Contingent repertoires are more adventitious, confessional, and personal accounts e.g. confidential interview with the researchers.

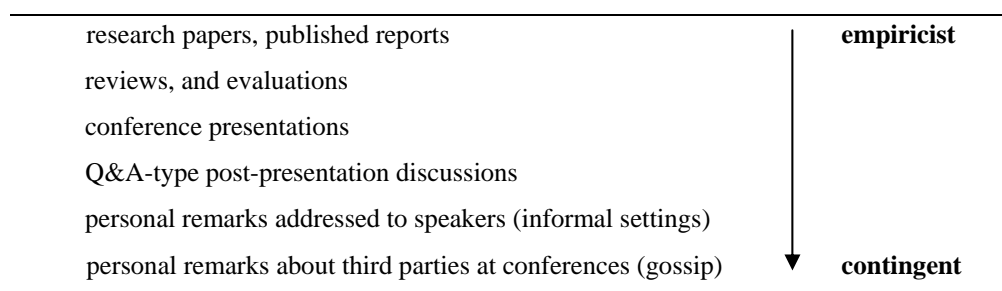


Figure 5. Continuum of empiricist, and contingent repertoires (Wulff et al. 2009: 90)

These authors distinguish many ‘intervening repertoires’ between the two extremes, research papers and personal remarks about third parties at conferences. Literature on CPs shows this genre contains more contingent elements than their written counterpart. Wulff et al. question whether such repertoires coexist in CPs and their subsequent DSs. Their initial conclusion is that “the presentations themselves, carefully prepared if not scripted, will tend towards the empiricist, while the ensuing DSs will allow presenters, in their responses to questions, and comments, to bring in contingent detail, as discussants may do in their anecdotes, and allusions” (ibid.: 89).

1.4.4 Discussion sessions

Since asking a question projects an answer (see Schegloff & Sacks 1973 about adjacency pair, and Sinclair & Coulthard 1975 about the Initiation-Response exchange), there is an obvious relationship between questions and interaction in dialogues (Thompson 1997). Although questions and answers have received scholars’ attention in spoken academic discourse, a considerable number of their studies have focused on classroom genres. The role of questions in monologues has also been considered (see e.g. Bamford 2005a, Fortanet 2004a, Querol-Julián 2008, Thompson 1998). For this study, however, the interest is focused on questions and answers in dialogic exchanges. Kayfetz and Smith (1992) pay attention to question and answer sessions that follow formal academic talks. They observe that the way interaction proceeds in the session often determines “not only how the presenter is evaluated as a professional but

also how audience members are perceived among their peers.” (ibid.: 123). Kayfetz and Smith describe the structure of the questions and the answers distinguishing them from those occurring in other communicative situations because of the presence of two phases. They found two moves in questions: a structuring move to identify the topic of the question, and a question move to actually ask the question, either direct or indirect. Answers are also observed to have two parts: a responding move to answer the question briefly, and an expanding move to provide additional information.

Question and answer sessions in seminars have received the attention of Lynch (1995). The contribution of Lynch, relevant to the present study, is the identification of what he called old-information questions and new-information questions. The former are questions that orient backwards to something already covered, the latter forwards to a new point in the discourse. Whereas an old-information question indicates “a need to solve comprehension problems arising at a previous point”, a new-information question indicates that “the questioner has been stimulated to ask for further elaboration”. It is expected to find these two types of questions in DSs in CPs.

Another study in the realms of classroom genres is Tracy’s (1997) examination of questioning and responding in the academic weekly colloquium, where graduate students and faculty members perform the roles of presenters and discussants. She explores the link between discussants’ questions and their institutional identities and how academics create intellectual identities through questioning and responding. Tracy observes three types of concerns about intellectual identity: “being adequately knowledgeable, being an original thinker, and being intellectually sophisticated” (ibid.: 52).

Finally, Bamford (2005a) in her study on interactivity in academic lectures examines the functions of question and answer noting they serve to involve listeners in the immediate discourse and to make them feel members of the discourse community. Questions are used in connection with potential face

threatening acts (use of preannouncements or re-formulations). Bamford states one of the features that differentiate question and answer sequences in lectures from those in other types of talk-in-interaction is speaker's control on both the questions and their answers.

The generic status of the *discussion session* or *question & response session*¹¹ that immediately follows research presentations has been considered from different perspectives by scholars. While Räisänen (2002), in her study based on a conference in crash safety, considers it as one of the genres that constitute the conference event together with the genres of conference proceedings paper and conference presentation; Wulff et al. (2009), in their study on discussion sessions from an applied linguistics conference, open to further research the consideration of it as part of the same genre as the presentation. They argue that, “[t]he presentations per se and the discussion sections have the same speaker (who remains an expert on the topic), and are themselves bounded by a break or by a change of the presenter. In that sense, we can consider the sessions as consisting of Part A and Part B of the same genre” (Wulff et al. 2009: 89). My position follows Räisänen's (2002) distinction of two different genres, the presentation of the research and the discussion, rather than being two parts of the same genre as postulated by Wulff et al. The discussion session involves significant changes in the discourse that, in my opinion, indicate it should be considered a different genre. To support this position we need to move back to the concept of genre defined in Section 1.4.2. by Swales (1990). This author identifies two main aspects need to be recognised in the discourse by the community of use to consider it a genre: some set of communicative purposes and patterns of similarity in terms of structure, style, content, and audience. Regarding the purpose, in the presentation presenters in a monologue share the results of their investigation. Conversely, the discussion is more interactive establishing a dialogue between the presenter and the

¹¹ Some scholars do not consider appropriate in this context the conventional term ‘question & answer’ and suggest instead ‘question & response’, because they claim not every presenter's reply may be considered an answer (Webber 2002).

discussant, and opening the results of the investigation for discussion. Although during the talk presenters do also try to persuade the audience of the validity of their investigation, it is in the discussion that discussants show alignment or position as odd with the research and presenters need to reject or acknowledge those comments or questions; thus, both participants are exposed to FTAs, a situation that is rarely found during the talk (presenters can perceive the audience' non-verbal positive or negative reaction but commonly interaction does not occur). Therefore, the communicative purpose of the discussion is expected to be different from that of the presentation. As Swales (1999) also notes, genres can be recognised by recurring structural patterns that can be analysed in rhetorical moves that determine the communicative purpose of the participants. The generic structure of the paper presentation has received considerable attention (see e.g. Rowley-Jolivet & Carter-Thomas 2005a, Spillman & Parberry 2000, Ventola 2002), however, rhetorical moves of discussion sessions have not yet been explored. In the present thesis, I try to shed some light on this issue. Other recurrent patterns in genres, apart from the structure, are style, content, and audience. When comparing the presentation and the discussion, one can see differences between them. On the topic of style, although it can be influenced by personal choices as well as the context (e.g. relationship among the participants), it seems to depend on the degree of control the speaker has on the discourse, that is, whereas the presentation is a discourse prepared in advance by the presenter (some presenters even read it), the discussion is more spontaneous and the presenter need to be ready for any type of reaction from the discussant. Thus, a possible change of style in the discussion might be expected; however, no research has been done on it yet. In addition, whereas the content of the two sessions is obviously focused on the research, in the discussion particular aspects of it are discussed in more detail. Finally, although the audience apparently could be considered the same, the dialogue in the discussion sessions brings to the fore another speaker, the discussant. On the one hand, the discussant plays the role of speaker and therefore the presenter becomes part of the audience; and on the other hand, in the discussion, the presenter addresses his/her speech to the audience but

specially to the discussant, whereas in the presentation apparently no distinction is made among the audience. Additionally, Wulff et al. (2009) identify considerable differences between the language used in the talk and in the discussion session, which is characterised by patterns of evaluative language. This feature can be considered the expression of the different communicative purposes of the two types of discourses and also, possibly, of the style. Presenter and discussant in the dialogue show their attitudes towards what has been said by the use of politeness strategies. The evaluative language in DSs of CPs is at the core of the present study.

To date, little research has been conducted exclusively 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. For the analysis, Shalom adopts the categories of topic, exchange, turn, move, and speech act drawing from Hymes' (1974) and Sinclair and Coulthard's (1975) spoken discourse analysis. She makes a description of the chair's speech acts suggesting up to ten different acts in the discussion. Shalom also examines the ideational focus and the main communicative functions of the questions, responses, and comments. She distinguishes between *neutral key* questions or questions to gather information whose response and comment focus on talking about: aim or problem, research parameters, assumptions, sampling, experimental procedure, data, or treatment of data; and *evaluative key* questions or challenges whose response and comment focus on justifying, accepting or challenging results, claims, gap in knowledge, or new aims or further work.

Webber's (2002) work pays full attention to the DS in workshops in an international medical conference. In this study, Webber analyses the 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 the casual conversation. Discourse Analysis techniques are used in the study, particularly

applied discourse analysis “because of its concern with real life contexts, and professional activities where discourse is an essential part of the interaction between persons” (ibid.: 228). The study also uses Conversation Analysis techniques, since in the author’s words, they are useful for the analysis of dialogues. Furthermore, SFL and Pragmatic approaches are used as a reference to analyse interactive features. Results show each exchange generally consists of two turns (a question, and a response), though sometimes the discussant may ask a further question (follow-up question), commonly responded by the presenter; the chair at this point allocates the next speaker. Questions are categorised in five types: i) information eliciting questions about facts or opinions, ii) criticisms or attacks, iii) suggestions, iv) comments, and v) mixed (comments, and information eliciting). It is observed that the presenter generally attempts to respond, and that any reaction, included silence, is taken significantly by the audience. Webber notes the dominant position of the presenter, who is given more speaking time and is free to judge if the question is relevant or not. She also comments on questions which refer back to something said earlier or refer forward to something not said yet (Lynch 1995). Four types of responses come to the fore: i) very straightforward, ii) a plea of ignorance, iii) try to be evasive, and iv) reject discussant’s view. Regarding the interactive features of the discussion, negotiation of social relations between participants seems to be the most relevant. Webber also illustrates some interactive discourse aspects such as exchange structure, discourse markers and politeness devices, and interpersonal distance. She argues “[although there are more direct speaker-audience features in the Discussion than in the preplanned phase of the presentation, this is certainly not just a chat among friends, however friendly it may appear at certain moments. Co-presence involves risk. [...] [S]peakers are on their guard and prepared to face criticism” (Webber 2002: 247).

Regarding the study of discussion sessions in conference paper presentations, Ventola (2002: 36-37) describes the structure of the exchange noting the dialogue between the discussant and the presenter is synoptically seen in terms

of an adjacency pair sequence. She says that each Question/Comment – Answer/Response pair has three stages: beginning (introducing the topic), middle (developing the topic) and end (closing the topic). The chair is in charge of opening and closing the discussion, and usually assigns the turn to discussants who indicate non-verbally their willingness to take the turn. Ventola, however, also notes the dynamic variations in the realisation of the synoptic patterns described, such as when the presenter asks for repetition of the question, or the situation where the whole discussion is not realised (i.e. there are no questions or comments, or the presenter does not leave any time for discussion).

More recently Wulff et al. (2009) has published “‘We have about seven minutes for questions’: the discussion sessions from a specialized conference”. In the paper, they explore the JSCC. These scholars look at the DSs that follow research papers presented in an Applied Linguistics conference from, according to the authors “a three-stage ‘peeling the onion’” approach. First, from a discursal perspective, they analyse the phraseological patterns of the presentations and the DSs, using corpus analysis software. They also examine the discourse management aspects paying attention to the chair’s utterances. Finally, Wulff et al. study some contextual features to probe the origin of general laughter in the DSs. They observe there are considerable differences between the language used by presenters in their monologues and the language used by presenters and discussants in the dialogues. Whereas monologues are unfolded by modified nominal, attention-directing, and procedural phrases; DSs are characterised by patterns involving hedging devices, positive and negative evaluation, and flagging suggestions. In addition, the examination of the corpus chairs’ discourses speech shows some evidences of regularities in terms of function and form of their discourse, especially in the openings. Wulff et al. stress chairs’ preference to elicit discussants’ questions whereas discussants are likely to make comments instead. They suggest this formula might probably be intertextually created over the span of the conference, calling chair’s reiteration of the formula *phraseological spanning* (following

Ventola's semiotic spanning). Finally, the paper introduces a comprehensive description of general laughter episodes in the DSs divided into non-flouting humour and flouting humour which in turn can be classified into four types: i) allusions; ii) table-turning; iii) ironies, admissions, and self-deprecations; and iv) verbal exaggerations, hyperboles, and apt expressions. In Wulff et al.'s words, analysis of general laughter shows the cohesive professional formation of that particular group of speakers.

In the foregoing account, DSs have been described in terms of the exchange structure, the roles of the participants, categorisation of questions and answers, some interactive features, phraseology and even episodes of laughter. Different perspectives have been taken from SFL, CA, pragmatics, to corpus linguistics techniques. However, non of them have considered the multimodal nature of the discourse but stem from a totally linguistic approach disregarding kinesic and paralinguistic features. In 2006 Räsänen and Fortanet presented the paper "Do genres have body language? Non-verbal communication in conference paper presentations". In this study Räsänen and Fortanet look into the kinesics of the genre of CPs. They establish common kinesics features of paper presentations proving the importance of gestures, gaze, face expressions, and postures for the study of this genre. As they note, little research has been done on kinesics in CPs, indeed kinesics seems to have been ignored in most genre analysis studies. Thus there are no specific patterns of gestures, gaze, face expressions, and postures to analyse academic speech. Räsänen and Fortanet draw on the works of Argyle (1975), Ekman (1980), McNeill (1992), and Crawford-Camiciottoli (2007) to classify gestures as: i) descriptor, ii) association, iii) dynamisers, iv) deictics (for full description see Räsänen & Fortanet (2006), Fortanet-Gómez (2008)). For face expression they distinguish: smile, serious face, attitude of listening attentively, and nodding. And as for gaze: audience-rapport, looking at something specific, looking up, and looking down. Finally, posture is described as standing straight, changing position constantly, etc. The exploration of kinesics in DSs reveals that DSs discourse, being not prepared language and so not being possible to read it, is

accompanied by a much greater variety and number of kinesic resources than monologic presentations. They observe that, whereas there are no gestures perceptible while listening, presenters show a good number of gestures while answering. Whereas in monologues there is a slight variation of face expression, there is much variation in DSs. Listening face and nodding seems to be specific face expressions of the DSs. Moreover, gaze seems to be conventionalised and a wide variety of postures are adopted, some of them would not be regarded as appropriate but, according to Räsänen and Fortanet (2006), it proves to evidence how comfortable the presenter feels.

In this chapter, I have discussed some important approaches for analysing interpersonal meaning in dialogic communication. This constitutes a crucial knowledge for the upcoming analysis of discussion sessions. In this way, it will be possible to better understand how interpersonal meaning is encoded in the discourse and to explore meaning beyond the language (systemic functional linguistics); to analyse dialogues between the presenter and the discussant (conversation analysis); and to better interpret the evaluative meaning embedded in the discussion (pragmatics). I have reviewed the findings of significant studies on multimodal discourse analysis, which will be a landmark for the examination of non-linguistic features that co-occur with linguistic evaluation in the exchanges. The cross-disciplinary part of the project will benefit from the discussion on the key issues of contrastive discourse studies. Finally, discussion on the concept of genre and review of up to date most salience literature on conference paper presentations and discussion sessions will make possible to contextualise and position this interactive forum in the realms of academic research spoken genres. The next chapter is dedicated to the central aspect the thesis is built around, linguistic evaluation.

CHAPTER 2

Evaluation

CHAPTER 2

Evaluation

Evaluation is the main concern in the thesis. As noted, the exploration of evaluation in the study takes a multimodal approach, considering the co-expression of language-paralanguage-kinesics. Insights into kinesics and paralanguage and their evaluative deployment have been discussed in Chapter 1. This chapter aims at exploring the third dimension, linguistic evaluation. The chapter also attempts to bring to the fore the research gap in the study of evaluation in academic research spoken genres, especially in discussion sessions and in the use of multimodal discourse analysis approach in the exploration of academic spoken discourse in general.

In Section 2.1, I look at the complex and controversial concept of evaluation and the wide range of terminology used to refer to it. The high amount of literature on evaluation makes necessary, in Section 2.2, a review of the most influential frameworks drawn up to study evaluation. The first part of the section is devoted to the introduction of three of the approaches that traditionally have been adopted in the study of academic discourse as well as their connection to the appraisal model, the one adopted in the study of lexicogrammatical evaluative resources in the thesis. This model is extensively described in the second part of the section. Even though evaluation in academic discourse has received considerable attention, most research focuses on written not on spoken evaluation. Section 2.3 begins with a review of current exploration of evaluation in academic spoken discourse, to later narrow it to research done on evaluation in conference paper presentations and discourse sections. The final section of the chapter, Section 2.4, is concerned about the multimodal approach of the thesis trying to bring to the foreground the few studies which have considered evaluative features beyond the word.

2.1 The concept of evaluation

Over the last decades discourse studies on academic speech and writing have been interested in the investigation of how speakers and writers express attitudes, opinions, and judgements about the information transmitted. There is a wide range of terms used to talk about the different aspects of the same phenomenon. Some of the well-established terms are *connotation* (Lyons 1977), *modality* (Halliday 1985a, Stubbs 1996), *evidentiality* (Chafe 1986), *appraisal* (Martin 2000, Martin & White 2005), *stance* (Biber & Finegan 1988, 1989; Bibet et al. 1999; Hyland 1999, Conrad and Biber 2000), *affect* (Ochs 1989), and *evaluation* (Hunston 1994a,b; Thompson & Hunston 2000). In some cases, those could be considered synonyms, or covering overlapping areas (e.g. the concepts of *modality* and *evidentiality*), but it is important to note they cannot be simply interchangeable, since they could have different frameworks and perspectives (e.g. focus on language items or focus on language user).

In this context, it is also necessary to review the discussion on two terms: *evaluation* and *metadiscourse*, since there is no agreement among scholars on the distinction between them. Whereas Hyland (1998, 2004) and Markkanen et al. (1993) take a broad perspective integrating in metadiscourse both interpersonal and textual functions, Ädel (2005, 2006) and Mauranen (1993, 2002) adopt a non-integrative approach attributing to metadiscourse exclusively the textual function. In the exploration of these concepts in written discourse, Ädel (2005: 158) notes “metadiscourse ties the writer and reader to the current text or world of discourse, while evaluation ties them to the ‘real world’”. I favour the most narrow position, where metadiscourse refers to the textual function, stemming from the simplest definition, its etymology: discourse which is meta, i.e. discourse about discourse; to Ädel’s line of argument (for extensive discussion on the concept see Aguilar 2008: 57-113).

As one can read in the title of the thesis, I have adopted the term *evaluation* to present my study; however, I have chosen to follow the systemic model of evaluative language, the *appraisal* theory. The potential confusion of the use of the two terms requires an explanation. Both, evaluation and appraisal, share a language user perspective, that is, an affective meaning¹². Nonetheless, whereas appraisal refers to lexico-grammatical resources (Martin 2000), evaluation for me is ‘the broad cover term’ sharing Thompson and Hunston’s (2000: 5) broad concept that refers to the speakers’ lexico-grammatical expression of attitude, stance, or feelings about the entities or propositions they are talking about; but my understanding of the concepts goes beyond Thompson and Hunston’s definition. Here evaluation opens its scope to embrace a multimodal analysis referring not only to the language (appraisal) but to the three systems: language-paralanguage-kinesics. However, because most of the literature has not considered evaluation from this triple structure, the term is used in Thompson and Hunston’s sense when reviewing the most influential approaches to its study, in the next section of this chapter.

2.2 Exploring evaluation

The complexity that involves the description of how speakers and writers unfold evaluation in their discourse has led to the development of comprehensive theoretical frameworks and models of analysis that help to better understand it. Traditionally, models have been developed on the grounds of written texts, and attention has been paid primarily on the lexico-grammatical aspects and the function evaluative expressions have in the discourse. However, those models have also been applied to the study of evaluation in spoken texts, though further exploration could be carried out on the non-linguistic features that characterise this type of discourse, as proposed

¹² Following Leech’s (1974: 15-18) distinction between affective meaning (it is people who have attitudes) and connotative meaning (it is words which have connotations).

in the thesis. Hereafter, I will briefly review some of the most influential models to study evaluation.

2.2.1 Models for the analysis of evaluative language

In this section I give a general overview of the models proposed by Biber et al., Hyland, and Thompson and Huston; three of the most influential frameworks for the analysis of lexico-grammatical resources to express evaluation. In the next sub-section, I will extensively discuss the fourth key model of analysis, the one adopted in the thesis, the appraisal model by Martin et al.

Biber et al.'s model

Biber et al. (1999) in their work *Longman grammar of spoken and written English* propose a model of *stance* which is based on a corpus driven study. The use of a large corpus to make a comprehensive description of stance, as part of a larger project to study spoken and written English grammar, makes this work a landmark for researchers. These scholars observe speakers and writers express stance, that is, personal feelings, attitudes, value judgements, or assessments, in many ways including grammatical devices, word choice, and non-linguistic devices. Though Biber et al. acknowledge the importance of both 'value-laden' word choice and non-linguistic devices, they focus primarily on grammar stance resources. It is worth noting, however, their brief consideration to paralinguistic and kinesic features:

In conversation, emotive and attitudinal stance meaning can be conveyed through a number of non-linguistic means (such as body posture, facial expressions, and gestures), and paralinguistic devices (such as pitch, intensity, and duration). As a result, it might be argued that speakers in conversation express a kind of linguistically covert stance with every utterance, even when the speaker does not directly articulate a stance. (ibid.: 967)

Biber et al. organise stance markers into three major semantic categories. The first category is epistemic markers, which are used either to mark certainty (or doubt), actuality, precision, or limitation (e.g. *definitely, in fact, sort of,*

certain), or to mark the source or perspective of knowledge (e.g. *according to x, as reported by x*). The second type of markers is attitudinal markers, these report personal attitudes or feelings. Some forms are attitudinal (e.g. *fortunately, interestingly*), others seem to mark personal feelings or emotions (e.g. the verbs *fear, love* or the adjectives *happy, angry*). However, often the distinction between attitudes and feelings is fuzzy with words expressing both (e.g. the verbs *expect, hope*). The last category identified by these authors is style of speaking, that marks speaker or writer comments on the communication itself (e.g. *honestly, quite frankly, to tell you the truth*). Biber et al. also distinguish possible situations regarding the extent of the attribution of the stance markers, including: explicit or overt attribution of the stance where it is common the use of first person pronoun (e.g. *I think, it seems to me, my concern that*); implicit or covert attribution which is the most frequent (common use of modal verbs, adverbial, and complement clauses e.g. *could, typically, it seems probable*); and ambiguous attribution of stance (e.g. *are believed, it was expected, as anticipated*).

Biber et al.'s model provides a comprehensive classification of the semantic and grammatical mechanisms speakers and writers use to express evaluation. Corpus findings show stance markers are considerably more common in conversation than in written registers, as the authors note, due to the high personal involvement of conversation. One can see in this model some ostensible similarities with the appraisal model in the distinction of, on the one hand, the evaluation per se, the so called here 'stance markers' and expressions of 'attitude' in the appraisal model; and on the other hand, the involvement of the authorial voice, 'attribution of stance' for Biber et al. and 'engagement' for Martin and his colleagues. Though there are differences in these categories in the two approaches, the key concepts broadly speaking can be considered the same.

Hyland's model

The second model is the one proposed by Hyland. This scholar focuses the study of evaluation on academic research writing. In 1999 Hyland develops a model of analysis to originally study the phenomenon in research articles. He also adopts the term *stance* as “the ways that writers project themselves into their texts to communicate their integrity, credibility, involvement, and a relationship to their subject matter and their readers” (1999: 101). At that time Hyland’s taxonomy included five types of stance categories: hedges, emphatics, attitude markers, and person markers. Later Hyland (2001, 2004, 2005) extends this line of research to note that when close looking evaluation in academic writing the writer manages interaction in five types of resources: i) Hedges are words that reduce the force of the arguments or criticisms such as *possible, might, and perhaps*. ii) Boosters, on the other hand, express certainty and emphasise the force of the utterance (e.g. *clearly, obviously, and demonstrate*). iii) Attitude markers express affective meanings conveying surprise, agreement, and importance among others. Attitude can be expressed by the use of subordinations, comparatives, punctuation, and the like but it is explicitly signalled by verbs (e.g. *agree, prefer*), sentence adverbs (e.g. *unfortunately, hopefully*), and adjectives (*appropriate, logical, remarkable*). iv) Self mention refers to the degree of explicit author presence, frequently expressed by the use of first-person pronouns and possessive adjectives (*I, me, mine, exclusive we, our, ours*). And finally, v) Engagement markers are addressed to the readers to focus their attention or to bring them into the discourse. Hyland identifies two main purposes to use engagement resources. The first emphasises a relationship with the reader and marks disciplinary solidarity bringing readers into the argument with digressions which directly address the reader (*by the way, you may notice* are common phrases to introduce asides or interruptions), and reader pronouns (*you, your, inclusive we*). The second purpose is related to positioning the audience, predicting reader’s possible objections, and guiding them to particular interpretations. The most common strategies to accomplish these functions are by references to

shared knowledge, directives (mainly imperatives like *consider, note, see*; and obligation modals such as *must, should, have to*), and questions.

Hyland's model, grounded on the examination of research articles, is widely used by researchers that focus their attention on written academic discourse. Regarding this model and the appraisal model it is noticeable that the third dimension of Martin et al.'s model, 'graduation', which refers to the gradability of evaluation, finds a common ground in Hyland's 'hedges' (1998) and 'boosters'. In addition, Hyland, in the last version of the model, also uses the term 'engagement' to refer to promotion of solidarity between the writer and the reader, and to positioning the audience. In the appraisal model engagement is considered one of the three key dimensions that shape the evaluation framework. It is considered apart from attitudinal resources since it has to do with the source of the attitudes and the negotiation of other voices in the discourse.

Thompson and Hunston's model

Probably one of the broadest and most integrating concepts is *evaluation*, as defined by Thompson and Hunston (2000). These authors acknowledge the potential confusion of the term (though not more than any of the other terms, as they claim), but support their choice on its syntactic and morphological flexibility that enables not only to adopt a user-orientation but also to express values towards the entities and propositions of the text. The concept embraces epistemic, deontic, and positive/negative attitudinal meanings. Thompson and Hunston identify two main types of evaluation: modality and affect or appraisal. Modal evaluation operates on propositions and is more grammaticalised (commonly expressed by modal verbs). Affective evaluation is generally performed by lexical items (adjectives and nouns) and is exercised by entities. These authors see the relevance of evaluation in the functions it usually performs in the discourse. They describe three functions which are not exclusive but may be performed simultaneously. The first and the most evident function of evaluation is to express opinions, to say what the writers or the

speakers think or feel about something reflecting the value system of the person and their community (such as *x is of interest for x*, *x is best understood as*). The second function is to construct and maintain relations between the speaker/ writer and the hearer/ reader; this evaluative meaning has been studied in relation to three areas: manipulation, hedging, and politeness. Finally, these authors also consider the role of evaluation to organise the discourse, claiming speakers and writers constantly monitor the texts as for example the use of *yes*, *that's right*, *good*, *mm mm*, *sure* or *yeah* in dialogues, or writers' commentary on the progress of the discourse itself such as *and this is why it is interesting*.

Thompson and Hunston suggest the recognition of evaluation should be done on conceptual and linguistic aspects. Conceptually, evaluation has been described to be comparative, subjective, and value-laden. Thus, one needs to identify signals of comparison (anything which is compared to or contrasts with the norm), subjectivity, and social value. On the other hand, linguistically evaluation can be expressed by: i) Lexical items including adjectives, adverbs, nouns, and verbs, such as *obvious*, *happily*, *tragedy*, *win*. Though there is a considerable agreement on the evaluative meaning of certain words, in other cases it is the linguistic and non-linguistic context which helps the recognition. ii) Lexical-grammatical devices including modal verbs and adverbs, hedges, and emphatics that express various degrees of certainty, such as *may*, *possibly*, *sort of*, *really*. And iii) textual devices referring to discourse structuring patterns that create evaluation because of the positioning in the text, for example, the final position in a narrative passage. These scholars also note parameters of evaluation can be 'real-world oriented', those are certainty and goodness which express writer/ speaker's views on the status of positions and identities; or 'text oriented', that is importance and expectedness which serve to guide the hearer/ listener towards the coherence of the text.

Thompson and Hunston's model provides the most relevant overview to work on evaluation, and makes a useful distinction between opinions about entities (affect) and opinions about propositions (modality). However, as the authors

point out, this opposition is not always easy to maintain when analysing realisations in a language or their function in discourse. The model sees evaluation functions are equivalent to the three metafunctions described by Halliday, ideational to express opinions, interpersonal to construct and maintain relations, and textual to organise the discourse. In this respect my position follows the theoretical grounds of the appraisal model, which situates appraisal in the interpersonal metafunction.

2.2.2 The appraisal model

The appraisal system, as introduced in Chapter 1, is the third type of interpersonal lexico-grammatical resources described by Thompson and Muntigl (2008). The system provides the tools to identify evaluative language, the first step to explore the multimodal nature of evaluation as it is intended in the thesis. Appraisal is the systemic theory proposed by Martin and White (2005) (for a synoptic introduction to the system of appraisal resources see Martin (2000) and Martin and Rose (2003)). These authors develop appraisal from the account of the interpersonal meaning in written discourse; however, as they note, the tools developed can be applied to both spoken and written texts (Eggins & Slade 1997 study evaluation in causal conversation from a comparable approach). Appraisal is located in SFL (Systemic Functional Linguistics) as one of the three major discourse semantic resources to construct interpersonal meaning. The other two systems that complement appraisal are negotiation and involvement. Whereas negotiation focuses on the interactive aspects of discourse, speech function, and exchange (Martin 1992); involvement complements appraisal by focusing on non-gradable resources to negotiate tenor relations, especially solidarity.

We use the resources of appraisal “for negotiating our social relationships, by telling our listeners or readers how we feel about things and people (in a word, what our attitudes are)” (Martin & Rose 2003: 22). The network of appraisal

resources is articulated in three domains: attitude, engagement, and graduation. Technically Martin and White (2005: 35) define the three systems as follows:

Attitude is concerned with our feelings, including emotional reactions, judgements of behaviour and evaluation of things. **Engagement** deals with sourcing attitudes and the play of voices around opinions in discourse. **Graduation** attends to grading phenomena whereby feelings are amplified and categories blurred.

All three dimensions are articulated at the same time into other categories. In this section, I have chosen to give an overview of the comprehensive theory to consider all the resources of appraisal observed by Martin and White. As I describe in Chapter 4 the scope of my thesis in this respect focuses exclusively on the identification of the three main domains (attitude, engagement, and graduation), to later find out the co-expression with kinesics and paralinguistics; however, it is useful for the study to be familiar with this broad theoretical and experimental background which is rich in examples that would help to understand the analysis made in the present study. An overview of the appraisal resources is represented in Figure 6.

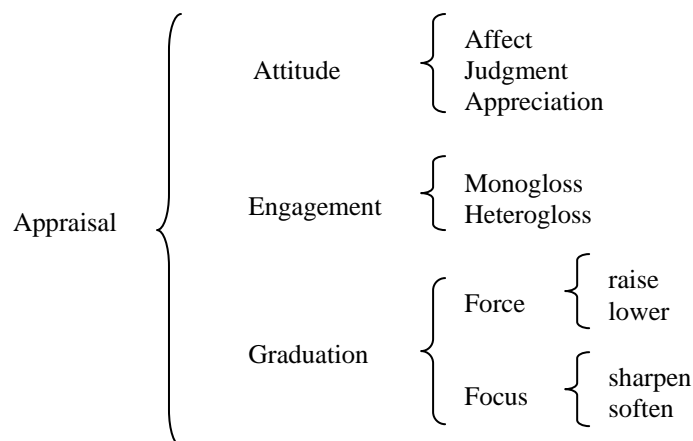


Figure 6. An overview of the appraisal model (adapted from Martin & White 2005: 38)

Attitude

The attitudinal system has to do with ‘evaluating’. Attitude is articulated into three domains: *affect*, resources for expressing feelings; *judgement*, resources

for judging character; and *appreciation*, resources for valuing the worth of things (Martin 2000). Affect, judgement, and appreciation can be expressed in two general ways, positive or negative, and direct or implied, also called inscribed and invoked (I prefer the term ‘evoked’ also used by Hood & Forey (2005)). Attitude can be inscribed when a lexical choice is intrinsically evaluative, but it can also be evoked when it leads to an evaluative interpretation. Besides people’s character can also be judged as social esteem, that is personal judgements of admiration (as positive) and criticism (as negative); or social sanction, that is moral judgements of praise (as positive) and condemnation (as negative)¹³.

Table 2 illustrates some examples of attitude¹⁴ with the combination of the two variables: polarity (positive or negative) and expression (inscribed or evoked).

	Polarity	Expression	
		inscribed	evoked
Affect	positive	<i>enjoy</i>	<i>very quiet*</i>
	negative	<i>anxious*</i>	<i>dull like the dead*</i>
Judgement	positive	<i>you’ll excuse</i>	<i>managing to handle</i>
	negative	<i>impose</i>	<i>try to use</i>
Appreciation	positive	<i>with interest</i>	<i>around the world</i>
	negative	<i>demands of assessment</i>	<i>not know very much</i>

Table 2. Examples of attitude

Attitude expressions, however, are really meaningful only in relation to the context. Even polarity in evaluative lexis sometimes is not clear with just a local analysis. For example, *enjoy* seems to be an undoubtedly positively inscribed verb, nonetheless in a tragic situation that calls for no enjoyment its polarity would change. Since examples in Table 2 are presented in isolation maybe some of them need further explanation. That could be the case of *you’ll excuse*.

¹³ White and Rose (2003) use the terms personal judgements and moral judgements.

¹⁴ The examples have been extracted from Hood and Forey’s (2005) analysis of attitude in the set-up stage of academic presentations. As the authors follow the model proposed by Martin and his colleagues, I have decided to illustrate attitudinal meaning with them since the discourse is closer to the one under scrutiny in the thesis. When examples do not appear in Hood and Forey, that is in the case of evoke and negative inscribed attitude, an asterisk in the table indicates the examples are taken from Martin and Rose (2003).

This is a positive moral judgement of property where the presenter is judging the audience responding to the answer “how far beyond reproach?” Regarding the examples of evoked attitude it is outstanding the role that metaphor plays in constructing emotion, as in *dull like the dead* expressing the negative attitude of extreme sadness the person feels. A final example worth explaining is *not know very much*. The presenter here is negatively appreciating other researchers’ contributions to the field of knowledge, a valuation answering the question “was it worthwhile?”

Appreciation of things, for these scholars, refers not only to our attitudes about concrete things (objects, places, events, natural phenomena) but also to abstract concepts including relationships, questions, issues, applications, and the like. This is interesting from the point of view of the thesis. On the one hand, the interpersonal communication in DSs may demand abstract appreciation when expressing attitudes, for example, about the interventions of other participants (e.g. discussant’s questions, presenter’s previous talk), or the research presented or other research in the field (e.g. methodology, results). On the other hand, the cross-disciplinary nature of the data may possibly show higher frequency of appreciation of concrete things in hard-sciences, and judgement and appreciation of abstract things in soft-sciences. This suggestion is underpinned on the fact that, whereas in hard-sciences the subject of research is ‘things’, in soft-sciences the subjects are any aspect related to human beings.

It has also been noted in relation to judgement and appreciation that often there is not a clear distinction between the two domains. Because of this difficulty, Martin and Rose (2003) and later Martin and White (2005) support the importance of analysing attitude, and consequently appraisal, in prosodic terms rather than analysing simply item by item. Finally, I would like to mention the exhaustive categorisation that Martin (2000) makes for each of the three domains (affect: happiness and desire; judgement: propriety, tenacity, veracity, capacity; and appreciation: reaction, composition, valuation). I do not consider, however, relevant to bring them for discussion here because of the narrow

scope of the thesis in this respect which, as I have commented above, does not go into so detailed analysis but attempt to provides a more general view of evaluation.

Engagement

Another system of appraisal resources is *engagement*. Engagement has to do with the negotiation of other voices in the text apart from the authorial voice. Utterances are classified as *monogloss* when there is no reference to other voices, and *heterogloss* when the source of an attitude is other than the authorial voice, allowing for dialogic alternative (after Bakhtin 1981). Engagement is concerned with whether or not, and how speakers acknowledge alternative positions to their own (see White 2003). An initially synoptic model (Martin & Rose 2003) considers three types of heteroglossic resources: projecting, modality, and counterexpectancy. Sources can be projected in various ways. We can quote the exact words of what other people say or write, or report the general meaning (Halliday 1994), and also use ‘scare quotes’ to mark that something written is not the author’s words. In spoken discourse Martin and Rose (2003: 47) notes speakers may use “special intonation or voice quality to signal projection of this kind, and sometimes people use gesture to mimic quotations marks”. Another way of introducing additional voices into a text is through the use of modality. Modality sets up semantic space between positive and negative polarity. In general there are two kinds of modality, for negotiating services, or obligation (deontic modality) (e.g. the gradation would be *do it, you must do it, you should do it, you could do it, don’t do it*), and for negotiating information, or probability (epistemic modality) (e.g. *it is, it must be, it should be, it could be, it isn’t*). The third resource considered regarding heteroglossia is counterexpectancy. Speakers and writers generally adjust expectations created by the audience during the discourse with the use of concessive conjunctions (such as *but, even if, instead of, at least, suddenly, in fact*), and continuatives that occur inside the clause rather than at the beginning like conjunctions (such as *still, only, just, even, already*).

In addition Martin and White (2005) in their more comprehensive description of the model propose heteroglossic resources can be divided into two categories according to whether they are “dialogically expansive” or “dialogically contractive” in their intersubjective functionality. Thus, we can find that an utterance actively makes allowances for dialogically alternative positions and voices (dialogic expansion) or alternatively acts to challenge, fend off or resist the scope of such (dialogic contraction). Utterances of dialogic expansion are classified as: i) entertain: authorial voice indicates that its position is but one of a number of possible positions and thereby makes dialogic space for those possibilities (*I think, it seems, possibly, probably, apparently, perhaps, maybe, etc*), and ii) attribute: authorial voice attributes the proposition to some external source invoking that dialogic alternative (acknowledge – *X said, X argues/ believes that, it’s said that, in X view, according to, etc* –, distance – *X claims that*). As for dialogic contraction they identify: iii) disclaim: the authorial voice positions as at odd or rejecting some contrary position (counter – *but, although, yet, amazing, etc* –, deny – *no, didn’t, never*), iv) proclaim: the authorial voice presents the proposition as highly warrantable, sets against, suppresses or rules out alternative positions rather than directly rejecting (concur-affirm – *of course, obviously, etc* –, concur-concede – *I accept that... however, sure... but, etc*, pronounce – *I contend that, there can be no doubt that, indeed* –, endorse – *X demonstrates/ proves that, as X has shown...*). Although the two categorisations seem to have different standpoints, Martin and Rose’s resources are identifiable as embedded in Martin and White’s categories.

Martin and White (2005) in their work present a taxonomy much more complex than the synoptic view presented here (see full description in Chapter 3 of their book). Nonetheless, this introduction gives me an insight into how the authorial voice opens or closes up the discourse to other voices, its positioning, and the semantic realisations. In discussion sessions the discourse is inherently heteroglossic since a dialogue is expected to be established in the

exchanges between the presenter and the discussant. Nonetheless the degree of engagement in the turn of each of the parties has not been explored yet. The speciality of the discourse, this is not a casual conversation but dialogue between scholars about research topics, also seems to demand openness to other voices in the field. My concern in this study is also cross-disciplinary, since I am exploring DSs that belong to hard-sciences and to soft-sciences. Hyland (2000, 2004) sees disciplinary differences of ‘engagement’ in research articles, being more frequent in soft-sciences. Though there are differences with the concept used by Martin and his colleges (I discuss Hyland’s model in Section 2.2.2 of this Chapter), Hyland notes soft-knowledge domains are typically more interpretative and less abstract. As researchers work with human subjects there is less control of variables and greater possibility of diversity of results. He says about these writers that “[t]hey have to spell out their attitudes to their work and work harder to establish an understanding with readers. [...] treating them as reasonable and knowledgeable colleagues” (2004: 29). Higher frequency of heteroglossia would be expected in soft-sciences when describing the subject of study (in human and social sciences the subject of investigation is often people). This heteroglossic situation would be even more common when the DSs were about research presentations that take an ethnographic approach in the experimental study.

Graduation

The third dimension in the appraisal model is *graduation*. A distinctive feature of attitudes is that they can be gradable. This means that “we can say how strongly we feel about someone or something” (Martin & Rose 2003: 37). The values of affect, judgement, and appreciation gradate their polarity to construe greater or lesser degrees of positivity or negativity. Gradability, as Martin and White (2005: 136) later postulate, is also a property of the engagement system. Engagement values “scale for the degree of the speaker/ writer’s intensity, or the degree of their investment in the utterance”. See for example, Table 3.

		low degree high degree			
		←—————→			
Attitudinal meaning					
Judgement		<i>competent</i> player	<i>good</i> player	<i>brilliant</i> player	
		<i>reasonably good</i> player	<i>quite good</i> player	<i>very good</i> player	<i>extremely good</i> player
Affect		<i>contentedly</i>	<i>happily</i>	<i>joyously</i>	<i>ecstatically</i>
		<i>slightly</i> upset	<i>somewhat</i> upset	<i>very</i> upset	<i>extremely</i> upset
Appreciation		<i>a bit</i> untidy	<i>somewhat</i> untidy	<i>very</i> untidy	<i>completely</i> untidy
		<i>attractive</i>	<i>beautiful</i>	<i>exquisite</i>	
Engagement value					
Entertain		<i>I suspect</i> she betrayed us	<i>I believe</i> she betrayed us	<i>I am convinced</i> she betrayed us	
		<i>possibly</i> she betrayed us	<i>probably</i> she betrayed us	<i>definitely</i> she betrayed us	
		she <i>just possibly</i> betrayed us	she <i>possibly</i> betrayed us	she <i>very possibly</i> betrayed us	
Attribute		she <i>suggested</i> that I had cheated	she <i>stated</i> that I had cheated	she <i>insisted</i> that I had cheated	
Disclaim		<i>I didn't</i> hurt him		<i>I never</i> hurt him	
Proclaim		<i>I'd say</i> he's the man for the job	<i>I contend</i> he's the man for the job	<i>I insist</i> that he's the man for the job	

Table 3. Gradability of attitudinal meaning and engagement value

Graduation adjusts the degree of the evaluation through mechanisms that operate grading the intensity, and making something that is inherently non-gradable gradable, those are called respectively *force* and *focus*.

Two resources have been identified for amplifying force, that is, for 'turning the volume up or down': intensification and quantification. *Intensification* can operate over qualities (such as *relatively/ rather/ extremely miserable* or *slightly/ fairly abruptly*), processes (*this upset me a bit/ greatly*), or modalities (*just/ quite possible* or *reasonably/ very often*). Relative scaling with respect of intensity is realised by comparatives and superlatives, for example *less/ least, more/ most, best/ better, far more, as ... as*, or *too/ enough*. Maximisation and lexicalisation are two phenomena also related to intensification. Maximisers are "locutions which construe the up-scaling as being at the highest possible intensity" (ibid.: 142), such as *utterly, totally, thoroughly, absolutely, completely, perfectly*, as well as the highest value for the modal assessment of

usuality, i.e. *always*. The intensifiers described so far are ‘grammatical’ items whose meaning depends on combinations with ‘content words’, since they do not have referential meaning. Nonetheless, intensifiers can also operate as isolated modifiers which are ‘lexical’ items or lexis, as for example *ecstatic* as opposed to say *happy*. Attitudinal lexis also includes metaphors such as *ice cold*. Lexis is often related to the ‘infused’ mode of intensification, conveying the sense of up/ down-scaling, as for instance in *warm < hot < scalding*, *possible < probable < certain* or *rarely < occasionally < sometimes < often < always*. Repetition is the other mode of intensification by repeating the same lexical item or putting together a list of items semantically related. The second kind of force is *quantification*. Quantification involves grading in terms of amount, ‘imprecise reckonings’ of number (e.g. *few/ many problems, a multitude*), mass or presence (e.g. *a tiny problem, a huge disappointment, small/ large, light/ heavy, dim/ bright*); and of extent in time and space measured in terms of proximity (e.g. *recent/ ancient, near/ far*) or distribution (e.g. *long-lasting hostility, short-term, narrowly-based support, wide-spread, sparse*). Quantification is generally deployed via isolated terms, though infusion has also been observed.

I have presented so far a general overview of one of the two types of graduation, force, the other is *focus*. Martin and White (2005) broadly define focus as grading a term that is non-gradable according to prototypicality, and in doing so the term is invested with attitudinality. It operates adjusting the strength of boundaries between categories. Grading experiential boundaries involves resources that sharpen or soften apparently categorical distinctions. When *sharpening*, the specification is prototypically indicated (e.g. *a real father, a true friend*). When *softening* the specification “characterise[s] an instance as having only marginal membership in the category” (e.g. *they sort of play jazz, they are kind of crazy*). Martin and White (2005) observe some inherent gradable categories that are also gradable regarding prototypicality. A distinction needs to be made between the expression of intensity and

graduation. For example in a *very red carpet*, the attitude is intensified, whereas in a *piece of genuinely red carpet*, prototypicality emerges.

In the foregoing description of the appraisal model I have tried to sum up the comprehensive framework proposed by Martin and his colleagues. My liking for this model lies in the brilliant approach they adopt to articulate the complexity of the phenomenon. These authors abridge the fine grained model in three dimensions that perfectly suit the aim of the thesis where both attitude and engagement are considered at the same level.

2.3 Evaluation in academic spoken discourse

Much of the work on evaluation in academic discourse has focused on written genres including essays (Barton 1993), research articles (Hunston 1993, 1994a, Hyland 1998, 1999; Webber 2004; Oakey 2005; Okamura 2005; Stotesbury 2003), book reviews (Shaw 2004; Römer 2005, 2008; Suárez-Tejerina 2005), research article referee reports (Fortanet 2008, Fortanet-Gómez & Ruiz-Garrido 2010), and textbooks (Poppi 2004, Freddi 2005) among others. Less attention, however, has been paid to how evaluation unfolds in spoken academic genres (Swales 2004b).

The MICASE (Michigan Corpus of Academic Spoken English) project has been one of the most productive efforts to describe spoken academic discourse. In this line of research, there is a significant number of MICASE-based studies that examine evaluation in the speech events that shape this corpus. For example, Lindemann and Mauranen (2001) describe the functions of *just* for metadiscourse and hedging, Mauranen (2002) explores evaluation and other kinds of metadiscourse, Poos and Simpson (2002) explain the use of *kind of* and *sort of*, Swales and Burke (2003) see the functions of evaluative adjectives and intensifiers. Nonetheless, to date the most explored spoken academic genre has been lectures. Recent studies based on MICASE data include: Fortanet

(2004a,b) on the use of the pronouns to express verbal stance, Perez-Llantada (2006) on phraseology of textual and interpersonal metadiscourse, or Artiga-León (2008) on epistemic lexical verbs as evaluative markers. Other corpora have also been examined to describe evaluation in lectures, as for example the work of Crawford-Camicciottoli (2007: 94-104) that looks at evaluative adjectives as audience-oriented relevance markers and affected markers in business studies lectures; or Aguilar's (2008) study, who from a socio-cognitive approach, provides insights into motivations, abilities, and preferences of engineering academics when using metadiscourse (from a broad perspective) in lectures and peer seminars.

Regarding academic research discourse, there are several studies that consider the evaluation phenomenon. Dubois (1981, 1987) examines biomedical talks revealing the presence of apologies, confessions, and ironic self-critical narrative episodes; all three expressions of interpersonal meaning. McKinlay and Potter (1987), on the other hand, look at psychology conference talks and identify the use of hedges and mitigators as 'softening' the force of criticism when speakers show disagreement with other contributors. A more comprehensive study is carried out by Heino et al (2002). These authors argue that, when presenting, speakers are conscious of their rhetorical and pragmatic goals, which are achieved through metadiscourse. These authors use the term metadiscourse, identifying four different types in the CPs: i) structure-oriented indicates how the presentation is organised; ii) validity-oriented signals the speaker's attitudes towards the forms of expression used, and also indicates how assured or modalising the speaker is about the actual content of the propositions; iii) interaction-oriented conveys the speaker's attitude towards content and indicates the speaker's attitude towards self and the others; and iv) context-oriented, to control the communicative situation. This broad concept of metadiscourse describes interpersonal functions in two of the categories, validity-oriented and interaction-oriented.

Finally, Wulff et al. (2009), when comparing the phraseological patterns of the presentations and the DSs, evidence 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 including: hedges (*I think, you know, kind of/ sort of*), positive evaluation (*that’s a very x*), negative evaluation (*it seems to me*), and suggestions (*would be interesting, I wonder if*). They also testify the indirectness associated with criticism strategies as in many spoken genres (Mauranen 2004, McKinlay & Potter 1987), as well as identify positive acknowledgement to react to any comment, rather than a straightforward response. From my point of view, the major function of DSs stated by these authors is conclusive, that is, to provide an opportunity for scholars to evaluate the research activity. One could see the counterpart of DSs in book reviews and research article referee reports, since they do also evaluate others’ research. However, there are considerable differences between them. Apart from the modes of expression (spoken and written), the most significant difference is that DSs are communicative dialogues where a discussion is open and where researchers, who have just presented their research, can answer and also evaluate the audience’s assessment. On the contrary, the written monologues of the reviews are rarely replied. First and uppermost, DSs are evaluative encounters. Wulff et al.’s work, however, is not enough to show the whole picture of the evaluative language used in DSs. My aim in the thesis is to colour the picture not only with the examination of evaluative language but also with a more comprehensive analysis of the expression of evaluation considering also kinesic and paralanguage aspects. To date, evaluation in DSs is still waiting to be disclosed.

2.4 Evaluation beyond the words

As noted, most of the studies on evaluation have focused on written texts. Furthermore, those which have attempted to explore spoken texts have

generally done it overlooking non-linguistic features which are spoken-genre-specific. In this section, I will provide an overview of studies centred on how evaluation unfolds using other semiotic resources beyond language.

The first linguistic study where the term evaluation appeared was the one conducted by Labov (1972) in his model to analyse narratives. He examines formal structural properties of narratives in relation to their social functions. Here, evaluation reveals the attitude of the narrator. Labov argues that “departures from the basic narrative syntax have a marked evaluative force” (ibid.: 378). He identifies four main evaluative devices: *intensifiers*, such as gestures, expressive phonology, repetition, ritual utterances; *comparators*, negatives, futures, modals, quasimodals, questions, imperatives, *or*-clauses, superlatives, and comparatives; *correlatives*, some progressives, appended participles, double appositive, double attributives, left-hand participles; and *explicatives*, qualifications and causal clauses. Labov, in his description of the evaluative mechanisms in narratives, has already in mind the complex construct of the spoken communication where linguistic and non-linguistic aspects play a role. The three co-systems language-paralanguage-kinesics make up the evaluative departures since gestures and expressive phonology are considered *intensifiers*, i.e. semiotic elements that lay on the grounds of kinesics and paralanguage respectively. However, Labov’s concern about the expression of evaluation is part of a larger study on narratives. In Chapter 1, references have also been made to researchers’ findings on evaluation in everyday conversations expressed by kinesic or/and paralinguistic features (Argyle et al. 1981; Bavelas et al. 1989; Ekman 1972; Goodwin & Goodwin 1987, 2000; Goodwin 1980; Goodwin 1986; Kendon 1967, 2002, 2004; McClave 2000; McNeill 1992).

In this line of research, Adolphs (2008) develops a framework to study speech acts in spoken corpus. In her study she narrows down the scope to describe the application of the framework to explore the linguistic and non-linguistic realisation of a very specific act, backchannels. The data explored is part of the

Cambridge and Nottingham Corpus of Discourse in English (CANCODE), one of the few corpora that has been designed to represent both a language variety and the genres of casual conversation. As this author argues, the accompanying head movement and the intonation pattern can change the function of the backchannel, and thus may also affect the surrounding discourse.

In a previous study with O’Keeffe, on the same corpus and on a similar one, the Limerick Corpus of Irish English (LCIE), these authors (O’Keeffe & Adolphs 2008) show their agreement with other scholars that backchannels have “more than one macro discourse function”. O’Keeffe and Adolphs make a classification of backchannels according to discourse function describing four types of listener response tokens which unfold a specific discursive function: *continuer tokens* to maintain the flow usually realised using minimal response tokens (*yeah, mm*), *convergence tokens* to mark agreement or convergence, *engagement tokens* to mark “high engagement where addressee(s) respond on an affective level to the content of the message”, and *information receipt tokens* to mark points in the discourse where satisfactory information is received (*right, okay*), these markers are usually also accompanied by falling pitch and seem to serve a global discourse marking function. From all four, *engagement* tokens are those that seem more clearly to fulfil an evaluative function. However, as the authors comment, in a pragmatic sense the affective value of the *convergence* token is worth noting. Engagement response tokens express “emotional responses” (e.g. surprise, shock, horror, sympathy). They are verbally expressed in many ways such as single-word (e.g. *excellent, absolutely*), short statements and repetitions (e.g. *that’s nice, oh wow, oh really*), or follow-up questions (e.g. *did you?*). As for convergence response token, signalling agreement or converging on a topic is a form to show an interactional link with the speaker (such as *exactly, yeah, that’s true*). These tokens help to maintain good relations between speakers by “reinforcing commonality between them”.

Another contribution to the study of the listener's response from a multimodal approach is Carter and Aldophs' (2008) examination of active listenership in an academic supervision session. In their work these authors examine head-nods on the grounds of computer-vision techniques. They identify five types of head-nods attending to the amplitude, frequency, intensity, and duration. The most interesting part of their study for the thesis is the exploration of those instances where a verbal backchannel is accompanied by a head-nod, considering the two systems language and kinesics instead of underpinning the study on traditional approaches that focus exclusively on linguistic aspects.

When we move to the academic research field, to date, only one work has looked at evaluation beyond the words. As discussed in Chapter 1, there are few studies that pay attention to kinesics and/or paralanguage in the CPs (Räsänen & Fortanet 2006; Rendle-Short 2005, 2006), however, these studies are not particularly concerned about evaluation. Hood and Forey's (2005) multi-layered exploration of interpersonal meaning studies the introductory section of conference plenary presentations paying attention, among other features, to how the two semiotic systems of language and gesture relate to construct interpersonal meaning. The analysis shows four ways of performing it (ibid.: 302-304):

- i) Stance is signalled by gestures before it is signalled linguistically. The gestures encourage the audience to interpret what is about to be said in a particular way.
- ii) Gestures and language are semantically parallel. The co-articulation can be interpreted as an amplification of the value conveyed. For example an expression of explicit affect, such as *thanks* co-occurs with a gesture that embodies pleasure, a smile, which could be interpreted as amplification of positive.
- iii) Expressions of explicit attitude are accentuated by an accompanying gesture, or implications of attitude are strengthened in the same way. For example the speaker's utterance *big* is accompanied by a

quick up-down of head encouraging the listener to interpret this as evaluative.

- iv) The audience reaction can be explained by accompanying gestures to the speaker's utterances. For example, episodes of humour are immediately preceded by a gaze that scans the audience. This could be interpreted as an embodiment of projection to construct all members of the audience as interactants.

Hood and Forey's brief examination of a specific section of conference plenary presentations provides significant insights into the co-expression of language and kinesics. However, although the study is a landmark for the thesis, the consideration of paralanguage as well as how the interactive nature of DSs influences the expression of evaluation in the basic triple communicative structure, language-paralanguage-kinesics, is still unexplored.

In this chapter, I have reviewed scholars' definition and endless terminology used to designate the concept of evaluation. This reflection has been decisive to show my position in this issue. I have discussed the most influential frameworks, in the field of academic discourse studies, for analysing linguistic evaluation. Full attention has been paid to the appraisal model (as this will be the one followed in the study), and comparison with the other models has brought to the fore the reason for this choice. Martin and White's (2005) elaborated account of appraisal has not been considered necessary for the aim of the analysis. However, the description of the categories that constitute the abridged version provides a comprehensive framework to examine semantic evaluation in discussion sessions and to foreground disciplinary differences and similarities. Revision of significant work on evaluation in academic spoken discourse and on evaluation for a multimodal perspective bring to the focus the research gap that the present thesis aims at contributing to fill in. In the next chapter, attention will be shifted to corpus linguistics and its application to the examination of spoken language.

CHAPTER 3

Corpus Linguistics

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Corpus Linguistics

Natural language is the source of analysis commonly used nowadays by researchers that aim at knowing how language works. Corpus linguistics provides the tools to adopt this approach; however spoken texts pose some difficulties for their register, non-existent in written texts. This chapter aims at giving insights into the complex nature of spoken language and the implications in data compilation and analysis, as well as showing the current situation of corpus linguistics when working with those texts.

In Section 3.1, I revise the concept of corpus linguistics and the controversy surrounding its status. Section 3.2 provides an overview of spoken corpora. First, I introduce the corpora available out- or in-house to describe the language mode of the corpus under research in the thesis. In this respect, specialised spoken academic corpora deserve special mention, which is given in the second part of the section. However, specialised corpora and particularly small specialised corpora have raised certain vexing issues regarding their design, such as corpus size and corpus representativeness, and the techniques used for the analysis, mainly concerned on qualitative- and quantitative-based proceedings. Such aspects are covered in Section 3.3. The last section of the chapter, Section 3.4, gives a close-up look at the development of spoken language corpora, in particular at those stages followed in the design of the corpora examined in the thesis. The multimodal nature of the data is stressed as the dominant feature which demands different approaches and tools on the management of data and upon the processes of coding.

3.1 What is corpus linguistics?

A corpus is “a collection of pieces of language text in electronic form, selected according to external criteria to represent, as far as possible, a language or language variety as a source of data for linguistic research” (Sinclair 2005: 16). *External criteria* is understood by Sinclair as those criteria derived from an examination of the communicative function of a text; in contrast to *internal criteria*, those criteria that reflect details of the language of the text. Corpus linguistics (CL), as supported by several researchers (McEnery & Wilson 1996, Kennedy 1998, Meyer 2002), refers to the methodology based on corpus as the source of evidence to describe how languages work. However, there is a controversy about the status of CL. Some scholars (Leech 1992, Halliday 1993, Mukherjee 2004) advocate it is not just a methodology but an approach towards the study of language. Bowker and Pearson (2002: 7) define it as “an empirical approach that involves studying examples of what people said, rather than hypothesizing about what they might or should say”. Others (Mindt 1991, Sinclair 1991, Hunston & Francis 2000, Tognini-Bonelli 2001) define it as a separate discipline within linguistics. My position on this matter is that CL could be considered a methodological approach, that is, I understand CL is not just a methodology to study the language but an approach based on a key methodological component.

However, the contribution of CL is not simply the use of authentic language (since traditional fields such as discourse analysis and text analysis have already done it), but its use of data in an electronic form which allows a systematic analysis of the language. In fact, in recent years a large amount of research has been devoted to the development of software to analyse the use of language. Computerised corpora have also influenced the methodology adopted in the new linguistic tendencies. On this point, Aijmer and Altenberg (1991) marked the beginning of CL in 1960s when two significant events took place, the launching of the Survey of English Usage (SEU), aimed at collecting a large variety of written and spoken English events; and the advent of

computers which made it possible to store, scan, and classify large bodies of data.

To put it together, Biber et al. (1998: 4) describe the major characteristics of CL: “it is empirical, analysing the actual patterns of use in natural texts; it utilises a large, and principled collection of natural texts, known as a “corpus”, as the basis of analysis; it makes extensive use of computers for analysis, using both automatic and interactive techniques; [and] it depends on both quantitative and qualitative techniques”. The last feature introduces a major concern in CL. Computers become an essential tool in the linguistic community to examine language from a descriptive and objective perspective based on quantitative data. However, it is important to recognise that CL is much more than collecting data and automatically processing the texts, the corpus linguist also has to interpret the results. In this respect, Fairclough (2003) warns about the excessive use of automated analysis since the value of those findings is limited; they need to be complemented by more intensive and detailed qualitative analysis.

Corpus linguistics, and particularly the use of language corpora in linguistic research and language teaching, has become one of the latest trends in the applied linguistics field. Language corpora have been used in most of the linguistic divisions (Kennedy 1998, McEnery et al. 2005) and their development has sought a wide range of research purposes. The projects towards developing language corpora started in the early 1960s, Kennedy (1998) called them “first generation corpora”. The Survey of English Usage (SEU) corpus (Quirk 1962) was the first pre-electronic corpus used to describe grammar of adult educated speakers of British English. It was a landmark for linguists interested in the study of the language from an empirical approach. The first major electronic corpus was the Brown Corpus consisting of data of written American English. This corpus was soon complemented by its British counterpart, the Lancaster-Oslo-Bergen corpus (LOB). The London-Lund Corpus (LLC) was the first spoken corpus, I will describe it later. In the 1980s

and 1990s a need of larger corpora led to the development of “second generation megacorpora” (Kennedy 1998). Those corpora contain millions of words of spoken and written texts. In the following section, a comprehensive review of English spoken corpora also pays attention to the most important megacorpora such as the British National Corpus, the American National Corpus, the Longman Corpus Network, the Bank of English, the Cambridge International Corpus, or the International Corpus of English.

3.2 Spoken corpora

3.2.1 An overview

While most corpus linguistic research has been conducted with the use of large written corpora, in the last decade significant advances have been made in the development of spoken corpora. Applications of spoken corpora depend to a great extent on the criteria selected for their design and the corpus annotation. Luzón et al. (2007), in the introductory chapter to the volume *Spoken Corpora in Applied Linguistics* (Campoy & Luzón 2007), consider six major criteria in the design of spoken corpora: national varieties of the language, dialectal varieties, historical period, age of the speakers, speakers’ competence of the language, and/or text type, and genre. Next, a description of the most important spoken corpora that follow those criteria is given. On this point, it is worth commenting that, though a considerable number of spoken corpora have been collected as such, we also find that large corpora tend to include a subcorpus of spoken data together with a division of written texts.

National varieties of the language

Two English varieties are considered when adopting language nationality as the main criterion to design a corpus, British English and North American English. British English spoken corpora are:

- i) The *London-Lund Corpus of Spoken English* (LLC) (Svartvik 1990) which derives from two projects. The first project is the *Survey of English Usage* (SEU, University College London, which was launched in 1959 by Randolph Quirk). The second project is the *Survey of Spoken English* (SSE, Lund University, was started by Jan Svartvik at Lund University in 1975 as a sister project of the London Survey). LLC consists of 100 texts, each of 5,000 words, a total of 0.5 million of running words of spoken British English recorded from 1953 to 1987. A distinction is made between dialogue (e.g. face-to-face conversations, telephone conversations, and public discussion), and monologue (both spontaneous, and prepared) in the organisation of the corpus. As mentioned above, it was the first spoken corpus.
- ii) The spoken subcorpus of the *British National Corpus*. BNC is a 100 million word collection of samples of written and spoken language from a wide range of sources, designed to represent a wide cross-section of British English from the late part of the 20th century (~1980s-1993). The spoken subcorpus (10 million words) consists of orthographic transcriptions of informal conversations and spoken language collected in different contexts (such as formal business, government meetings, or radio shows). A demo restricted to 50 hits is available at the BNC website¹⁵.
- iii) The *Cambridge, and Nottingham Corpus of Discourse in English* (CANCODE) (McCarthy 1998) is a collection of spoken English recorded in Britain between 1995 and 2000. It is part of the *Cambridge International Corpus* (CIC), a large database of both written and spoken texts with a total of over 281 million words built up to help in writing books for learners of English. CANCODE contains 5 million words. Recordings include a wide variety of situations (e.g. casual conversation, people working together,

¹⁵ <http://www.natcorp.ox.ac.uk/> [Accessed 06/09/2010]

people shopping, people finding out information, discussions). A feature of CANCODE that makes it different from other spoken corpora is that all the recordings are sensitive to speaker relationship, context, and speech genre. As part of the Cambridge International Corpus, CANCODE is a property of the Cambridge University publishers for in-house use only.

- iv) The spoken subcorpus of *The Bank of English* corpus. This corpus contains 524 million words and it continues to grow with the constant addition of new material. The Bank of English is a collection of many different types of writing and speech. It contains up-to-date English language from thousands of sources. It was launched in 1991 by Collins and the University of Birmingham in the context of a project known as COBUILD project. Collins *WordbanksOnline* is an online service for accessing language data based on the Collins corpora. It comprises 56 million words of contemporary written and spoken texts. The data is organised in three subcorpora: British books, ephemera, radio, newspapers, magazines (36 million words); American books, ephemera, and radio (10 million words); and British transcribed speech (10 million words). A demo restricted to 40 lines of concordance is available on the Collins website¹⁶.
- v) The *Longman British Spoken Corpus* contains 10 million words from a representative sample of the population in terms of speaker age, gender, social group and region, and from the language of lectures, business meetings, after dinner speeches, and chat shows. The corpus is part of the spoken section of the British National Corpus.

As for North American English spoken corpora:

¹⁶<http://www.collins.co.uk/Corpus/CorpusSearch.aspx> [Accessed 06/09/2010]

- vi) The spoken subcorpus of the *American National Corpus* (ANC) (Reppen & Ide 2004) is a project of a collection of electronic American English written and spoken texts produced from 1990 onwards. When completed, the ANC will contain a core corpus of 100 million words. The ANC has so far compiled 22 million words of American English. The corpus has also made available an ‘Open’ portion of the full corpus consisting of approximately 15 million words, which is freely available for download¹⁷. The spoken subcorpus of the Open ANC (OANC) comprises about 3.2 million words. The predominant genre is telephone conversations, though face-to-face conversations are also included.
- vii) The *Santa Barbara Corpus of Spoken American English* is based on a collection of data of naturally spoken interaction from all over the United States. The predominant form of language represented in the corpus is face-to-face conversation, but there are data from other types of everyday interaction such as telephone conversations, card games, food preparation, on-the-job talk, classroom lectures, sermons, story-telling, town hall meetings, and tour-guide spiels among others. The Santa Barbara Corpus is part of the International Corpus of English (ICE) and provides the main source of data for the spontaneous spoken portions of the American component.
- viii) The *Switchboard Corpus* is a corpus of about 3 million words of spontaneous telephone conversations. The complete corpus is available on a set of CD-Roms that includes about 2,430 conversations; in other terms, over 240 hours of recorded speech from every major dialect of American English in the early 1990s. As each transcript in the corpus is time-aligned at the word level (that is, orthographic transcription and sound are aligned), the corpus is useful for sociolinguistic studies as well as for speech

¹⁷ <http://www.americannationalcorpus.org/OANC/index.html> [Accessed 06/09/2010]

recognition. The corpus can also be downloaded from the Switchboard website¹⁸.

- ix) The spoken subcorpus of the *Corpus of Contemporary American English*. COCA is the largest corpus of any language freely available on the web¹⁹. The corpus contains more than 400 million words of text, including 20 million words in each year from 1990 to 2009, with 4 million words each year in five genres: spoken, fiction, popular magazines, newspapers, and academic. The spoken section comprises 83 million words of transcripts of unscripted conversations from more than 150 different TV and radio programmes.
- x) The *Cambridge University Press/Cornell Corpus* is a collection of 0.5 million words of American English spoken in everyday life (at work, at home with their families, going shopping, having meals, and so on). The corpus belongs to the Cambridge International Corpus.
- xi) The *Longman Spoken American Corpus* comprises 5 million words of spoken data collected from everyday conversations of more than 1,000 Americans of various age groups, levels of education, and ethnicity from over 30 states. As part of the Longman Corpus Network, the Longman Spoken American Corpus is a property of the Longman publishers for in-house use only.

Dialectal varieties of the language

When considering dialectal varieties researchers have paid attention to a significant number of English dialects spoken all around the world, as for example:

¹⁸ http://www ldc.upenn.edu/Catalog/readme_files/switchboard.readme.html [Accessed 06/09/2010]

¹⁹ <http://www.americancorpus.org/> [Accessed 06/09/2010]

- i) The spoken subcorpus of the *International Corpus of English*. The compilation of ICE began in 1990 with the primary aim of collecting data for comparative studies of English worldwide. Eighteen research teams around the world have been preparing corpora of their own national or regional variety of English. Each of the 18 corpora consists of a total of 1 million words of spoken and written English produced after 1989. To ensure compatibility between the individual corpora in ICE, each team is following a common corpus design and annotation. The spoken data represent 60% of each corpus, that is, about 600,000 words. The categories of this subcorpus are organised in two main modes of discourse: dialogues (conversations, phone calls, class lessons, broadcast discussions, broadcast interviews, parliamentary debates, cross-examinations, and business transactions), and monologues (commentaries, unscripted speeches, demonstrations, legal presentations, broadcast news, broadcast talks, and non-broadcast talks). Some ICE corpora are available (free of charge or under licence) on the web²⁰, and on CD-Rom.
- ii) The *Freiburg English Dialect Corpus* (FRED) consists of 370 texts, with a total of 2.5 million words, or 300 hours of speech. FRED contains data collected in 43 different countries in 9 major English dialect areas, with speakers mostly born between 1890 and 1920, and were recorded in the 1970s and 1980s. Some samples of the data are available on the FRED website²¹.
- iii) The *Hong Kong Corpus of Spoken English* (HKCSE) (Cheng & Warren 2000) is a collection of about 2 million words of the English spoken in Hong Kong. Its compilation began in the mid-1990s and currently it includes four subcorpora to represent the main overarching spoken genres found in the Hong Kong context (academic discourse, business discourse, conversation, and public

²⁰ <http://www.ucl.ac.uk/english-usage/ice/> [Accessed 06/09/2010]

²¹ <http://www2.anglistik.uni-freiburg.de/institut/liskortmann/FRED/> [Accessed 06/09/2010]

discourse). Each subcorpora consists of 50 hours (about 0,5 million words). The orthographic transcription of HKCSE was enriched by adding a prosodic transcription to 53% of the data. HKCSE has become the largest prosodically transcribed corpus. This corpus is freely available on the HKCSE website²².

- iv) The *Wellington Corpus of Spoken New Zealand English* (WSC) is a collection of about 1 million words of English spoken in New Zealand. WSC comprises different proportions of formal, semi-formal, and informal speech. The formal speech section involves all the monologue categories and the parliamentary debate. The semi-formal section is comprised of the interview categories, both public and private (oral history, social dialect, and broadcast interviews). The remaining dialogue categories are the informal speech, with 50% of the overall corpus being comprised of private face-to-face conversations. This corpus complete the New Zealand component of ICE.
- v) The *Limerick Corpus of Irish English* (LCIE) (Farr at al. 2002) is a one million word spoken corpus of Irish English discourse, which includes conversations recorded in a wide variety of mostly informal settings throughout Ireland. While the corpus consists mainly of casual conversations, there are also over 0.2 million words of professional, transactional, and pedagogic Irish English included. Speakers range in age from fourteen to seventy-eight years, and there is an equal representation of both male and female speakers. LCIE is publicly available on the web by registered users²³.
- vi) The *Intonational variation in English* corpus (IviE) (Grabe et al. 2001) consists of recordings from nine urban varieties of English spoken in the British Isles (London, Cambridge, Cardiff, Liverpool, Bradford, Leeds, Newcastle, Belfast in Northern Ireland, and

²² <http://rcpce.engl.polyu.edu.hk/HKCSE/> [Accessed 06/09/2010]

²³ <http://www.ul.ie/~lcie/homepage.htm> [Accessed 06/09/2010]

Dublin in the Republic of Ireland). The corpus contains approximately 36 hours of the speech of male and female adolescents. A balanced subset of data in the corpus has been prosodically labelled. IviE is available to the research community free of charge²⁴.

- vii) The spoken subcorpus of SCOTS. SCOTS is a corpus of both written and spoken texts for the languages of Scotland. The corpus currently contains over 4 million words of running text. The spoken subcorpus constitutes 20% of this total, 0.8 million running words, in the form of an orthographic transcription synchronised with the source audio or video. SCOTS aims at covering the period from 1945 to the present day; however, the majority of texts are from the latter part of this period. SCOTS attempts to represent today wide range of texts in Scots and Scottish English including: texts of different language varieties, genres, and registers; speakers and writers from as wide a range of geographical locations as possible and of different backgrounds, ages, genders, occupations, and so on. SCOTS is freely available on the web²⁵.
- viii) The spoken corpus of the *Survey of English Dialects* (SED) (Beare & Scott 1999) was started in 1948 at the University of Leeds. The initial work comprised a questionnaire-based survey of traditional dialects based on interviews of about 1,000 people from 313 locations all over rural England. During the survey, a number of recordings were made as well as the detailed interviews. The spoken corpus derived from SED consists of transcripts, totalling roughly 0.8 million running words. The corpus is a valuable resource for dialectologists, historical linguistics as well as historians. The spoken corpus is available on CD-Rom.

²⁴ <http://www.phon.ox.ac.uk/IViE> [Accessed 06/09/2010]

²⁵ <http://www.scottishcorpus.ac.uk/corpus/search/> [Accessed 06/09/2010]

Age of the speakers

Spoken corpora have also focused on the age of the speakers as the main feature for the compilation. The data of some corpora include the spoken language of children:

- i) The *Polytechnic of Wales Corpus* (POW) was originally collected between 1978 and 1984 for a child language development project to study the use of various syntactic-semantic constructs in children between the ages of six and twelve. A sample of approximately 120 children in this age range from the Pontypridd area in South Wales was selected. The parsed corpus consists of approximately 65,000 words. POW was recorded from a play session or an interview.
- ii) The *Bergen Corpus of London Teenage Language*. The COLT material was collected in London by a research team at the University of Bergen in 1993. It consists of about 0.5 million words of spontaneous conversations between 13- to 17-year old boys and girls from socially different school districts. In addition to the orthographically transcribed text, a subset of the corpus has also been prosodically annotated. COLT has become part of the British National Corpus (BNC). The corpus is available on CD-Roms.
- iii) The *Child Language Data Exchange System*. As the name suggests CHILDES is neither a corpus nor a coding scheme in itself, but it provides both, operating as a service that pools together the data of many researchers all over the world, using a common coding and annotation schemes, and common software including annotation software. CHILDES was founded in 1984 and it is currently formed by 130 donated corpora which are freely downloadable from the website²⁶.

²⁶ <http://childes.psy.cmu.edu/> [Accessed 06/09/2010]

Speakers' competence of the language

Although in most corpora the data belong to native speakers, some spoken corpora consist of material from learners of a second or a foreign language, such as:

- i) The *Louvain International Database of Spoken English Interlanguage* (LINDSEI) is a complementary corpus to the International Corpus of Learner English (ICLE), also compiled at the University of Louvain in Belgium. The first component of LINDSEI contains transcripts of 50 interviews with French mother tongue learners of English (100,000 words of learner language). A number of other components is currently being compiled for different mother tongue backgrounds. Alongside these non-native varieties of English, a comparable corpus of interviews with native speakers of English has been compiled, so that interlanguage and native language can be compared and the universal and L1-specific features of oral interlanguage identified.
- ii) The *NICT Japanese Learner of English corpus* (NICT JLE) (Izumi et al. 2004) consists of 2 million words from the audio recordings of the English oral proficiency interview test taken by 1,300 Japanese learners. One the most unique features of this corpus is that it contains rich information on learners' errors (grammatical, and lexical). Two subcopora were compiled to examine error-tagged data: a native speakers' speech corpus (to compare utterances), and a back-translation corpus (to study mother tongue interferences).
- iii) The *Multimedia Adult ESL Learner Corpus* (MAELC) (Reder et al. 2003) is a collection of audio or video recordings, classroom codes, transcripts, teacher reflections, and student work samples from four years of adult ESL classes at the Adult ESOL Lab School at Portland State University from beginning to upper-intermediate proficiency. The project started in 2001 and now it comprises more than 3,600 hours of classroom interaction recorded by six cameras

and multiple microphones. This is not only a multimedia corpus but a corpus capable of showing learning stages. MAELC is intended to be used for research in second language acquisition and pedagogy as well as for professional development purposes. The extensive resources of MAELC are available online on request²⁷.

In other cases the corpus consists of the interaction between non-native speakers of English who use it as a *lingua franca*:

- iv) The *Viena Oxford International Corpus of English* (VOICE) comprises 1 million words of spoken ELF interaction (approximately 120 hours of transcribed speech). The speakers are experienced ELF speakers from about 50 different first language backgrounds. VOICE covers a wide range of speech events (interviews, press conferences, service encounters, seminar discussions, working group discussions, workshop discussions, meetings, panels, question-answer-sessions, and conversations). The corpus is available as a free of charge resource for non-commercial research purposes via a user-friendly online search interface²⁸.

Or the interaction between native speakers:

- v) The *English Language Interview Corpus as a Second-language Application* (ELISA) (Braun 2006) is a collection of video-based interviews with native speakers of different varieties of English (e.g. US, England, Scotland, Ireland, Australia), and from different walks of life. They talk about their professional career. The corpus is being developed as a resource for language learning and teaching, and interpreter training. ELISA currently contains 25 interviews, about 60,000 words. A demo is available on the ELISA website²⁹.

²⁷ http://www.labschool.pdx.edu/maelc_access.html [Accessed 06/09/2010]

²⁸ http://www.univie.ac.at/voice/page/corpus_description [Accessed 06/09/2010]

²⁹ http://www.uni-tuebingen.de/elisa/html/elisa_index.html [Accessed 06/09/2010]

Text type and genre

The text type and genre represented in the corpus is another criterion adopted by linguistics mainly to conduct corpus-based research on specialised contexts. Two types of corpora can be distinguished in this respect: corpora that aim at the study of spoken professional discourse, and corpora compiled to study spoken academic discourse. A special mention deserves the second type, since the corpus analysed for the purpose of the present dissertation belongs to it. Thus, academic spoken corpora will receive full attention in the next section of this chapter.

Regarding spoken corpora of professional language, when the data come from occluded genres (Swales 1996) such as meetings, telephone conversations, or discussions, sometimes it is difficult to persuade companies to make them public. And when they do, researchers preserve complete privacy of the information. Accordingly, contrary to the availability (free of charge or not) of most of the corpora already described, professional corpora are difficult to access and scholars commonly only get permission to use the data for their research but not for making them public to other researchers. Some examples of spoken professional corpora are:

- i) The *Cambridge and Nottingham Spoken Business English Corpus* (CANBEC) is a collection of 5 million words of spoken business English recorded across the UK in companies of all sizes. The corpus covers a range of speech events such as formal and informal meetings, presentations, conversations on the phone, over lunch, etc. CANBEC is part of the Cambridge International Corpus (CIC) (see description on page 121).
- ii) The *Corpus of Spoken Professional American English* (CSPAЕ) (Barlow 1998) contains 2 million words of speech involving over 400 speakers. The corpus was compiled between 1994 and 1998 with a selection of transcripts of various types of interactions occurring in professional settings. CSPAЕ has two components. The

first division is made up of transcripts (0.9 million words) of press conferences from the White House. The second division consists of transcripts (1.1 million words) of faculty meetings and committee meetings. The corpus is available on payment of the license.

Historical period

The last criterion considered in the design of spoken corpora is the range of time covered by the texts. However, currently there are not many corpora following this feature as the decisive factor for the compilation. An example is the *Diachronic Corpus of Present-Day Spoken English* which contains 400,000 words from ICE-GB (early 1990s) and 400,000 words from LLC (late 1960s – early 1980s).

The foregoing account demonstrates the extensive use of corpus linguistics in current spoken research. This shows scholars' interest in supporting their research in a natural source of evidence, rather than in making hypothesis on how language is used.

3.2.2 Academic spoken corpora

Current corpus-based studies of spoken academic discourse have led to the development of some relatively large corpora that will be described in the following subsections.

Michigan Corpus of Academic Spoken English (MICASE)

MICASE (Simpson et al. 1999) is a publicly available web-based³⁰ collection of approximately 200 hours of academic speech, about 1,8 million words. MICASE was compiled at the English Language Institute of the University of Michigan, in Ann Arbor, from 1998 up to 2003; though, recently it has been complemented with the *John Swales Conference Corpus (JSCC)* that will be described in more detail in Chapter 4.

³⁰ <http://micase.elicorpora.info/> [Accessed 06/09/2010]

Audio files and transcripts of the events fashion the data of the corpus. Some of the audio files are also freely available online. The academic speech represented in MICASE involves interaction between faculty and students in different speech genres across four major academic divisions: Biological and Health Sciences, Physical Sciences and Engineering, Social Sciences and Education, and Humanities and Art. These cover both classroom events (lectures, discussion sections, seminars, laboratory sessions, and student presentations) and non-classroom events (advising sessions, colloquia, dissertation defences, interviews, meetings, office hours, service encounters, study groups, tours, and tutorials). The corpus constitutes a fairly balanced sample across the speech events and academic divisions. Furthermore, the primarily mode of discourse (i.e. monologic, interactive, and mixed) as well as the speakers' attributes (i.e. gender, age, academic position, native or non-native speaker status, and first language) are also represented in the corpus.

MICASE was one of the first attempts to collect a large quantity of academic speech data. Thus, as Swales and Burke (2003: 2) explain, MICASE “provides authentic material in sufficient quantity to redefine our concepts of academic speech”. Since its publication on the Internet, many studies based on MICASE have shed light on a considerable number of different aspects that help to define current academic speech (see publications on the MICASE website).

British Academic Spoken English (BASE)

The BASE corpus (Thompson & Nesi 2001) was developed at the Universities of Warwick and Reading in U.K. It consists of 160 lectures and 39 seminars recorded in a variety of university departments, a total of about 1,6 words. Data are distributed across four broad disciplinary groups, each represented by 40 lectures and 10 seminars: Arts and Humanities, Life Sciences, Physical Sciences, and Social Sciences.

The corpus facilitates, amongst other things, investigation of: the frequency, and range of academic lexis; the meaning and use of individual words, and

multi-word units; the structure of academic lectures; the pace, density, and delivery styles of academic lectures; the discourse function of intonation; patterns of interaction, including turn-taking, and topic selection; the interplay of visual and aural stimuli; or the representation of ideas and the expression of attitudes.

The BASE corpus functions as a companion to the Michigan Corpus of Spoken Academic English (MICASE), although unlike MICASE it does not include speech events other than lectures and seminars. As the overview of the corpus provided on the website notes, data was video-recorded at the University of Warwick and audio-recorded at the University of Reading. Transcripts of the recording are freely available on the BASE websites at University of Warwick³¹ and Reading³².

TOEFL 2000 Spoken and Written Academic Language (T2K-SWAL)

The T2K-SWAL corpus (Biber et al. 2004) was compiled at the Northern Arizona University. It is a relatively large corpus of 2.7 million words representative of the range of spoken and written registers encountered in U.S. universities. The T2K-SWAL corpus was constructed and analysed to help to fill a gap, the lack of tools to determine whether the texts used on listening and reading exams accurately represented the linguistic characteristics of spoken and written academic registers.

The spoken subcorpus was collected at four academic sites: Northern Arizona University, Iowa State University, California State University at Sacramento, and Georgia State University. The speech events included in this subcorpus are classroom teaching, office hours, study groups, and on-campus service encounters. The total speech section of the subcorpus is about 1.7 million words, though class sessions are the predominant genre (1.2 million words). The collection of texts from class sessions includes a range of teaching styles,

³¹ <http://www2.warwick.ac.uk/fac/soc/al/research/collect/base/history/> [06/09/2010]

³² http://www.reading.ac.uk/AcaDepts/ll/base_corpus/ [Accessed 06/09/2010]

as measured by the extent of interactiveness (three levels of interactiveness are distinguished: low, medium, and high interactiveness). Texts belong to six academic disciplines (Business, Education, Engineering, Humanities, Natural Sciences, and Social Sciences), and three levels of education (lower division undergraduate, upper division undergraduate, and graduate).

T2K-SWAL corpus was grammatically tagged to investigate a wide range of research issues on the linguistic characteristics of academic texts (grammatical and lexicogrammatical characteristics, stance features, vocabulary distributions, lexical bundles, multidimensional descriptions, and the use of specific definitions). The design of the T2K-SWAL corpus also allowed research from a register perspective. That is, each specific register category was studied in relation to a range of other academic spoken and written registers.

English as a Lingua Franca in Academic Settings (ELFA)

The ELFA (Mauranen & Ranta 2008) corpus contains 1 million words of transcribed spoken academic English as a lingua franca (approximately 131 hours of recorded speech). The recordings were made at the University of Tampere, the University of Helsinki, Tampere University of Technology, and Helsinki University of Technology. The data consists of both recorded speech and transcripts, which are available to researchers on request.³³

The speech events in the corpus include both monologic events, such as lectures and presentations, and dialogic/polylogic events, such as seminars, thesis defences, and conference discussions. As for the disciplinary domains, the ELFA corpus is composed of Social Sciences, Technology, Humanities, Natural Sciences, Medicine, Behavioural Sciences, and Economics and Administration. The speakers in ELFA represent a wide range of first language

³³ <http://www.uta.fi/laitokset/kielet/engf/research/elfa/corpus.htm> [Accessed 06/09/2010]

backgrounds as the data comprises approximately 650 speakers with 51 different first languages.

The corpora described so far are examples of relatively large spoken academic corpora. However, frequently researchers need to compile their own small corpora for the purpose of their studies. The creation of those corpora is mainly motivated by i) lack of data in the existing corpora, ii) special design for contrastive studies, or iii) corpus access. Regarding the lack of data, though specialised corpora such as the public MICASE corpus contains a fairly large sample of academic spoken events, not all academic genres are represented, for example there is a gap in guest lectures. On the other hand, the approach adopted in the study could also demand new data; for example, a quantitative analysis of tutorials based on MICASE would entail a larger sample of data since only 3 transcripts are available. Moreover, a multimodal analysis would need data of the events that are not at hand (e.g. one can access transcripts and sound files from MICASE, but neither video recordings nor the materials used to support the speech events are available). Another reason that can explain the collection of small corpora by researchers is to carry out contrastive studies. Bellés-Fortuño's (2008) analysis of discourse markers in North-American and Spanish lectures is an example of this type of study. In this work the English corpus of lectures was selected from MICASE, and the Spanish corpus was compiled in a Spanish university for the purpose of the study. Finally, access to some corpora is either restricted to the agency responsible for the intellectual content (individuals, research group, company, institution, etc.) (e.g. the T2K-SWAL corpus) or is restricted to paying users, with prices that sometimes are too high.

Multimodal Academic and Spoken language Corpus

One example of a small specialised academic spoken corpus is the *Multimodal Academic and Spoken language Corpus*. MASC (Fortanet-Gómez & Querol-Julián 2010) is a collection of Spanish and English spoken academic events in a university context (i.e. lectures, seminars, guest lectures, students'

presentations, dissertation defences, plenary lectures, and conference presentations). Data have been collected mostly by the research group GRAPE (Group for Research on Academic, and Professional English) at the Universitat Jaume I. The collection of MASC³⁴ started in 2004, and it is still in progress. To date, the English subcorpus contains about 40 hours of audio and video recordings.

MASC is a multidisciplinary corpus that includes events from the fields of Linguistics, History, Law, Business, Marketing, Biology, and Chemistry. It takes a step further in the design of academic spoken corpora since it is multimodal in nature. That is, whereas two different types of data commonly fashion current corpora in this field (i.e. transcripts and audio), five different elements make up the multimodal nature of MASC: slides, transcripts, handouts, and audio and video recordings. Therefore the three communicative modes are represented in the corpus: word (transcripts, slides, and handouts), sound (audio), and image (video, slides, and in some cases also handouts).

Other small academic spoken corpora have adopted a multimodal approach in their design. However, the access to these corpora is restricted exclusively to the researchers that have compiled them. That is the case of the *Social Science Lecture Corpus* (SSLC). A collection of 30 lectures from the fields of Sociology, Law, and Business, which was video recorded in several British universities, and transcribed for the purpose of a doctoral thesis to study linguistic repetitions in academic lectures (Giménez-Moreno 2000). This author notes the necessity of video recordings in the analysis of lectures to consider all the extra-linguistic information related to body language and teaching tools (e.g. white or black board, overhead projector, etc.). A similar small specialised corpus is the *European Business Module* (EBM). A collection of 15 audio and video taped guest lectures given at the University of Florence by native and non-native speakers of English, on aspects of business and

³⁴ The collection of MASC was funded by Grant HUM2004-02599/FILO from Spanish Ministerio de Educación y Ciencia.

economy. The corpus was part of the research data in the study conducted by Crawford-Camiciottoli (2008) to understand the linguistic and discursive features of business studies lectures from the perspective of L2 listening comprehension.

The main difference between these small corpora and MASC project, thus, is that in MASC the aim is to provide all components that shape the communicative act together, that is audio and video files, orthographic transcripts, and support materials (slides, transparencies, handouts, and the like). This corpus is of special relevance for the present thesis since the data for the analysis belong to it.

3.3 Corpus design and techniques

There are many criteria that need to be considered when designing a corpus. However, the selection of those aspects is ultimately determined by the primary use of the corpus. When general purposes define the design, the corpus will be as large as possible, and will incorporate many different types of language (e.g. British National Corpus or the American National Corpus). Those corpora foster investigations that focus on a particular language as a whole and attempt to provide absolute generalisations. They look for representativeness of language in general and are suitable for the design of grammars and dictionaries. However, when the research pursues specific goals, corpus will likely be more restricted in scope, language mode (written or spoken), specific variety of language, or historical period. Following Partington (2004), the corpus will be specialised in terms of both purpose and type of language.

The use of specialised corpora to understand academic language has been supported by many scholars (Connor & Upton 2004). Flowerdew (2004) suggests four reasons why general corpora may not be suitable for investigating specialised language. First, 'general-purpose' corpora have been compiled for their representativeness of the language, and carefully balance the

different types of texts to reflect their importance in the culture; that means that there will be a limited representation of some genres. Secondly, even though a specialised subcorpus of a suitable size may be included in a general corpus, logistically it might be difficult to access it as the search fields have not been set up with this purpose. Besides, some types of discourse are not easily accessible for compilation, for example spoken corpus data are more time consuming to collect than written data, or occluded genres which are not of public domain and may only comprise a small portion of general corpora. Another important reason to disregard general corpora to investigate specialised language is that some general corpora comprise text segments rather than full texts, which has implications for the analysis. In this line of argumentation, this author affirms that text segments can be used to explore individual lexical or grammatical items, but they do not serve for more top-down genre-based analyses where the discourse functions of those lexicogrammatical items need to be examined within different sections of the text. Accordingly, the internal composition of general corpora may not be appropriate to understand specific types of academic language.

3.3.1 Corpus size and corpus representativeness

Size and representativeness of specialised corpora, as well as the generalisability of their findings, are issues that have been widely debated in the literature on corpus linguistics (see e.g. Cortes 2007, Flowerdew 2004, Gavioli 2002, Sinclair 2005).

As many researchers have pointed out, there is no ideal size for a corpus, but the size depends on the needs and purposes of the investigation, and often on pragmatic factors such as how easily the data can be obtained. Sinclair (2005) notes that the minimum size of a corpus depends on two main factors, the kind of query that is anticipated from users and the methodology used to study the data. All in all, a specialised corpus should be of adequate size to have sufficient number of occurrences of a linguistic structure or pattern to validate

a hypothesis (Flowerdew 2004). Literature on CL often uses the term small specialised corpora, since small corpora means to be specialised. However, the term specialised does not imply that the corpora are small. Some specialised corpora run several million words. Flowerdew (2004) notes some large specialised corpora can themselves be divided into smaller specialised subcorpora. He marks the size of specialised corpora from 1 to 5 million words for the whole corpus, and from 20,000 to 200,000 words (Aston 1997) for the subcorpus or small-scale corpus.

Working with general corpora leads mainly to quantitative analysis of the data where broadly generalisations on the language can be made on account of the size of the corpus. However, as a general principle, more qualitative-based analyses tend to be carried out on specialised corpora as their size and composition make them more manageable. A more detailed analysis of both linguistic co-text and extralinguistic contextual features, afforded by qualitative methods, also provides valuable data to complement quantitative-based studies. However, even though the specialised corpus may be statistically representative of the discourse under investigation, the nature of qualitative-based approaches to corpus analysis means that generalisations cannot be drawn with the same certainty as from quantitative-based analyses. Gavioli (2002) faces the problem of representativeness in small specialised corpora. She notes that her students when working with a small specialised corpus of medical research papers tend to overgeneralise specific language features to medical language as a whole.

Large corpora present many advantages in the identification of frequent language features. Sinclair (1991) emphasises that to study the use of words in a text it is necessary to have many examples of their use. In addition, he stresses the use of large corpora for the study of functions and meanings. In small corpora the issue of frequency of linguistic features is mainly related to two subjects, the comparison between corpora of different size and the generalisation of findings based on the analysis of small collections of

language (Cortes 2007). In the comparison of small and large corpora, as explained by Biber et al. (1998), it is important to ensure the reliability of the comparison. The studies that compare corpora which are not of the same length need to be carefully reviewed, especially those that call for the normalisation of absolute frequency of linguistic features, that is, the adjustment of raw frequency counts to provide an accurate comparison. Cortes (2007) affirms that this simple procedure can present some difficulties when comparing corpora of different size, particularly when the linguistic features are defined by a fixed cut-off frequency. In her study of lexical bundles in published and disciplinary academic writing (Cortes 2002), she finds that the empirical identification of those expressions resulted completely unreliable in small corpora. This fact forced her to turn her study into a more qualitative analysis.

In the present thesis, I adopt a qualitative-based approach to examine multimodal expression of evaluation in two specialised small corpora. I neither attempt to make quantitative-based generalisations of linguistic aspects, nor compare results with larger corpora. The aim is to describe full expression of evaluation which demands exhaustive and global interpretation of the multimodal data no viable in large corpora.

3.3.2 Corpus analysis

Corpus linguistics has facilitated the tasks of many scholars by introducing data and tools that help to provide empirical evidence in the analysis of certain aspects of natural language such as words, structures, uses of a language, and its tendencies of use, among many others. The evidences that derive from corpus-based analyses are different from other sources of evidences in that those are strong and engender considerable confidence in the generalisation of the findings as well as the validity and reliability of those generalisations. When a collection of texts is machine-readable it is easy to find, sort, and count items either for linguistic description or for other language-related concerns (Kennedy 1998).

One major argument against using corpus data to make predictions about language is put forward by Widdowson (1998) who affirms that corpus data are a sample of language rather than an example of authentic language, because the data are divorced from the communicative context in which it was created. In this line, Flowerdew (2004) maintains that to interpret the corpus data fully and accurately it is necessary to consider the role that the situational and cultural contexts play in shaping the discourse. This author (2003) sees the value of working with specialised corpora where the analyst is probably the compiler who is familiarised with the socio-cultural dimension in which the discourse was created. Accordingly, the compiler-cum-analyst can act as a kind of mediating ethnographic specialist informant to shed light on the corpus data.

Another concern of corpus analysis is the identification of linguistic features. This can be made in a corpus by the use of a simple concordancer or by the use of more specialised computer programmes. Moreover, the identification and the statistical analysis of frequency of linguistic features in large corpora commonly require the use of some sort of annotation or tagging (Biber 1991). A criticism made to corpus-based methods, in the form of concordance and keyword searches, is this procedure limits the investigation of the corpus data to a bottom-up approach. This type of analysis contradicts the more top-down process types of genre-based analyses (Swales 1990) where the starting point is the macrostructure of the text (larger units in the form of move structure analysis) rather than sentence-level or lexico-grammatical patterns. As Flowerdew (2004) notes, this criticism is in part obviated by the corpus linguistic techniques that can be applied in specialised corpora, where top-down annotation procedures can be adopted. This kind of annotation needs to be done manually and it is impossible to carry it out on very large-scale corpora of millions of words.

However, as discussed in Chapter 1, spoken data can be described not only by linguistics features. Although traditionally discourse analysis of academic

spoken data has focused exclusively on language, other approaches such as conversation analysis have already considered the multimodal nature of oral communication which leads to the identification and annotation of non-linguistic cues. On the grounds that only the interpretation of all cues together ensures fluent human-to-human communication, scholars go a step further in the techniques utilised to analyse data. Accordingly, Benoît et al. (1997) and other researches have focused attention on multimodal systems (or audio-visual speech systems). Systems for automatic exploration which attempt to use the same multiple channels as human communication. The approach in the present study calls for the use of multimodal annotation systems (see discussion on these tools in Section 3.4.4) to integrate speech (linguistic and non-linguistic features, that is, language and paralinguistics) and non-verbal cues (kinesics) to provide a synthetic output to analyse evaluation. These types of annotations, however, need to be done manually, a technique only feasible when working with small corpora as the ones under scrutiny in the thesis.

3.4 Developing a spoken language corpus

Spoken language is taken to mean any language which original presentation is in oral form. This presentation can be read from a script (e.g. TV news programmes) or unscripted and therefore to be spontaneous (e.g. telephone conversations). Only spoken language data from recordings of unscripted speech are object of concern here.

Spoken language data are notoriously more difficult to work with than written language 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 of a speech event 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, as

Thompson (2005) notes, not only the transcription but also the process of data capture itself 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 lost. To compensate for this, video can also be used. This author affirms that video recording in most cases neither can capture the views of the participants in the event. Nonetheless, nowadays video recording is the only available tool researchers have to register the physical component of the event. Often more than one camera is used to capture the different interlocutors in the communicative act and also, replying to Thompson's complaint, capturing to a certain extent the participants' views.

In addition to the complexity of working with spoken data, there are certain factors that need to be considered when compiling any corpus such as the way in which texts are selected, the number of samples of texts to be included and the length of those samples, the size of the entire corpus, register distinctions and selection, language medium (spoken or written), available resources for the compilation of the corpus and corpus proofreading, and editing issues (Biber et al. 1999). However, one cannot overlook that the development of a spoken language corpus is a especially complex job. Difficulty lies in the multimodal nature of the discourse. As explained above, analysis of speech events cannot be performed on the same basis as written discourse.

In this line, Adolph and Carter (2007) note the problematic analysis of spoken corpora from a Corpus Linguistics approach. Despite significant advances over recent years, one of the shortcomings of CL is the exploration of language and communication beyond the textual. The difficulty arises because communication is multimodal, it is embodied and combines both verbal and non-verbal elements. These authors postulate that while CL methods allow us to explore the functions of linguistic patterns of communication, they do not allow us to explore verbal-visual or multimodal functions of linguistic patterns. For this reason, as they suggest, SFL (Systemic Functional

Linguistics) tradition does not always fit with CL approaches. Whereas SFL is concerned with establishing specific meaning in texts and with showing the integration of a theory of textual communication and qualitative methods of description, observation and insight; CL approaches look for more quantitative insights, they are more concerned with regular, frequent, and thus generalisable patterns of meaning adopting more empirical and practical methodologies for aligning word and meaning across a large number of texts. These authors see a challenge for current research is to integrate computer-enabled power of CL methods with the theories and practices of multimodal communication research, “[t]his would provide a basis for linking word and image, and the verbal and the non-verbal in ways that allow new understandings of textuality to emerge” (ibid.: 135). However, the complexity of the multimodal system of speech corpora requires multidisciplinary exchange and cooperation (Grice et al. 2000, Jacobson et al. 2001, Cassidy & Harrington 2001). The thesis underpins on SFL and other theoretical inherently qualitative-based methodologies (conversation analysis and pragmatics), but also embraces CL practical methodologies to make ready the multimodal data for interpretation.

The development and exploitation of spoken corpora have been described by Leech et al. (1995) in five stages: *recording*, *transcription*, *representation* (or *mark-up*), *coding* (or *annotation*), and *application*. Later Thompson (2005) adapts Leech et al.’s framework changing the headings for two stages and collapsing two (representation and coding) into one as follows: *data collection*, this stage involves the technical issues of audio/ video recording, but also the collection of contextual information and the consent of participants; *transcription; mark-up and annotation*, this stage involves the computerisation of the data and the possible addition of further information to the original transcription; and *access*, the last stage puts emphasis on the access to the corpus, rather than on application, since, according to Thompson, it is not possible to discuss on the range of possible approaches to application.

In the following sections, I provide insights into the three stages followed when compiling the data for this study: data collection, transcription, and annotation. Mark-up and access are two stages beyond the purpose of the small corpora compiled here, since they search for making the data ready to be shared with the academic community. The corpora examined in the thesis do not pursue such aims, therefore neither mark-up nor access have been stages in their development. Mark-up is the process of making the data machine readable in ways that facilitate the interchange of data between users. This stage is needed when the corpus is intended to be public. If that is the case, it is necessary the use of standardised languages widely accepted by the community of use, such as HTML (Hypertext Markup Language) and XML (eXtensible Markup Language (for an introduction to mark-up see Thompson 2005)). As for access, it has to do with making the corpus available to the wider academic community. Nowadays it is more frequent to find multimodal corpus available through CD or DVD media. In some cases, as noted in Section 3.2, analysts have access to transcripts and even sound files online, but rarely to video recordings.

3.4.1 Data collection

Before collecting the data it is important to ensure the analyst and/or compiler receives informed consent from those whose voice and/or image will be recorded as well as transcribed. When compiling unscripted speech this may compromise the purpose of the data collection, since some participants may change their behaviour when aware they are being recorded. Moreover, the researcher's responsibilities to informants driven by ethical and even legal issues force the researcher to get a proof of consent before carrying out any kind of recording. This issue is particularly important for the compilation of specialised corpora, such as various genres in the fields of business and technology, where the confidential nature of the data may pose legal problems if one tries to avoid the participants' consent.

The rapid development of audio and video recording technology has had a profound effect on linguistics. A criticism of the early collections was the low quality of the audio recordings which made it difficult for transcribers to hear the words clearly. Where high quality data are required, studio recordings have to be used, but spontaneous speech is difficult to be captured in the studio. As noted in Gibbon et al. (1997: 123), recording ‘on location’ has “the advantage that the speaker is acting in an ecologically realistic environment”. In most cases the price to be paid for this advantage is a substantial loss in the quality of the audio recordings because of high ambient noise levels and/or considerable distance between speakers and microphones. The EAGLES (Expert Advisory Group on Language Engineering)³⁵ proposes the use of digital recording devices which are easy to access and produce files that can be downloaded/ saved in computers with minimal loss of quality.

When recording academic spoken corpora most of the events occur in a classroom, an office, the main lecture theatre, the hall, or a conference room among others; all of them rooms with different sizes and shapes, as well as different furniture distribution. The compiler has to set up the recording equipment to be as less obtrusive as possible but at the same time to get high quality data. It is essential to choose the best video angle (when video recording), and to place the microphone/s as close to the speaker as possible specially when recording events where the speaker is not sitting but moving around the room. Some compilers avoid lapel microphones when they seem to interfere in the production of natural speech, they use instead flat microphones and minidisk recorders. The problem with not using lapel microphones is high quality of the data is not guaranteed.

Though the use of video in data capture is becoming more common and the possibilities for including the video data in the corpus are increasing, Thompson (2005: 87) poses relevant questions to this respect, showing corpus

³⁵ <http://www.ilc.cnr.it/EAGLES/home.html> [Accessed 06/09/2010]

design is subject to tensions among the desire of representing the event fully, the treatment of excessive quantity of data, and excessive amounts of time and work.

Firstly, what relation will the video data have to the transcripts and to the corpus? Will the video data act simply as an aid to the transcriber, providing an extra source of information, or will the video contain information that could not otherwise be captured? Secondly, whose perspective is represented by the video camera angle: that of the observer or that of the participants? [...] If the aim is to gain the perspectives of the participants, how should the camera(s) be positioned? Thirdly, will the transcript be aligned to the video? Will the transcript include coding of the gestural and other non-linguistic features?

This author also notes that, in addition to the recording of the event, a certain amount of background and circumstantial information is needed; as well as taking detailed notes at the recording stage about the equipment used, the conditions and any technical problems encountered. It is important to determine in advance the information required for the study, to ensure a consistency in type and degree of detail of information. All these aspects have been considered during the compilation of the corpora of the present thesis, as explained in Chapter 4.

3.4.2 Transcription

Transcription is one of the three processes of data encoding, the other two are mark-up and annotation. Edwards (1995: 20) defines transcription as:

‘[...] capturing who said what, in what manner (e.g. prosody, pause, voice quality), to whom, under what circumstances (e.g. settings, activity, participant characteristics, and relationships to one another). It includes preservation of various temporal aspects (e.g. pause duration, sequence of events, and simultaneity or overlap of speaker turns or speech and gestures), and some metacomments or interpretative ‘annotations’.

She notes the distinction between broad transcription and narrow transcription. The former provides a level of detail similar to scripts of plays and courtroom proceedings. The latter provides a higher degree of detail regarding aspects such as prosody, voice quality, or simultaneity of speech and gestures. Sinclair (1995) claims his long experience studying spoken discourse analysis has made him aware of the need for “well-transcribed data”, though he also notes cost-effectiveness has to be taken into account when transcribing.

My first concern regarding transcriptions is their integrity, in Sinclair’s (1995) word the ‘honesty’ of the transcriptions. Since, as Edwards (1995) affirms, far from being objective and exhaustive of the events of an interaction, a transcript is fundamentally selective and interpretative. A transcriber is constantly making choices concerning what information to include, what descriptive categories to use, which aspects of the interaction are interrelated and which are the most important, and how to express all of these within the limits of the graphemic/ spatial medium of the transcript.

In addition, there is a conflict in transcription between those elements which can be transcribed most exactly and those which must remain impressionistic, elusive, and subjective (Cook 1995). Analysts may limit enquiry to ‘exact and measurable’ elements where hypotheses can be made, such as linguistic features; or extend analysis to those areas whose description must remain ‘intuitive and speculative’, but which are nonetheless often essential to an understanding of certain aspects of communication, for example contextual features. The problems of transcription and the distinction between measurable and immeasurable phenomena have been dealt with by Cook (ibid.: 37) classifying elements in the original speech event in two categories linguistic and contextual features. Linguistic features include the *words* under consideration at any given time; and *preceding words*, speech occurring earlier in the same event and its transcription. On the other hand, contextual features embrace *paralanguage*, that is, any meaningful behaviours preceding or interpolating the word (such as voice quality, gesture, facial expressions, and

touch)³⁶; *situation* or features of immediate physical surroundings including features of participants; *participant knowledge* of the cultural context including knowledge of other participants and of other speech events, and written texts affecting intervention; and *participant attitudes* towards all of these. This author foresees two possible problems of transcription. The first problem is to relate linguistic to contextual features. In his words, contextual aspects have often been overlooked by a linguistic design for the analysis of written data. However, whereas in writing contextual features are either irrelevant, or when they are relevant textually encoded, in speech they are often evident to participants and hence unmentioned. The second problem relates to the first. Since elements of context are less likely to be linguistically realised in speech because they are manifest to participants, they intensify the likelihood of divergent interpretation between transcriber's and participants' perceptions. Cook postulates that whereas ignoring the context in the discourse analysis of some written texts could be justified, there can be no justification for this in the transcription of speech (see experimental evidence of problems caused by overlooking contextual factors in Argyle et al. 1970, 1971):

In many spoken discourses how something is said outweighs what is said; the interpersonal dominates the ideational. The effect of paralinguistic message which accompanies every linguistic message provides an example. For when the paralinguistic contradicts the linguistic message, it is usually the former which is believed, presumably because we know it is harder to control (Cook 1995: 40).

Another aspect that should be mentioned here is how researchers face the analysis of speech discourse. Cook (1995) warns against treating speech as if it were writing. This position has been supported by other linguists. Chafe (1995: 54) for example states his suspicions that too many spoken language corpus users are quite content to ignore the sound of language completely, doing

³⁶ Following discussion in Chapter 1, the concept of paralanguage for Cook is considered in the thesis non-linguistic features since this author includes in the definition kinesics (gestural and facial expression), and paralanguage after Trager (1958) and Poyatos (1983) (voice quality).

research on the basis of transcriptions alone, as if they were dealing with written language; a position that this scholar completely disapproves. In the same line of argument, Sinclair (1995) sees our relation to a written language event is totally different from our relation to a spoken language event, even if that spoken language event is given in some kind of written form. Since we know that it is a transcript, and there is no integrity in transcription, no social acceptance, and no cultural place.

Finally, I would like to mention some aspects about transcription systems. Chafe (1995) questions the existence of an ideal system for transcribing, instead he suggests that the way we transcribe depends on our purposes. This author, after Ochs (1979), notes the especial interest of the fact that any transcription system is a theory of what is significant about language. Edwards (1993) proposes three principles in the design of a transcription system: i) categories should be systematically discriminable, exhaustive, and contrastive; ii) transcripts should be readable (to the researcher); and iii) for computational tractability, mark-up should be systematic and predictable. The three principles refer to the creation of categories and to questions of readability for human researchers and for computers.

The first decision must be made about whether the transcription is to be orthographic or phonetic, or both of them. If a combination is used, this means that two levels of transcriptions must be aligned somehow. This can be done by placing the levels of transcription on different lines, or in different columns. Sinclair (1995) notes the dilemma analysts find is the danger that by not transcribing everything one may be systematically missing something. Thompson (2005) describes further decisions that need to be taken when transcribing, such as spelling conventions for an orthographic transcription, how to represent non-verbal data (such as contextual information, paralinguistic features, gaps in the transcript, pauses, and overlaps); or how the speaker turn can be represented. To guarantee consistency, he noted the importance of the creation of databases or web-based lists of categories and

codes easily accessible to all members of the team in charge of the transcription. He finds essential the establishment of clear guidelines to reduce the risk of inconsistency. Furthermore, he stressed the importance to implement a thorough procedure for checking each transcription. It might be a transcriber checking another transcriber's work or a researcher (when he or she is not a transcriber) monitoring a transcriber's work.

3.4.3 Annotation

Another process of data encoding is annotation, also called tagging or coding. The difference from transcription is its content and degree of structuring. Rather than capturing the observable verbal and non-verbal aspects of the interaction, annotation focuses on events which have a more abstract relationship to each other, that is, on syntactic, semantic, and pragmatic categories (Edwards 1995). This author also notes that whereas events under the categories of transcription tend to share some physical similarities (e.g. pauses), the events under annotation categories may have little or no physical similarity, as for example instances under the category Noun Phrase such as *ice cream* and *Senate Appropriation Committee*. Accordingly, annotation serves to create physical similarity to retrieve in an electronic text all instances sharing a code or tag. In this line, Leech (2005) describes corpus annotation as the practice of adding interpretative linguistic information to a corpus. Adding annotation to a corpus is giving 'added value'.

Types of annotation

There are many levels for which annotation can be provided (see Garside et al. 1997, Gibbon et al. 1997, Grice et al. 2000, Leech 2005), however I describe here only four of the most common ones: morphosyntactic, syntactic, prosodic, and pragmatic. The two latter are of special interest for the thesis.

- i) *Morphosyntactic annotation*, also known as word-class tagging, POS (part-of-speech) tagging or grammatical word tagging, assigns

a code to each lexical unit indicating its morphosyntactic category (e.g. 'N' for noun, 'V' for verb). This basic type of annotation provides groundwork for many types of analysis. POS taggers, as for example CLAWS developed at the University of Lancaster, can achieve a high level of accuracy nowadays. It is worth noting that POS tagging schemes are often part of parsing schemes.

- ii) *Syntactic annotation* or parsing takes the form of developing treebanks. Parsing does not entail only the grammatical category but also the function in a group or phrase. A well-developed parsing scheme is that of the SUSANNE corpus (Sampson 1995). To date, few spoken databases have been syntactically annotated.
- iii) *Prosodic annotation* remains one of the major problem areas in annotation of spoken data. Prosodic annotation systems generally capture two phenomena: those which give prominence and those which divide the speech up into chunks or units (Grice et al. 2000). The standard system for annotating prosody (stress, intonation, etc.) is ToBI (Tones and Break Indices) and its own processing platform. Its phonological model was taken from Pierrehumbert (1980). A major criticism to ToBI is it needs to be substantially adapted for a new language or dialect. One widely extended and free of charge software for prosodic annotation is PRAAT³⁷. This programme is suitable for pitch, format, and intensity analysis with automatic detection of syllables.
- iv) *Pragmatic annotation*, or functional dialogue annotation, involves adding information about the kinds of speech acts or dialogue acts that occur in a spoken dialogue. The international Discourse Resource Initiative (DRI) provides a set of recommendations for the

³⁷ <http://www.fon.hum.uva.nl/praat> [Accessed 06/09/2010]

analysis of spoken discourse at the level of dialogue acts and at higher levels such as dialogue transactions. These were set out in the DAMSL manual (Dialog Act Markup in Several Layers) (Allen & Core 1997). Whereas other levels of annotation may to an extent be done independently, pragmatic annotation uses information from all the other levels. As noted by Grice et al. (2000), one of the main problems in analysing discourse is to separate form from content, that is to distinguish between the structural level and the functional one. In this respect, for example, it may happen that a speaker's turn correspond to one sentence on the structural level but on the functional level it may correspond to more than one speech act. Dialogue act annotation involves encoding different levels of discourse structure and identifying how they relate to one another at the pragmatic level. Pragmatic annotation, however, is the most subjective type of encoding. The analysis of data from this perspective is highly interpretative. To guarantee validity of the annotation the researcher double checks it with other researchers and, when necessary and possible, interviews the participants of the spoken event.

As mentioned above, there are some annotations such as morphosyntactic and parsing which are commonly done by computers. It is also worth noting that even in these types of annotation where the level of accuracy is high, hand edition is needed to solve 'grey areas'. There are other types of annotation such as pragmatic annotation where the process is commonly undertaken manually. All in all, the process of transcribing and annotating spoken language data is time consuming. Sinclair (1995: 102) urges caution when going through the process of annotating a spoken language corpus:

People should be allowed and encouraged to get on with what they want to do and not try to second-guess the future by putting in lots of annotations that they do not themselves want. In all the experience I've had of corpora for 30 years, we have never

once found ourselves with corpus annotations in such a state that another user really wanted them. The next user always wants something slightly different.

The annotation of the corpus will determine its potential applications and the investigation that will be conducted on it. However, the most interesting part to make a real good use of the time and effort devoted to the transcription and annotation of a spoken corpus is the integration of the different levels in a multi-layer structure. In the next section, I briefly describe some of the multimodal annotation tools designed for this purpose.

Multimodal annotation tools

Current multimodal annotation tools focus either on the management (link audio, video, transcript, and annotations) of data or upon the processes of coding previously collected data. In recent years a considerable number of tools have become available for annotation of digital audio-video data (see e.g. Maybury & Martin 2002, Rohlfings et al. 2006). Looking for an annotation tool is difficult since one has to decide about its usefulness and usability. In this section essential information about some of the available tools is summed up as an attempt to justify the one chosen to carry out the analysis in the thesis.

The first aspect considered for the selection has been the cost. Although some of the tools are available under licence (e.g. Transana), for the analysis I am interested exclusively on those which are free of charge. I have tested, with the data under analysis, and evaluated three tools: Anvil (version 4.7.7), DRS, and ELAN (version 3.8).

Anvil³⁸, the video annotation research tool (Anvil is a free video annotation tool which can be downloaded on request. It offers multi-layered annotation based on a user-defined coding scheme in time-alignment. Originally developed for gesture research, Anvil is now being used in many research areas including human-computer interaction, linguistics, ethnology, anthropology,

³⁸ <http://www.anvil-software.de/> [Accessed 06/09/2010]

psychotherapy, embodied agents, computer animation, and oceanography. Anvil can import data from phonetic tools like Praat which allow precise and comfortable speech transcription. Anvil can display waveform and pitch contour. As announced in the website, the new beta version (5.0) will also be able to import ELAN files. A drawback of Anvil is you have to invest a certain amount of time installing. Anvil allows for intuitive annotation at the expense of a moderate learning curve. Another issue is that the user's preferred annotation types must be specified in XML. XML is not difficult to learn but annotation schemes are moderately complex and defining them can be tricky.

DRS³⁹ (Digital Replay System) (French et al. 2006) was developed at the University of Nottingham initially to support ethnographic inquiry. DRS allows to import video, audio, and image files, and time-synchronise them with transcripts and annotations. The DRS concordancer is a powerful search tool used across one or more transcripts or annotation sets. It is designed to be used across entire corpora of multimodal data utilising specific phrases, patterns of language, or gestures codes as 'search terms'. Once presented as a concordance view the analyst may jump directly to the temporal location of each occurrence within the associated video or audio clip, as well as the full transcript. DRS can be used in standalone mode or server mode. Server mode is designed for sharing projects. In any case the software only works online. Some inconveniences of DRS are the amount of time needed to learn, the software does crash occasionally, and Internet dependency.

ELAN⁴⁰ (EUDICO Linguistic Annotator) (Wittenburg et al. 2006) is an annotation tool that allows to create, edit, visualise, and search annotations for video and audio data. It was developed at the Max Planck Institute for Psycholinguistics (MIP), Nijmegen, The Netherlands, with the aim to provide a sound technological basis for the annotation and exploration of multi-media recordings. ELAN is specifically designed for the analysis of language, sign

³⁹ <http://www.ncess.ac.uk/tools/drs/> [Accessed 06/09/2010]

⁴⁰ <http://www.lat-mpi.eu/tools/elan/> [Accessed 06/09/2010]

language, and gesture, but it can be used to work with any media corpora, i.e. with video and/ or audio data, for purposes of annotation, analysis, and documentation. ELAN supports: display a speech and/or video signals, together with their annotations; time linking of annotations to media streams; linking of annotations to other annotations; unlimited number of annotation layers or ‘tiers’ as defined by the users; different character sets; export as tab-delimited text files; import and export between ELAN and several programmes for annotation (Transcriber, CHAT, ToolBox/ Shoebox, Praat); and search options, as those described for DRS and with three different types of searching substring, single layer, or multiple layer search. ELAN is a professional tool to be used for the very time consuming manual annotation work of studying multimodal interaction. It is continually enhanced, although it remains a tool designed to work locally on personal computers. The source code of ELAN is Open Source which allows for researchers’ adaptations to their needs.

The above description attempts to bring to the fore the reasons for using ELAN in the thesis. Regarding usefulness, all of them allow time alignment between transcripts and annotations, and video and audio files. This is an essential requirement in the analysis of the co-expression of speech and kinesics. What makes ELAN more valuable for the study is it embraces Anvil’s concern for phonetic issues and DRS’s concordancer. As for usability, ELAN has a relatively shallow curve supported by a short getting-started guide with little terminology, and enables the creation of an ELAN file very quickly, and the official ELAN manual, which is rather long but well organised, clear, and useful. Besides ELAN does not need Internet connection, installation is simple, its stability guarantee no software crashes, and annotation values are Unicode characters which makes the task easy.

In this chapter, I have discussed the key issues of corpus linguistics and its contribution to the study of spoken discourse. An overview is given of the spoken corpora in English and of academic spoken corpora in particular. This has foregrounded the status, features, and availability of this specialised

database. Discussion on development of spoken corpora has provided insight into the procedure and aspects to take into account. The data for the thesis was already collected before starting the analysis (it belongs to a larger corpus), yet this constitutes essential knowledge for what is one of the novelties of the study, the multimodal transcription and annotation of the corpus. In addition, results of the comparative trial of the multimodal annotation tools gave me the reasons for selected the most suitable one for the aim of the analysis. In the next section, the methodology followed in the thesis is presented, as well as the aim of the study and the research questions.

CHAPTER 4

Methodology

CHAPTER 4

Methodology

The thesis is based on a cross-disciplinary study of evaluation in discussion sessions of conference paper presentations. My aim in this chapter is to provide a close look at the methodology employed in the compilation of the corpus and in its analysis. Besides, in the opening section of the chapter I describe the aim of the study and formulate the research questions that try to help to accomplish the objective of the investigation.

In Section 4.2, I deal with different aspects related to the corpus used in the analysis. I start with the features that influence the design, to move to the description of the corpus, and to give an inside account of the process of making it ready for the analysis. Furthermore, I discuss some key issues in the design, collection, transcription, and annotation of the corpus. Finally, in Section 4.3, I turn to the presentation of the methodology employed in the analysis of the structure of discussion sessions and of evaluation in Linguistics and Chemistry conference paper presentations.

4.1 The aim of the study and research questions

The present study aims at contributing to the research of academic conference paper presentations, particularly to the discussion sessions that follow them. The main purpose of this thesis is to explore the speaker's expression of evaluation in the DSs of two CPs in Linguistics and Chemistry from a multimodal approach. To accomplish this aim, I carry out a qualitative examination of the performance of evaluation in two sub-corpora of the Multimodal Academic Spoken language Corpus (MASC).

I set out to investigate evaluation in spoken academic discourse beyond the traditional linguistic approach inherited from the studies of evaluation in written genres, a mode more broadly explored. Thus, a multimodal approach, drawn from conversation analysis studies, is followed to foreground kinesics and paralanguage that co-occur with the linguistic expression of evaluation. However, it is the semantic resources of this interpersonal communicative feature that are taken as the point of departure of the analysis. This does not mean that I consider the two non-linguistic resources are subordinated to linguistic expressions, but the criterion has exclusively been adopted to narrow down the scope of the analysis. The thesis neither attempts to make an exhaustive exploration of kinesic aspects and paralanguage, nor looks for all their evaluative functions in the discourse. I set out to investigate the hypothesis that linguistic evaluation is not always expressed isolated but co-expressed with other non-linguistic resources. Besides, I consider relevant to pay attention not only to the presenter's evaluation when responding the discussant's comment or question, but also to the presenter's evaluative response which can be expressed before, when they act as listeners anticipating in this way their attitudes towards what the discussant is saying. In this respect, I aim at seeing the presenter's evaluative response that is co-expressed with the discussant's semantic and paralinguistic evaluation.

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 as yet hardly received any attention. The analysis of the structure will provide insights into how the interaction is organised, as well as how the interpersonal meaning emerges in the dialogue. Accordingly, I consider the description of the structure can be an enlightening stage in the analysis.

To accomplish the main objective of the thesis I have formulated three specific research questions:

1. How is interaction organised in the discussion sessions? Which are the disciplinary similarities and differences in this respect?

2. Is linguistic evaluation co-expressed with kinesics and paralanguage? Which are the disciplinary similarities and differences in this respect?

3. Does evaluation both linguistic and non-linguistic articulate the generic structure of the dialogic exchanges? Which are the disciplinary similarities and differences in this respect?

To answer the first research question I examine the following aspects: the flow of the DSs, the types of turns and the participants, the sequence of the dialogue, and the structure of the exchanges. Disciplinary similarities may be expected in the flow of the sessions and sequence of the dialogue. The answer to this question will accomplish two goals. It might shed light on the macrostructure of the DSs in these specialised conference paper presentations, and it will be a tool to establish the criteria for the selection of the exchanges that will be used in the analysis of generic structure and evaluation.

The second question looks for evidences to confirm or reject the hypothesis that the expression of evaluation is multimodal in nature. The answer to this question, if positive, will show the relevance of taking a multimodal approach to analyse evaluation in spoken discourse. In that case, I will try to foreground the contribution of non-linguistic features to the construction of this interpersonal meaning. On the other hand, the question is twofold. To answer it first I identify, following the appraisal model, the semantic evaluation projected by the discussant and the presenter. Then, I move to see the paralanguage and kinesics that co-occur with the linguistic expressions. To explore the presenters' deployment of evaluation, I analyse it in their responses as speakers and as listeners when evaluation is co-expressed with the discussants' evaluation.

The third question is based on the hypothesis that the expression of interpersonal meaning and particularly of evaluative meaning is central in the dialogic exchanges of the DSs. To the extent that it is evaluation that articulates the generic structure of the exchanges, that is, the rhetorical moves that shape the discussant's and the presenter's turns, what could be called the microstructure of the discussion. To test this hypothesis, I identify the different rhetorical moves in the dialogic exchanges and the expression of evaluative meaning. The corpora under examination are too small to show final conclusions in terms of rhetorical patterning, it can only show tendencies which will need confirmation in larger corpora; however, it will serve to confirm or reject the hypothesis.

The three questions also include cross-disciplinary examination to shed light on similarities and differences regarding interaction, generic structure, and evaluation in the DSs of Linguistics and Chemistry. My final objective in this study is to devise a new methodology, from a multimodal perspective, to analyse evaluative meaning expressed in dialogues between discussant and presenter in discussion sessions of conference paper presentations.

4.2 The corpus

The present study is based on the analysis of two small specialised corpora, the discussion sessions of the paper presentations of two conferences. The corpus was designed and compiled within the framework of a major project, the compilation of the MASC, already described in Chapter 3. As also discussed in that chapter, there are several aspects to consider when designing a spoken corpus, such as the size, variety of language, level of proficiency of the language, text types, and genre among others. Prioritizing one aspect over another depends on the purpose of the research that is going to be conducted on the corpus. In this respect, the aim of the analysis also determines the compilation of the corpus, how the corpus is collected, transcribed, and tagged.

In the following subsections, I will describe the criteria followed in the design of the corpus used in the thesis and how the compilation took place.

4.2.1 Corpus design

The criteria followed in the design of the corpus were based on the main objective of the study of MASC, the multimodal discourse analysis of academic spoken genres. The data explored in the present study are a selected set of the discussion sessions (DSs) that follow some of the paper presentations given in two international conferences in the fields of Chemistry and Linguistics (see full description of the corpus later in this section). The Chemistry conference, *Isotopes 07*, was held in 2007, in Benicassim, Castellón (Spain). *Isotopes 07* was the fifth conference in an informal series of meetings that started in 1999. The conference brought together leading scientists from all over the world. A total of 36 papers were presented across a range of areas on the science of isotopes. The Linguistics conference, *The Conference in Honor of John Swales*, was organised in 2006, in Ann Arbor, Michigan (USA), to celebrate the official retirement of Professor John Swales. All contributions to this conference, 24 in total, dealt with the topics of genre analysis and discourse analysis. Participants were international experts in the field of applied linguistics.

As discussed in Chapter 1, a contrastive study should compare items that are comparable; to put it in other words, both sub-corpora should have similarities to make possible the comparison. A close look to the factors that may influence the rhetoric and the performance (linguistically and non-linguistically) of the DSs of conference paper presentations can help to shed light on the *tertium comparationis* of the two sub-corpora. Figure 7 below shows six different aspects that may affect interpersonal meaning in discussion and therefore evaluation: the purpose of the conference, the relationship among the participants, cultural and personal features, environmental factors, others' turns

and the discipline. These factors do not operate individually but function as a whole.

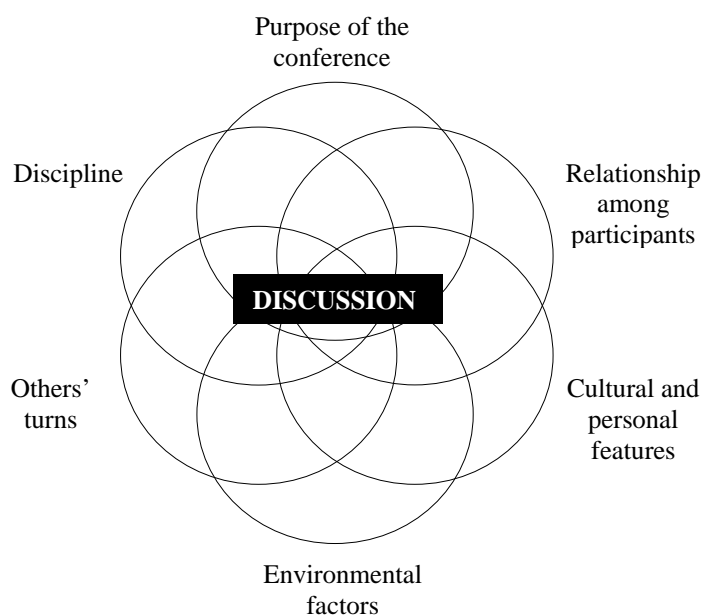


Figure 7. Influential factors in the interpersonal meaning of DSs

The first aspect that comes to discussion is the *purpose of the conference*. My first concern, when I selected those conferences for the contrastive analysis, was that both conferences should have the same objective: to create a site for bringing together specialists in a field of research to share investigation results and to open a forum for discussion. In the case of Linguistics conference, it was organised to honour Professor John Swales, the way to do it was by inviting applied linguists (who had had an academic relationship with him during his career) to present their studies. However, there was no difference in the primary objective both conferences pursued. Nevertheless, a dissimilarity was observed in the role performed by the chairs. In the conference on Linguistics, they had restricted roles, since the introduction of each presenter was made by the honouree who usually related a personal experience with the presenter/s. In view of this, chairs in Linguistics conference took their responsibilities lightly; for example, in general they allowed presenters to select their discussants. Furthermore, it is not surprising that the honouree was

in the limelight of the presentations, in the sense that most of the speakers had a special mention to him: they made a reference to his work (see example 1) and its influence (see example 2), to personal experiences (see example 3), or to his retirement (see example 4).

- (1) [...] in nineteen eighty-sev- eighty-six, John is probably the first author who called for a close uh coming together for a greater interdisciplinary integration of these various research traditions. [...]
- (2) [...] i want to thank uh John for having inspired the wonderful work that we've seen in the last two, two days. [...]
- (3) [...] thank you John. it reminds me of a number of things we used to do in Asten, but that was about, i don't know, twenty-five or thirty years ago. <LAUGH SS> it seems like so far away and yet so close, so probably_ i've been, been reminded of one of those stories here and in Montreal. [...]
- (4) [...] i'm sure you're all hoping that John in retirement will continue to fulfil that role and will come back as a guest and that's certainly something that happens in our context. [...]

However, in the discussion sessions, as well as in the presentations, the major concerns of the speakers were to present their views and to persuade the audience of the relevance and value of their research.

My second concern was the *relationship between the participants*. Both were small, focused conferences, with no parallel sessions; thus, the audience size was similar in all the presentations, around 50 people. Small conferences may help presenters to establish a good rapport with the audience. Some participants in the conference in Linguistics, as well as the organisers of the conference in Chemistry were interviewed to find out the relationship between the participants and its possible influence on the discussion sessions. They maintained that most of the participants already knew each other before the conference; mainly because we are talking of an international community of experts with specific and common research interests. The use of first names to address them can linguistically confirm this affirmation. The following examples illustrate interventions of the different participants during the

discussion session, in the two conferences. The chairs use first names to thank presenters after their speech and to open discussion (5), to give word to the next discussant (6), or to thank presenter and close discussion (7).

- (5) uh thanks Dan we've got time for one or two questions for Dan (if there are any) on the floor...any questions? (CDS7)⁴¹
- (6) Charlie (CDS2)
- (7) thank you Jane (LDS1)⁴²

The discussants also use first names to address other discussants (as in the overlapping transcribed in example 8), or a member of the audience (9). They also address the presenter to formulate their questions or comments (10).

- (8) [...] you destabilize the overall structure not stabilize it <Discussant 1><OVERLAP> uh Judy (xx) </OVERLAP> so that (xx) lemme just_ i i never mind <LAUGH> (CDS1)
- (9) Tony should have asked this one but i have heard of [...] (LDS10)
- (10) Carol are you finding that this is happening in a// this is a big controversy, right? [...] (LDS9)

Finally, the presenters give word to the discussants (11) or address the discussants by the first name during their turn (12). The last example is taken from the Linguistics conference. Here, the presenter shows her close relationship with the discussant, the honouree, by calling him Mr. Swales, which instead of a formal expression could be understood as a token of affection.

- (11) yes Tom (LDS3)
- (12) [...] and that raises a very good question Charlie [...] (CDS9)
- (13) okay thanks... yes Mr. Swales (LDS2)

The discussion session brings the presenters face to face with the audience. As the participants interviewed affirmed, DS in conference paper presentations could be considered the most stressful stage. The main reason they gave to

⁴¹ CDS stands for Chemistry Discussion Corpus.

⁴² LDS stands for Linguistics Discussion Corpus.

affirm this is that after presenting their research experience, they are fully exposed to an audience of experts (in these conferences most of them were senior researchers), who during approximately 20 minutes have been evaluating the presentation and comparing it with their previous knowledge and experience. Presenters should be ready to respond tricky questions and challenging comments; obviously, easy questions and nice comments do not pose major problems, but the difficulty lies in the uncertainty of the audience's reaction. In view of this, the relationship among the participants can play a crucial role to create a relaxed atmosphere for discussion. The main characters of the discussion are the presenter and the discussant; hence, the relationship between them would be the most influential in their questions, comments, and responses. However, the discussion opened between them is not an isolate event. The relationship the presenter and the discussant have with the rest of the participants may also constrain their performance. Figure 8 shows a tentative description of how participants relate in the DS.

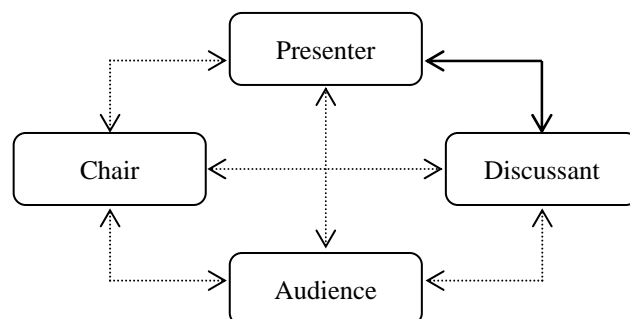


Figure 8. Relationship among the participants in DSs

The diagram represents the complexity of this social construct. During the conference paper presentation and the subsequent discussion session, the roles of the major participants change, in the sense that presenters will (again) be part of the audience after the discussion and consequently will become potential discussants; on the other hand, some of the discussants will become, if they have not been yet, presenters. As for the chairs, some of them, in both conferences, also play the role of presenters and discussants. The complex adoption of roles in these small conferences, where most of the participants

attend all the presentations, may also be done on the grounds of the relationship the participants maintain. Of major interest to the present contrastive study, however, is that the informants argued that the rhetoric and performance of the discussion did not differ from those adopted in other conferences on the same academic discipline.

So far, I have attempted to demonstrate that the purpose of the meetings and the relationship among the participants of these specialised conferences seem to be the same. However, there are other factors that may influence these comparable corpora of DSs which rather than constants are variables. In this respect, *cultural and personal features* may affect the questions, comments, and responses of the presenters and the discussants. However, I am neither a biographer nor interested in adopting an ethnographic approach to go into what could be a fascinating analysis. My final objective in this study is to find out a new methodology of analysis from a multimodal perspective; that is the reason why I primarily will focus on the linguistic and non-linguistic realisations of the participants' speech, not putting much emphasis on their cultural and personal backgrounds. On the other hand, the DSs are organised around an exchange structure where discussant's and presenter's turns succeed each other or overlap. Certainly, the *others' turn*, the meaning and how it is performed will constrain the response. This is the way the discussion is constructed. Turns are central in the exchange structure, in the sense that it is by turn taking that participants are included in the discussion. Nonetheless, as affirmed above and illustrated in Figure 8, the factors that may affect discussion do not do it individually but their spheres of influence overlap. How other's turns are performed depends on the other factors: the purpose of the conference, the relationship among the participants, cultural and personal features, environmental factors (such as problems with microphones, etc) and the discipline. This last variable, the *discipline*, has been the point of departure in a number of contrastive studies (see references in Chapter 1) that focus on evaluation in academic speech. Results have shown disciplinary differences; however, no attention has been paid yet to the interpersonal meaning of

evaluation in discussion sessions of conference paper presentations. The present study carries out a contrastive multimodal exploration of evaluation in the DSs of the two conferences.

The *tertium comparationis* of the two sub-corpora is essential to conduct a scientific contrastive study. On the one hand, there are factors that seem to have similar influence on the discussion –the main purpose of the conferences and the relationship among the participants. These features are beyond the corpus designer’s control since they are inherent to the event and the people that take part in it. However, there are other aspects that can be managed in the design of comparable corpora, I am referring to the corpus size and the data selection. The size has been determined by the approach adopted in the analysis, the multi-layered exploration of the expressions of evaluation and the co-expression of evaluative semantic meaning with kinesics and paralanguage. This type of analysis demands small corpora to carry out a qualitative exploration. The purpose of the thesis is to describe evaluation in both disciplines, rather than to make generalisations of linguistic and non-linguistic patterns, where a larger corpus will be needed.

The size of the two original corpora was different due to problems concerning data collection (see Section 4.2.3). The corpus on Chemistry comprised 11 presentations and the subsequent discussion sessions, in contrast to the 23 of the corpus on Linguistics. For the present investigation, only the discussion sessions were of interest. In view of this, a selected sample of ten DSs from each conference shapes the corpus. Two criteria were considered in the selection of these DSs. The first criterion was the number of presenters. Only one speaker should have presented the paper and thus he or she should be the only one responsible for responding the audience’s questions and comments. A preliminary analysis showed that when there is more than one presenter, speakers share responsibilities; in the sense that, presenters can give and seek for their mate’s support and even negotiate who is going to respond, using verbal and non-verbal language. Turn-taking organization and rhetoric might

tend to be more complex. It is not only the interpersonal meaning between presenter and discussant/s that would come into play but also the interpersonal meaning between presenters. Whereas in the conference in Linguistics six papers were discussed by two presenters, in the conference in Chemistry one presenter is always in charge of the presentation and discussion. The second criterion adopted in the selection was the number of turns. A turn is counted when a participant in the discussion (chair, presenter, and discussant) takes the floor. This criterion can give a tentative idea of the level of interaction in the discussion. Thus, the number of turns in the selected DSs should be as similar as possible. In the next section, I describe in detail both sub-corpora.

4.2.2 Corpus description

The initial exploration of the corpus was on the structural level. This analysis was conducted on the whole discussion session using two corpora of DSs. In addition, two sub-corpora of dialogic exchanges were selected for the study of the interpersonal meaning of evaluation. See in Appendices A and B in CD ROM the transcripts of the corpora of DSs, and the video recordings and transcripts of the corpora of exchanges respectively.

Corpora of Discussion Sessions

The corpus on Linguistics is part of a larger corpus which comprises 23 paper presentations and their subsequent discussion sessions from *The Conference in Honor of John Swales*. The total corpus comprises nearly 100,000 words. The discussion session sub-corpus consists of approximately 23,000 words. However, for the purpose of the thesis a selection of 10 discussion sessions make up the Linguistics Discussion Sessions Corpus (LDS). The corpus consists of nearly 12,000 words, 71 minutes, and 39 exchanges.

The corpus on Chemistry is part of the *Isotopes 07* conference, where 11 presentations and their discussion sessions comprise a total of approximately 67,500 words. The Chemistry Discussion Sessions Corpus (CDS) amounts to

nearly 8,500 words, 59 minutes, and 34 exchanges. See full description of the corpora in Table 4.

Code	Time	N. words	N. exchanges
Linguistics			
LDS1	9' 17"	1,561	5
LDS2	8' 08"	955	4
LDS3	8' 30"	1,586	3
LDS4	4' 33"	432	2
LDS5	5' 21"	883	6
LDS6	8' 28"	1,542	5
LDS7	6' 02"	1,043	4
LDS8	9' 53"	1,924	3
LDS9	7' 59"	1,238	4
LDS10	4' 11"	578	3
Total	71'02"	11,742	38
Chemistry			
CDS1	8'05"	1,126	4
CDS2	13'12"	1,812	6
CDS3	2'33"	304	2
CDS4	7'44"	1,195	3
CDS5	7'25"	1,014	5
CDS6	1,27	104	1
CDS7	8'17"	1,315	5
CDS8	5'59"	905	4
CDS9	2'11"	210	2
CDS10	3'14"	364	2
Total	58'47"	8,340	34

Table 4. Corpora of Discussion Sessions

Corpora of exchanges

As introduced in Chapter 1, Sinclair et al. (1972) define *exchange* as the basic unit of the interaction, because it consists of the contribution of at least two participants. In the present study, I have followed this definition and categorised what I have called *dialogic exchanges*. These types of exchanges refer to the dialogue held between discussant and presenter to make comments and questions, and to respond to them. The definition of this type of exchanges is necessary to distinguish them from other types of interaction where participants aim at organising the discussion rather than engaging in a dialogue. Another concept that is used in the present thesis is *dialogic pattern*. Dialogic pattern goes beyond the concept of adjacency pair postulated by Schegloff and Sacks (1973), where a question is followed by an answer, to embrace more

complex structures (Have 1999, Jefferson & Schenkein 1978, Sacks 1992, Schegloff 1980); for example, discussant's comment is followed by a question which is responded by presenter, where a three-turn dialogic pattern articulates the exchange.

The multimodal analysis of the evaluation was carried out in two subcorpora of dialogic exchanges drawn from each corpus of DSs. Only those exchanges that follow similar dialogic patterns in both corpora were selected for the analysis. Table 5 shows the subcorpora of exchanges. In Linguistics, I only had one possibility of choosing between two exchanges with the same pattern. I was in a dilemma at that point since, in one of the exchanges the presenter is most of the time out of focus both when listening and when speaking (see discussion on Collecting the data in Section 4.2.3).

Exchange	Discussion session	Time	N. words
Linguistics			
L-E1	LDS4	1'07"	176
L-E2	LDS5	0'19"	51
L-E3	LDS6	2'21"	212
L-E4	LDS8	1'16"	207
L-E5	LDS5	0'18"	27
L-E6	LDS2	0'56"	149
L-E7	LDS7	0'46"	121
L-E8	LDS9	1'58"	339
L-E9	LDS1	1'19"	262
L-E10	LDS2	2'53"	469
L-E11	LDS6	1'02"	157
L-E12	LDS10	0'52"	126
Total		15'07"	2296
Chemistry			
CH-E1	CDS5	2'44"	227
CH-E2	CDS7	0'41"	101
CH-E3	CDS8	1'19"	211
CH-E4	CDS9	0'56"	114
CH-E5	CDS8	1'06"	191
CH-E6	CDS1	0'51"	129
CH-E7	CDS2	1'08"	158
CH-E8	CDS7	1'22"	234
CH-E9	CDS6	0'29"	72
CH-E10	CDS2	1'02"	158
CH-E11	CDS3	1'38"	196
CH-E12	CDS5	1'14"	218
Total		14'30"	2009

Table 5. Corpora of exchanges

In the other exchange, presenter's response to discussant's praises is just "thank you". I decided to choose the first exchange for the analysis where there are presenter's linguistic evaluative data and also some non-linguistic data to be analysed. I reintroduce the criterion followed to select the exchanges in Chapter 5, Section 5.1.5, where a full description of the exchange patterns found in the DSs is given. As for Chemistry, there are not more exchanges of similar dialogic pattern than the twelve that comprise the corpus.

4.2.3 Getting the corpus ready

The data for the study was compiled in three stages: data collection, transcription, and annotation.

Collecting the data

The first stage in the compilation of a corpus is its collection. However, before collecting the data we need the participants to give their permission to be taped, in the corpus under study, to be videotaped. As already commented, the corpus is part of a major project, the Multimodal Academic Spoken language Corpus. Five different types of data gathered in the academic events make up the multimodal nature of MASC: slides, transcripts, handouts, and video and/or audio recordings. The procedure we follow to collect the data is first to contact with the organisers of the events. In many cases, the organisers give us the go-ahead to email the speakers. But it can also happen that the organisers become mediators. In both cases we write a formal email explaining the project. We only tape those speakers who give a positive reply to our request. The data are initially compiled for research purposes; however, participants also sign a consent form when part of the data is going to be published.

For the present study, the original corpus (presentations and discussion sessions) was videotaped and the organisers in both conferences played the role of mediators. However, sometimes the use of go-betweens entails a risk. An example of the difficulties that may appear when researchers do not contact

directly with the speakers is what happened in the Chemistry conference. The organisers informed us that we only had permission to tape 11 out of the 36 presentations and the discussion sessions; however, when the conference was over some of the speakers complained about not having been recorded. A major obstacle to compile data for a specialised academic spoken corpus is to have access to other areas of knowledge different from the researcher's one, since neither the organisers nor the participants are familiar with the methodology we use. In those cases, it is essential that once the organisers green-light our project we try to personally contact speakers to avoid misunderstandings. On the contrary, the conference on Linguistics was a smooth ride. Although researchers had contacted some of the speakers in advance, during the opening of the meeting the organisers announced that the whole conference would be videotaped. Only one presenter refused to be recorded.

Several aspects should be taken into account before and during the recording to guarantee the quality of the data. Special mention deserves those aspects related to the physical context and the speakers' performance. Before setting up the camera one should consider the size of the room, as well as the distribution of tables, computer/ OHP, aisles, window/s and door/s. On the one hand, the intrusion of the camera should cause as little trouble as possible to the presenters in the sense that, they should not feel threatened by the camera, otherwise their behaviour could change. The smaller the room the more difficult it is to create a comfortable environment and at the same time focus on the speaker. Moreover, the camera should neither prevent the audience from seeing the speaker, nor distract them from the presentation and discussion. On the other hand, a video recording can become a valuable source of data for analysis if the quality of the image and the sound is good. Light conditions are essential for the quality of the image. As for the sound, external microphones may help to improve it. The speakers' performance should also be taken into account when setting up the camera to focus on them all the time. Presenters may be sitting or standing up, but they can also move around. Accordingly it is

a matter of extreme importance to be careful in this issue, otherwise we could lose relevant data for a multimodal analysis.

The conferences the shape the data for the present study were videotaped⁴³ with a mini-DV digital video camera and an external unidirectional microphone plugged in the camera. One of the advantages of unidirectional microphones is that they seem to reduce ambient noise and to capture the sound of the image that is in focus. In the corpus, presenters were in focus during the presentations and the discussion sessions. In the conference on Linguistics we were able to use two cameras which allowed us to film also the audience. This is an important difference in the data collection that has determined that only the presenters' performance should be the centre of the contrastive analysis. The external microphones helped to get an acceptable sound quality of the presenters' speech. However, the sound quality of the discussants was lower, which sometimes made the transcription hard. In the Chemistry conference it was so because although the camera was set up in the middle of the room, among the discussants, the presenter was the one always in focus. In the Linguistics conference the second camera was set up at the front of the room to focus on the audience; however, audio recordings of those discussants sitting at the back did not have good quality. Regarding the image, quality was good in the Linguistics conference, but in the conference on Chemistry it was too dark because, during the presentation and discussion session, lights were off on behalf of an excellent slide show and only light coming in from back windows illuminated the room. Light condition was a fruitless negotiation with the organisers of the conference. Unfortunately, this reduced the quality of the video recordings which will affect the analysis of kinesics, particularly of face expression and gaze. In addition, even though I said the quality of the image in Linguistics was good, video recordings of this conference had the problem already mentioned in Section *Corpora of exchanges*, that is, in four exchanges the presenter is not on focus for few

⁴³ The conferences were video recorded by the group of research GRAPE (Universitat Jaume I). Professor Christine Räisänen (Chalmers Technical University) also participated in the recording of *The Conference in Honor of John Swales*.

seconds, which will also affect the analysis of kinesics. These problems can be attributed principally to two reasons; on the one hand, to the inexperience of collecting a multimodal corpus at that time, that was the first contribution to the MASC; on the other hand, to the fact that data was not collected originally for the purpose of carrying out the investigation done in the present thesis, therefore we were not so sensitive to those particular aspects of the recording and the consequences for this type of research. The next step in the collection of data is the edition. I used the video editing software Avid Liquid 7.0 to create .avi files.

The collection of data involved the audio and video recording described above, but also the collection of contextual information. To gather this type of information we employed an Observation Guide Sheet (see Appendix A). This form is currently used by the GRAPE (Group for Research on Academic and Professional English) to compile MASC. While recording the conferences, we observed how the paper presentations and the discussion sessions were performed and made a register during the observation about: the academic event (e.g. name of the conference) and the communicative situation, the speaker, the room, the audience, the props, the speaker/s' performance, the discussion, the recording, and any incident that occurs during the communicative act. The observation aims at fulfilling aspects that one cannot capture with the camera or the microphone and may help to understand the communicative act.

Transcribing the data

Once the audio and video recordings were edited, the next step was to transcribe what was said, that is, a verbatim transcription. The orthographic transcription was done for the original corpus (presentations and discussion sessions) in a collaborative work between the GRAPE and the English Language Institute (ELI), at the University of Michigan. Transcriptions followed the established MICASE conventions (see Appendix E for the most common symbols used in the corpus), where some contextual data were also

represented (i.e. XML tags and symbols were utilized to annotate potentially relevant features like speaker identity, speaker turns, speech overlap, laughter, backchannels and pauses⁴⁴). Transcribers were native speakers of English who were previously trained. The process was implemented by checking and editing the transcriptions, a task that was accomplished by a multidisciplinary team since the help of an expert in the field was necessary to check the Chemistry transcripts. The transcriptions of the conference in Linguistics were transferred to the ELI and gathered in a single corpus which was named *John Swales Conference Corpus (JSCC)*, a project that aims at complementing MICASE. As MICASE, transcripts of JSCC are also publicly available at the ELI corpora website⁴⁵.

Kinesics and paralinguistics were exclusively transcribed for the analysis of evaluation in the corpora of exchanges when linguistic evaluation is expressed. Therefore, it was done after the orthographic transcription. Changes in kinesics and paralinguistics that co-occur with semantic evaluation were identified and data were registered in the corpus with the help of the multimodal annotation tool ELAN (see detailed description of the use of ELAN in Section *Creating a multimodal annotated corpus*).

The scope of analysis of kinesics covered changes of: arms and hands gestures, facial expression, gaze direction, and head movement. 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 (thanks to a useful command in ELAN) to reveal any change, any micro expression (Ekman & Friesen 1969), not only of the face but any of the kinesic four aspects considered in the study, that are not observable in normal examinations and that could be related to the expression of semantic evaluation. Figure 9 shows a sample of identification of kinesics in ELAN in two frames of L-E6

⁴⁴ For a detailed documentation of the MICASE transcription conventions, cf. the MICASE manual at <http://micase.elicorpora.info/micase-statistics-and-transcription-conventions/micase-transcription-and-mark-up-convent> [Accessed 06/09/2010]

⁴⁵ <http://www.elicorpora.info/> [Accessed 06/09/2010]

data clip. The sample captures a change in the facial expression of the speaker. The presenter raises eyebrows, a kinesic feature that lasts 114 milliseconds, and whose co-expression with the evaluative adverb *often* in the sentence *how it's often taught* would be difficult to capture in a different way.

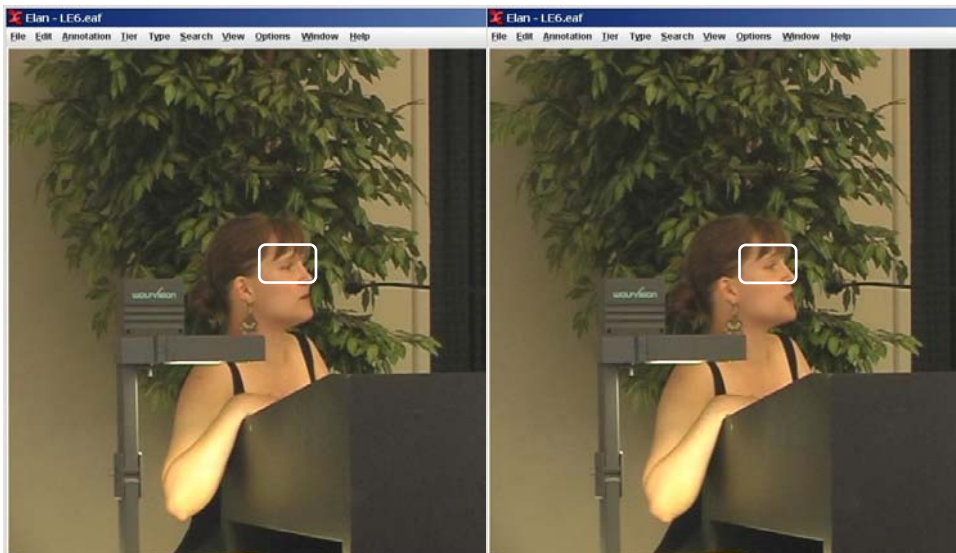


Figure 9. Sample view of identification of kinesics in ELAN

In the exchanges in the Chemistry discussion sessions, due to the quality of the videotapes, it was not always possible to determine the exact direction of eye gaze. As a result, assumptions had to be made on body and head orientation. As for facial expression it was not possible to be determined. On the other hand, the transcription of gestures was made broadly, in the sense that in the present study I am not interested in the gestures themselves, but in how they are co-expressed with evaluative semantics. For this reason, I did not use an accurate identification of the three phases of prototypical gestures (Kendon 1980) (i.e. preparation, stroke, and retraction). Nonetheless, a preliminary study showed preparation and stroke commonly co-occur with linguistic evaluation. In Linguistics some presenters stay behind the lectern during the discussion with the consequence that at some points hands movement cannot be described completely. In these few cases (only four), the gesture has been transcribed just as “hands movement”.

Regarding paralinguage, as the starting point of the analysis is the semantic evaluation, its examination was limited to changes in the pronunciation of discrete words. This approach narrowed the transcription to changes in the speaker's voice quality (i.e. loudness) and voice qualifier (i.e. syllabic duration) (after Poyatos 2002). The identification of loudness was done by the comparison with the surroundings. Sound waveforms available in ELAN were essential at this stage since waveforms reach the highest peaks when loudness gets up and the lowest peaks when it gets down.

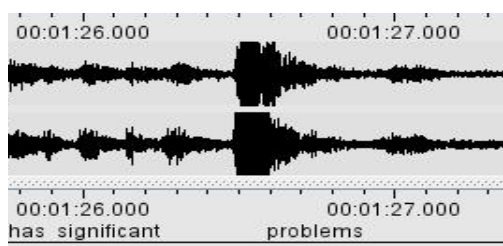


Figure 10. Sample view of identification of paralinguage voice quality in ELAN

Figure 10 shows a sample of identification of loudness-up in ELAN of a fraction of clip CH-E1, where the maximum amplitude of the waveform of the evaluative word *problems* corroborate the phonetic perception of the stressed noun. As for voice qualifier, changes in the syllabic duration refer to whether the word is pronounced faster or slower than expected in the discourse, that is, in comparison with the pronunciation of surrounding words. Figure 11 shows a sample of identification of long syllabic duration in ELAN of a portion of L-E1. By comparing duration of the evaluative utterance *tends to be more broad*, it can be observed that the adjective *broad* is attributed with a paralinguistic feature. Whereas the verb *tends to be* is pronounced in 582 ms and *more* in 222 ms, the adjective, despite being a monosyllabic word similar to *more*, lasts 594ms, a duration even higher than the pronunciation of *tends to be*.

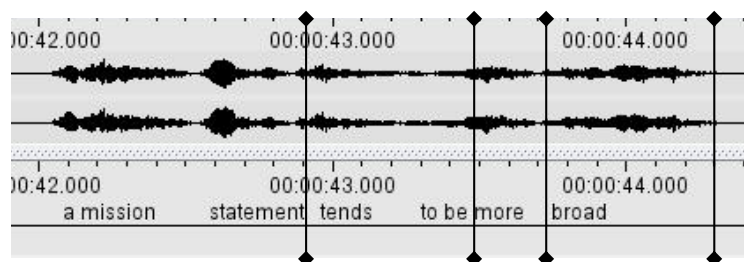


Figure 11. Sample view of identification of paralinguistic voice qualifier in ELAN

I have also included for the analysis the transcription of laugh, a type of differentiator (following Poyatos 2002) or of voice qualifier (after Roach et al. 1998). I have considered speakers' instances of individual laugh in contrast to episodes of general laugh which are not included in the data (see Wulff et al. 2009: 86-89), since I understand them as the expression of the speakers' attitude towards what they are saying. This is a non-linguistic vocal effect which shows emotional reactions, thus I cannot obviate this fact. Other aspects such as intonation (as discussed in Chapter 1) would appear in holistic analysis rather than exploring paralinguistic of discrete items as the thesis does.

Annotating the data

As already described, annotation differs from transcription in its content. Rather than capturing overtly observable aspects, annotation focuses on more abstract relationships. Annotation, as the collection and the transcription of the data, is determined by the purpose of the study. In view of that, a pragmatic or functional annotation was done on the verbal language to examine the structure of the discussion session and the linguistic evaluation.

Regarding the annotation of the structure, it is important to note that the analysis conducted was corpus driven. Therefore, all the tags used in the annotation were not pre-selected before the analysis, but drawn from the findings. The corpus was annotated to shed light on the flow of the discussions, to see how turn-taking operates in DSs of specialised CPs. Three different types of tags were used to this aim: the identification of the *participants* (speaker and addressee), the *type of turn* and its *position* in the discussion. All

three were assembled in the following string which identifies each of the turns taken and the overlapping:

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

Regarding the identification of the *participants*, even though it has been said that the identity of the speakers was already captured in the orthographic transcription, it is remarkable that I have adapted MICASE conventions to identify the role the participants play in the interaction. That is, instead of identifying the participant by the order they speak (S1, S2, etc.), I identified them by the primary role they play as chair, presenter, discussant, or audience. Besides, discussants are also assigned a number that shows the order in which they speak. I maintained unknown speaker/s and two or more speakers tags. Moreover, the name used for the tag was *participants* instead of *speakers* (as in the MICASE) since I aimed at identifying a further functional level, if they are speakers or addressees. As regards the *type of turn*, the function that each turn the participants take in the DS has been labelled. The third tag identifies the *position of the discursal turn* in the discussion. The dialogue between discussant and presenter can occur in two turns or in several turns. In order to trace the complexity of the sequence it has been annotated when the discussant's and presenter's turn starts the exchange, or when it is a follow-up turn. Follow-up turns have also been numbered. When there is not follow-up, only start turns are tagged even though they start and finish the exchange.

Example 14, taken from LDS10, illustrates how the exchange between the first discussant in the exchange and presenter is annotated in the corpus. The discussant formulates a question to the presenter to start her turn <D1:Q_S~P> and the presenter responds <P:R_S~D1>. However, the discussant does not consider the interaction is finished after the presenter's response and goes on with a follow-up question <D1:Q_FU1~P> which is also responded by the presenter <P:R_FU1~D1>, first attempt with an overlapping and then in his turn.

- (14) <D1:Q_S~P><U WHO=D1-f> um, (were these others) that worked in these (fields) were guest editors or were they all the official editors </U>
 <P:R_S~D1><U WHO=P-m> um, both both kinds. uh um and the_ in in linguistic and in meds- in medical uh journals yes </U>
 <D1:Q_FU1~P><U WHO=D1-f> cuz i just wondered if they might get kind of a different, um, well different kind of type of editorial from a guest editor, who doesn't usually get the floor <P:R_FU1~D1><U WHO=P-m><OVERLAP> absolutely, mm </OVERLAP> and might use the opportunity to say things uh_ you know, put forward their views and... </U>
 <P:R_FU1~D1><U WHO=P-m> > yep, yep. certainly, there's lot of variation from one journal to another, so that they seem to have their <U WHO=SU-m><OVERLAP> in-house style </OVERLAP> in-house customs and perceptions of the genre, but also according to the the author. [...]

The annotation of the corpus of discussion sessions (LDS and CDS) allowed to see, among other aspects, the sequence of the dialogues held in the exchanges (i.e. a question is followed by a response, a comment is followed by a comment and the like). This analysis has determined the selection of the recurrent structural patterns of the dialogues that make up the subcorpora of exchanges (L-E and CH-E) to conduct the analysis of evaluation. These two subcorpora have been also functionally annotated in terms of the moves that shape the dialogic patterns and also in terms of linguistic evaluation. The tags used to mark the moves were also driven by the corpus. However, the annotation of linguistic evaluation follows the appraisal model. I considered interesting for the study to tag whether the semantic evaluation expresses one or more than one of the three systems of the model: attitude, engagement, and graduation.

In the next section I describe how these annotations and the transcriptions were incorporated to the corpus to carry out the analysis. Before moving to the description of how the multimodal annotated corpus was created, I would like to note the importance of tagging (structure and linguistic evaluation) not only by the examination of the orthographic transcription but, even at this stage, by the consideration of the whole performance, that is, audio and video recordings

too. The multimodal approach might help the analyst to make a more accurate interpretation, closer to the reality. It is important to bear in mind that in the interaction, participants interpret their interlocutors' speech on the basis of what they listen, the content and the way it is said (that is linguistics and paralanguage), and what they see (kinesics, visual aids, and any physical interaction with the surroundings). The study of certain aspects of interpersonal meaning in spoken discourse (like those examined in the present work), which were based exclusively on the analysis of the transcripts could cause analysis inaccuracy.

Creating a multimodal annotated corpus

As described in previous sections of this chapter, the present study analyses the data from two approaches. First, I focused on the structural level of DSs from a top-down approach. At this level, the analysis was conducted on the corpus of DSs (see Table 4). The whole corpus was transcribed following MICASE conventions, and annotations were added to the transcriptions. Then, I explored moves and multimodal evaluation in the subcorpora of exchanges (see Table 5). The examination of moves did follow a top-down approach but the exploration of multimodal evaluation followed a bottom-up approach. At this level of analysis the use of a multimodal annotation tool made the work easier, since it was necessary to time-synchronise the different levels of transcriptions (orthographic transcription, kinesics, and paralanguage), the annotations (moves and evaluative semantics), and the sound and video data. I used ELAN tool to accomplish this task (see comparison with other multimodal annotation tools in Chapter 3, Section 3.4.3).

With this tool I was able to create as many layers or tiers (as the programme calls them) as needed for the different types of transcriptions and annotations. In the thesis I use up to ten tiers: two for orthographic transcriptions (discussant's and presenter's), two for linguistic evaluation (discussant's and presenter's), one for moves, one for paralanguage, and four for kinesics (gesture, head movement, gaze, and facial expression).

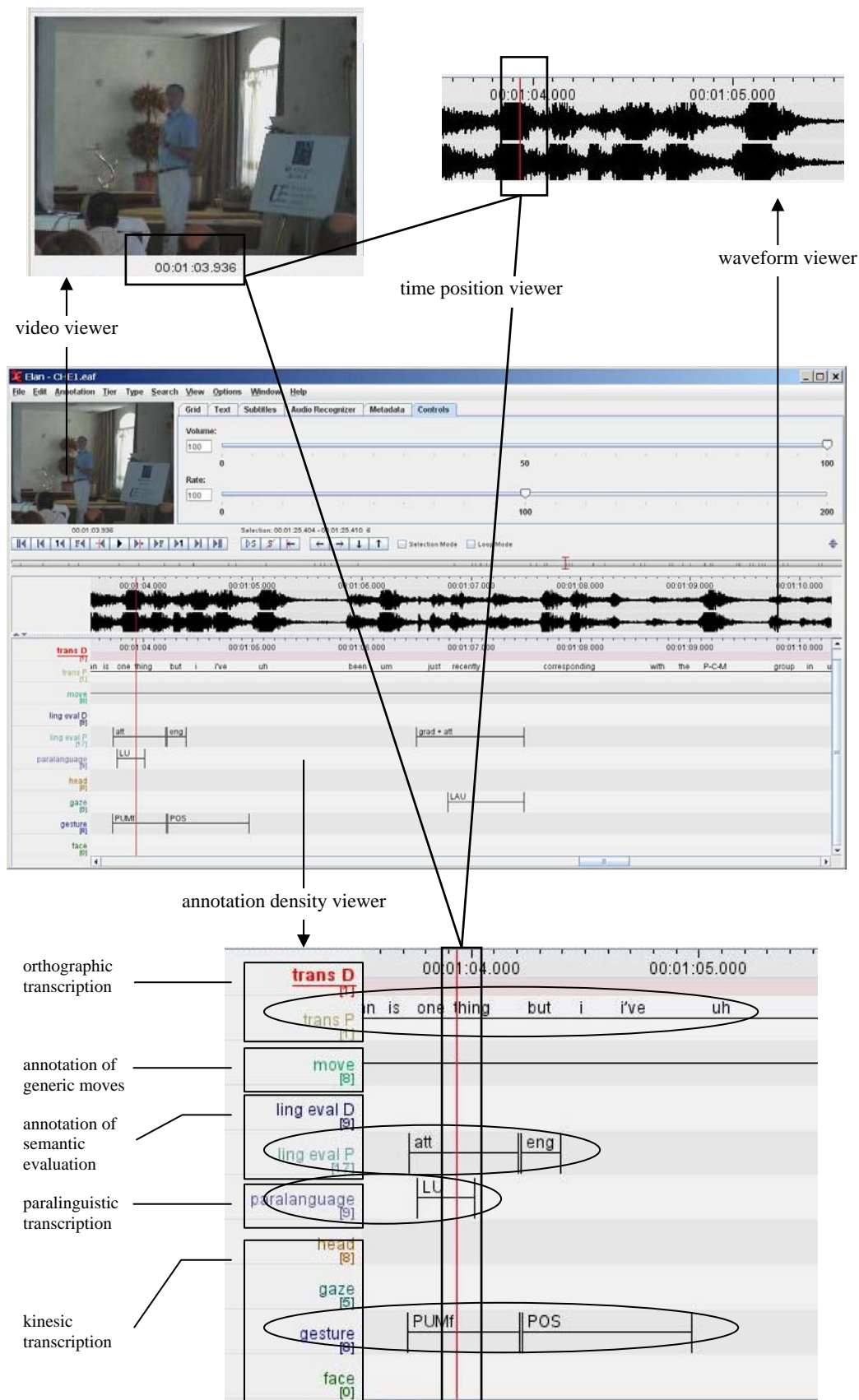


Figure 12. Sample view of multimodal annotation in ELAN

Figure 12 shows a sample of multimodal annotation view in ELAN of a portion of CH-E1 data clip. I have enlarged in the figure the four viewers that work in ELAN: video, waveform, annotation density, and time position. All viewers are synchronised and thus display at the same point(s) in time. The first stage was to introduce the plain orthography transcriptions and synchronise them with audio and video data. Sound waveforms were a useful aid at this point. Then, I annotated moves and linguistic evaluation of presenter and discussant. Finally, the transcriptions of kinesics and paralinguistics were done on the grounds of the semantic evaluation. Once all the data were introduced, I could start the analysis with the aid of a search tool also available in the programme. Manual extraction of data was necessary in the qualitative approach of the study.

4.3 The analysis

The present analysis was framed in a social semiotic theory of language (Systemic Functional Linguistics) and of non-verbal systems drawn from Conversation Analysis. The multi-layered exploration of the interpersonal meaning in the discussion sessions of conference paper presentations paid attention to the exchange structure, to linguistic expressions of evaluation and to the co-expression of evaluative semantics with kinesics and paralinguistics. Enlightening for the methodology followed in the study has been Hood and Forey's (2005) multimodal discourse analysis of the set-up stage of conference plenary presentations in English.

The methodology used in this study followed Sinclair's (2001: xi) concerns for the exploration of small corpora. He claimed a small corpus can be analysed using interactive and automatic techniques, that is, manually and processing it by means of a computer. The methodology followed here reflects both approaches; on the one hand, I used the computer to mark and retrieve data following corpus linguistics methods (see Chapter 3); on the other, I drew a qualitative multimodal analysis (see Chapters 1 and 2). Thus, I designed

electronic texts, and read, watched, and listened to them carefully. This approach is especially appropriate when analysing meaning (in the thesis the interpersonal meaning of evaluation) rather than form, and when carrying out a multimodal analysis where data of different nature come into play at the same time. The exploration of small corpora in the present study will enable me to bring to the fore insights from a global perspective, only feasible with this corpus size.

4.3.1 The analysis of the structure

Given the relative lack of previous research on DSs, it seemed important in a study concerned about interpersonal meaning to first see how interpersonal relations are articulated in the discussion. The structural analysis was carried out by a careful examination of the annotations on the participants (speaker and addressee), type of turn, and position of the turn in the corpora of DSs. Systemic Functional Linguistics and Conversational Analysis techniques were followed to describe the flow of the sessions (Ventola 2002), the turns and the participants, and the sequence of the dialogues held between the discussant and the presenter as well as their patterning. Such approach will provide an overview of the microstructure of DSs.

The second stage in the structural analysis was the description of the dialogic exchanges (Sinclair et al. 1972) of those patterns shared by both disciplines. To this aim, the corpora of dialogic exchanges were carefully examined to identify discourse moves (Swales 1990) that shared communicative purposes. The examination of the microstructure, however, was also done to verify there is a close connection between evaluation and the generic structure of dialogic exchanges. To this aim, generic moves were examined alongside evaluative meaning in an attempt to see how speakers' attitudes articulate the microstructure of DSs in conference paper presentations.

4.3.2 The analysis of evaluation

The social academic construct of DSs is characterised by the evaluative nature of the discourse. Wulff et al. (2009) identified language patterns of hedging devices, positive and negative evaluation, and flagging suggestions; all of them showing speakers' evaluation. However, a recurrent idea in this thesis is that evaluation might not only be expressed by linguistic resources, paralinguistic and/or kinesics might also help speakers to communicate their assessment of the world. Furthermore, it is not only speakers who may use non-linguistic expressions to evaluate, since addressees may also evaluate while listening. In the present study, I have focused on the examination of evaluative meaning expressed by the presenter, when acting as an addressee (listening to the discussant's comments and questions) and as a speaker.

The analysis of the semantic resources to express evaluation followed the appraisal model (Martin & White 2005) which, as described in Chapter 2, identifies three big systems which in turn are articulated into other subsystems. Briefly, according to the model, three domains define *attitude*: *affect* as the resources for expressing feelings, *judgement* as the resources for judging character, and *appreciation* as the resources for evaluating the worth of things. *Engagement* envisages the possibility of two dialogic alternatives, *expansion* when alternative positions and voices to the authorial voice are expressed, and *contraction* when the authorial voice fends off alternative positions. The third system, *graduation*, adjusts the grade of evaluation through the force, grading the *intensification* and the *quantification*, and the focus, *sharpening* and *softening* non-gradable things.

This model, however, was initially developed for the examination of written texts, and although it has been validated for the analysis of spoken discourse, to my knowledge no studies have focused on so high interactive discourse as the exchanges of discussion sessions are. For this reason, certain changes were necessary to make the model suitable for the needs of the discourse under

scrutiny. Figure 13 shows the model of analysis of the semantic resources. The adjustments were the following. First, I described a fourth type of attitude, *acknowledgement*, to consider under this label speakers' expression of agreement or converging on a topic, in their turn as speakers and as listeners' response or backchannels (O'Keefe & Adolphs' (2008) convergence response tokens). One could think that appreciation of abstract concepts could embrace these evaluative utterances; however, I consider this type of attitude distinctive of interactive situations. Acknowledgement could be described as the evaluation of the alignment with the interlocutor. Secondly, to adjust the force of evaluation instead of using the global term intensification for grading up and down, I distinguish between intensification (e.g. really) and mitigation (e.g. often) (after Crawford 2009).

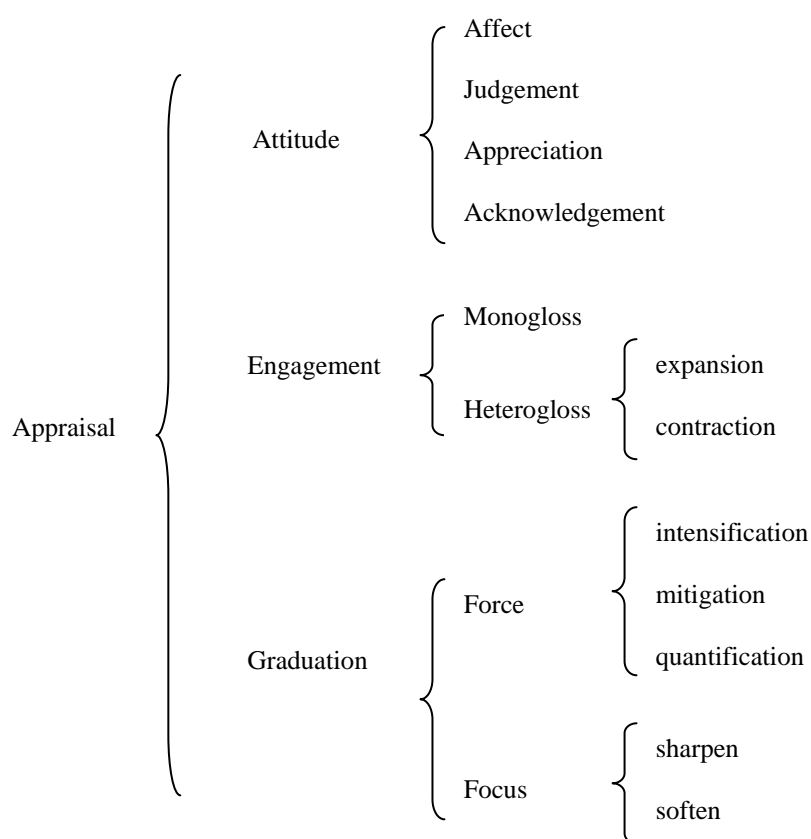


Figure 13. Model to analyse semantic evaluative resources

There are certain rhetorical devices which, although they can be considered evaluative, are not part of the analysis since the scope is narrowed down to semantic evaluation. That is the case of self-repair, as for example in “I had we all had busy weeks [...]” (L-E4) or “we calculated bindings well not binding but calculated [...]” (CH-E4). I consider self-repair is evaluative in that it shows a change of mind because the speaker evaluates what s/he has just said and rewords it. In the first example the speaker first thought might be “I had busy weeks”, however, she might have evaluated the audience she is talking to and eventually decides to include them in the comment “we all had busy weeks”. However, only the semantic evaluation of those instances is part of the study; as in the second example where the speaker uses *well* to mark the self-repair followed by the expression *not [...] but* to make explicitly his evaluative thought, introducing in the second part of the comment a more accurate description of what they calculated. Furthermore, there are also a few examples of another type of self-repair where the speaker anticipates part of the discourse and immediately reformulates it; as in “deformation can be more can be observed more easily” (L-E10) or “some of them might you know, there might be” (L-E12). In the first example the change may be due to the formulation of what the speaker may consider a more grammatically correct utterance “can be observed more easily” instead of “can be more easily observed”. However, although an evaluative utterance is used in the expression, “more easily”, there is not explicit semantic evaluative mark of the self-repair. As for the second example, there is a change from personal subject “some of them might” to impersonal subject “there might be”, which is made by the use of the discourse marker *you know*. I consider this marker an evaluative utterance in the rhetorical device of self-repair. The two phenomena, though evaluative, are not in the scope of the analysis but only the evaluative utterances that express self-repair. The same occurs with expansion when the authorial voice attributes the proposition to some external source, here the rhetoric device (reported speech and direct speech) is not analysed but the introductory utterances that indicate engagement, e.g *I think, they said*.

The analysis of semantic evaluative resources did not look for a set of lexical items but took a corpus driven approach to identify any evaluative instances and organise them according to the model described in Figure 13. Furthermore, the examination of evaluation followed a prosodic perspective, an approach suitable to see the connection between evaluative meaning and generic structure. In this respect, following Martin and Rose (2003), appraisal resources are used to establish the tone of the speech, “as choices resonate with one another from one moment to another as texts unfolds. The pattern of choices is thus ‘prosodic’. They form a prosody of attitude running through the text that swells and diminishes, in the manner of a musical prosody” (ibid.: 54). As these authors, I consider the prosodic pattern of appraisal choices constructs the position of the appraiser.

Nonetheless, the major contribution of the thesis is the global examination of the transcription of paralinguistic and kinesic resources co-expressed with linguistic evaluation, to shed light on the underlying reasons for disciplinary similarities and differences of evaluation. As described in Section 4.2.3 of this Chapter, the analysis of paralinguistic was narrowed to the identification of two features, the speaker’s voice quality (i.e. loudness) and voice qualifier (i.e. syllabic duration) (Poyatos 2002). Regarding kinesics, functions of these non-linguistic resources are categorised following the previous studies on gestures. Four categories define the model of analysis: *referential* function when the kinesic feature represents any aspect of the content of the utterance (Kendon 2004); *cohesive* when kinesics link part of the discourse (McNeill 1992); *interactive* used to maintain interaction rather than conveying meaning (Bavelas et al. 1989, 1992); and *pragmatic* that in turn can be *performative* showing the speech act, *modal* showing how the utterance is interpreted, and *parsing* showing punctuation in discourse (Kendon 2004) (see literature review in Chapter 1). The model is summarised in Figure 14.

In addition, the extensive literature on gestures has also given the framework to classify these types of kinesic features. I have adopted McNeill’s (1992)

taxonomy that distinguishes four types of gestures: iconic, metaphoric, beats, and deitics; as well as the rules governing speech and gesture synchrony, phonology, semantic, and pragmatic, also conceptualised by this author.

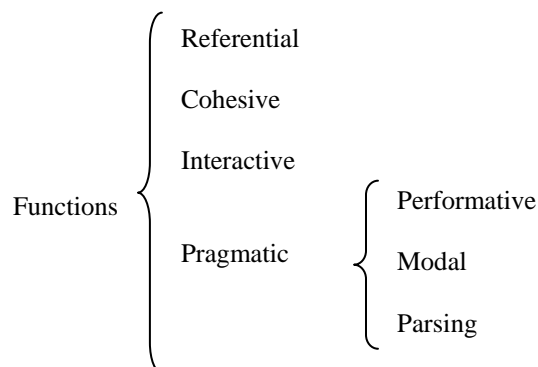


Figure 14. Model to analyse functions of kinesic resources

Furthermore, interpretation of evaluation was also done in pragmatic terms where politeness strategies (Brown and Levinson 1987) essentially seemed to clarify the appraiser's stance.

In the next chapter, I present results of the contrastive analysis of the interpersonal meaning of evaluation in DSs. These results are discussed to stress the most salience tendencies in both disciplines and to bring to the fore the contribution of this multimodal approach to the study of evaluation in academic spoken research genres.

CHAPTER 5

Results and discussion

Results and discussion

In the foregoing chapters I have presented the theoretical and methodological framework adopted in the study. In this chapter I account for the findings on the analysis and the discussion which is presented in three sections, following the three research questions posed in the thesis. In Section 5.1, interaction in DSs is described from the analysis of the macrostructure. Section 5.2 focuses on evaluation, describing semantic evaluative meaning and its multimodal expression. Finally, in Section 5.3 the relationship between the generic structure of the dialogic exchanges and evaluation is revealed.

5.1 Interaction in discussion sessions: analysis of the macrostructure

To understand the interpersonal meaning expressed in the DSs of conference paper presentations the analysis of the structure would shed light on how the interaction among the participants occurs. To accomplish this aim, first I will present an overview of the exchange structure. Then, I will present findings on the participants and the turns they perform. And finally, I will describe the structure of the dialogue between the discussant and the presenter, how the dialogic sequence is organised.

5.1.1 The flow of the discussion session

The analysis of the exchange structure has revealed that the flow of the DSs in small specialised CPPs is a complex social construct. A flow-chart like the one in Figure 15 on the next page conceptualises the sequencing of the different types of turns, the participants' interventions and how the dynamic variation in

discourse is unfolded. Ventola in 2002 provided a general picture of what might be the expected flow of the discussion and the expected speakers' roles; however, as she already noted it was in "relatively simplified form" (ibid.: 36) (see Figure 4). The present analysis contributes with a more complete portrait of the flow of the exchange structure.

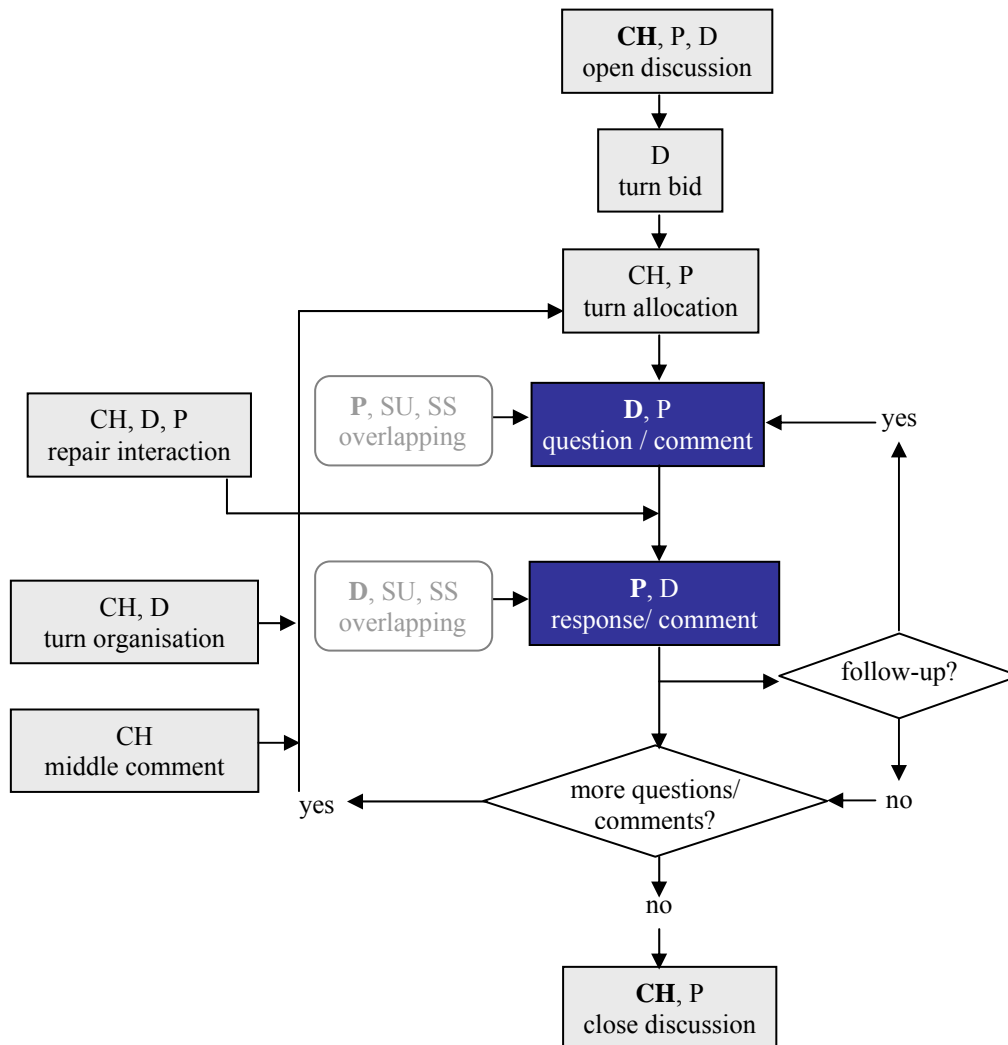


Figure 15. The flow of Discussion Sessions in specialised paper presentations

Abbreviations have been used to indicate participants in the discussion (CH stands for chair, D for discussant, P for presenter, SU for unknown speaker and SS for two or more speakers in unison). When more than one speaker can perform a turn function, bold letters are used to mark the speaker who commonly takes the turn, if any; that is, a label like "**CH**, P, D open

discussion” means that although instances in the corpora have shown that “open discussion” can be done by the chair, the presenter, or the discussant, usually discussion is opened by the chair.

Results have revealed that participants’ intervention in the DSs may accomplish two primary functions: to structure and organise the discussion, *metadiscoursal turns*; or to construct a dialogue between the discussant and the presenter, *discoursal turns*. Though evident, this distinction is new in the description of the exchange structure. Metadiscoursal turns delimit the discussion (signalling the beginning and the end of the session; that is, opening discussion turn and closing discussion turn), control and organise the flow of the discussion (biding, allocating and organising turns and middle comment turn) and solve problems during the discussion (repairing interaction turn). Findings have disclosed that three of these types of turns were not identified in Ventola’s synoptic view (2002): organising turns (generally to control discussants’ long turns, or to organise discussants’ order of participation), middle comment turns (to announce the end of the session and to give the last opportunity for comments and/or questions) and repairing turns (to solve problems (commonly of audition) to make the interaction possible). On the other hand, discoursal turns occur at the core of the discussion in the dialogue open between the discussant and the presenter, with the discussant’s comments and/or questions and the presenter’s responses and/or comments.

Another contribution to the description of the flow of the DSs is the participation of the speakers. Whereas the standard picture of these sessions had described speakers adopt fixed roles in the discussion, results have revealed that even though the main roles of the speakers are clearly defined, they may fulfil other functions taking “others’ responsibilities”, e.g. the function of turn allocation, commonly done by the chair, can also be accomplished by the presenter. This situation was already noted by Wulf et al. (2009) when analysing chairs’ utterances in DSs.

The dialogue between the discussant and the presenter had also been simplified (Ventola 2002) in terms of an adjacency-pair sequence (comment/ question – response). Results have shown that the sequence may occur in two turns, as already described, or in more than two turns. Furthermore, discussants make a comment or ask a question, but there are also instances of comments followed by questions and more complex combinations between comments and questions. On the other hand, the presenter may respond the discussant's questions but also make a comment, or respond and make a comment. In Section 5.1.3, I will discuss findings on the sequence of the dialogue; however, for the description of the exchange structure in Figure 15 I have considered it synoptically and I have just noted the possibility of taking follow-up turns and making comments, asking questions or responding.

Finally, I have also considered relevant to bring to the fore the episodes of overlapping since in some occasions they may play a discursal function in the dialogue, which, as results have revealed, may be significant in the interaction and therefore for the understanding of the interpersonal meaning. Therefore, I have also included in the flow-chart the presence of overlapping at the core of the discussion.

5.1.2 Types of turns

The first contribution to the description of the exchange structure is the two primary functions of the turns taken in the discussion, metadiscursal and discursal. It is not surprising that in both disciplines discursal turns are more frequent than metadiscursal ones, 75% in Linguistics and 69% in Chemistry, as illustrated in Table 6.

Whereas in Chemistry the bulk of the metadiscursal turns falls on the chair, in Linguistics the presenter plays as important metadiscursal role as the chair. The chair's participation in Chemistry is about 12% higher than in Linguistics; whereas the presenter's participation in Linguistics is this very same

percentage higher than in Chemistry. Such a difference shows how the presenter in Linguistics has taken the chair's metadiscoursal turns. However, this situation should not be considered a disciplinary difference since, as it has been already described in Chapter 4, chairs in this precise Linguistics conference take their responsibilities lightly.

Speakers	Linguistics				Chemistry			
	Metadiscoursal		Discoursal		Metadiscoursal		Discoursal	
	N. turns	%	N. turns	%	N. turns	%	N. turns	%
chair	19	13	-	-	35	24	-	-
discussant	-	-	59	41	5	3	55	38
presenter	18	12	49	34	6	4	45	31

Table 6. Participation in the DSs

On the other hand, it seems that in the discussion *per se* the percentage of discoursal turns taken by the presenters and the discussants is nearly the same in both disciplines, being the discussants a bit more participative than the presenters in terms of number of turns taken. In view of this, it can be noted that, even though there appear to be differences in the level of participation of the speakers in both conferences, that variation is only at the metadiscoursal level and it could not be attributed to disciplinary differences.

Metadiscoursal turns

Regarding the types of turns, seven different *metadiscoursal turns* have been identified in the corpora: opening comment, turn bid, turn allocation, repair interaction, turn organisation, middle comment, and closing comment.

a) Opening discussion is a statement to note it is time for comments and questions. It is commonly preceded by thanking presenters for their presentation.

(15) Chair: so we still have about seven minutes for questions (LDS1)

(16) Chair: questions? (CDS3)

b) Turn bid is a statement to take the turn. In the following example, the discussant has to bid the turn twice, since the presenter did not see him among the audience.

- (17) Discussant: I have a question. that's good?
 Chair: yeah
 Discussant: I have a question, I'm here...
 Chair: over here
 Presenter: ah (CDS2)

c) Turn allocation is a statement to organise the turn-taking and let discussants take the floor.

- (18) Presenter: yes (LDS7)
 (19) Presenter: Darren (CDS5)

d) Repairing interaction is a statement to solve problems in interaction unfolding, commonly audition problems. In example 20 the presenter overlaps the discussant and she takes the turn, to urge the discussant on to speak louder; whereas in the second example it seems the discussant has the microphone off.

- (20) Discussant: um, when I was looking at what you were showing us I was thinking
 <Presenter: OVERLAP> can you talk up a little bit (in the camera)? </OVERLAP>
 [...] (LDS9)
 (21) Discussant: may I? <PAUSE: DUR=05> is it on?
 Unknown speaker: is it on? (xx)
 Chair: I don't think this is on (CDS1)

It can also happen that the presenter has not heard the discussant's question and thus asks for the repetition of the question.

- (22) Discussant: what happen if you kill the oxyanion hole in this system
 Presenter: I beg your pardon?
 Discussant: if you, mutate the oxyanion whole (CDS8)

e) Turn organisation is a statement to control turns discussion usually because a turn is too long, or to assign discussants' order of participation.

(23) Chair: okay you need to (stop) speaking so can we at least move on they're are three people right back (way back) with their hands up so if we could hear from (Levid) and then move onto the next speaker please. (CDS7)

f) Middle comment is a statement towards the end of the discussion that announces the end but also gives the discussant the opportunity to make a final comment or question.

(24) Chair: one more quick question, (xx)?(LDS4)

(25) Chair: ok one thirty second question (CDS1)

g) Closing discussion is a final comment to finish the discussion, commonly followed by thanking the presenter and the audience, which is accompanied with a general applause.

(26) Chair: I think we're out of time for questions (LDS7)

(27) Chair: okay if we can thank Suki once again, thank you (CDS2)

Discoursal turns

The other types of turns are *discoursal turns*, those turns that occur during the dialogue between the discussant and the presenter. Three types of functions have been identified: comment, question, and response. The difference between response and comment is whereas the response replies a question, a comment can reply to another comment, or make any observation like contextualising other comments or questions.

h) Comments are made frequently by discussants (see Example 28). However, presenters may also reply to discussants' comment with another comment (see the presenter's turn in the example). Furthermore, discussants may at the same

time reply to presenter's comment with another comment (see the discussant's follow-up).

(28) Discussant: um, this audience might like to know that at the editorial meeting in uh Montreal of the board of English for Specific Purposes, uh was agreed that it will now be possible in the online version to have audio or video clips or some other kinds of material that wouldn't be possible in the standard print ones so, even in the social sciences. <LAUGH>

Presenter: it's kind of scary <xx> (just moving under your seat)

Discussant: you may appear <LAUGH> (xx) it's Räisänen et al. may (LDS9)

i) Questions are commonly asked by discussants.

(29) Discussant: uh aren't the variations large enough that you should see different C-H stretching frequencies in the infrared frequencies (CDS5)

j) Responses are made by the presenters to the discussants' question.

(30) Presenter: well exactly the the simple way to observe thi- to to to examine this further would be to compare calculated frequencies with infrared frequencies. now in in this simple model i gave you (xx) uh going to (xx), the effect is all on the cation side there's there's virtually nothing at all on the (xx) side. uh and then the problem is I'm simply not aware of any, infrared spectra for cations in solution. (CDS5)

The identification of comments and questions found some problems of classification caused by indirect speech acts. Most of the instances of questions have the illocutionary force of an interrogative. However, there are utterances (see Example 31) where declarative sentences like "I'm wondering if [...]" and "[...] I wonder if [...]" convey the illocutionary force of a question. These instances have also been considered questions.

(31) Discussant: I'm wondering if there are, are any...any shadows being glossed over here any problems that <Presenter: OVERLAP> yes </OVERLAP> are not aren't uh apparent on the surface but are kinda tucked away [...]. (LDS8)

The dialogue between the discussant and the presenter can show up to six combinations of the three functions, comment, question and respond:

i) Comment followed by question (boxed) mainly taken by discussants. In the example below, the discussant refers to the presentation, announces his question and checks his understanding of the research, first with a statement and then with an actual question.

- (32) Discussant: uh going back to the first part of the presentation i wanted to ask you seem to make a distinction between uh good formed consciousness and the bad ones, like you know consciousness as awareness and consciousness as self consciousness when you do things too deliberately in <Presenter: OVERLAP> yes </OVERLAP> is that so? (LDC1)

ii) Question followed by comment, a turn taken both by discussants and presenters. In example 33, Discussant asks a question (boxed) and then makes a comment to justify or contextualise the question.

- (33) Discussant: um is there any training or any work being done with the faculty? because you just mentioned you are doing that <Presenter: OVERLAP> mhm </OVERLAP> with foreign students coming in (LDC1)

iii) Question followed by comment and question. A comment is embedded in the middle of a question (boxed). The discussant opens a question, makes a comment and goes back to the question.

- (34) Discussant: to what extent do you think to the to the extent that a lot of these unconscious competences in the doxa that you're talking about are so different cross culturally and so embedded in our unconscious, to what extent do you think they actually can be taught versus to what extend to you see your role as um, sort of educating in rhetorical consciousness raising among the people in the dominant culture to sort of i mean where where do you? (LDC1)

iv) Comment followed by question and comment, the discussant's question (boxed) is preceded and followed by comments. Discussant opens his turn with a joke about the time given by the chair for his question, describes his area of expertise, announces the question, asks the question which is challenging the experiment and rationalises his criticism.

- (35) Discussant: ooh I don't know about thirty seconds <LAUGH> but my area is (xx) chemistry. uh i- i- it's commonly associated with every geometry uh zero point energy

for example variational conditions (xx) theory. uh going on the path which is zero point energy (xx) so real zero point energy surface and it's clearly a better model for for transition state (xx). okay that leads me to the question Watson (xx) are we sure there's no flaw in the (xx) experiment th- that as it strikes me that as the proton moves uh uh uh across a zero point energy surface when it's available it's going to be an unsymmetrical zero point energy surface and all would say that is the (xx) experiments the- or in in experiments where you show a symmetrical (xx), there are (xx) heavy atom cases where you're going to be at the bottom of the well anyway and I'm not sure that it's the same thing with proton movement (CDC1)

v) Comment followed by a question, a comment and another question, That is, more than one question (boxed) which are preceded by comments. In the example discussant refers to other research, announces the question, asks the question, then announces a second question and asks the question.

- (36) Discussant: okay eh coming back to nonstatistical studies em the nonstatistical problem related with redistribution (xx) is a (xx) no no reactions, in spite of that, the (Gaussian) theory including all uh its uh variants, uh works uh very well in most of the reactions. um then my my question is eh uh why do you think that uh these uh S-N-two reactions uh present, uh special problems uh related to with I-B-F?. and do you think that this problem is a general problem for uh faster reactions in which eh more than uh two bonds are involved in a (xx) of the way? <Presenter: OVERLAP> hm </OVERLAP> and and the second question related with this, have you tried eh to um to carry out, these uh S-N-two reactions in an uh in in an (inert) atmosphere? is that the way that you are able to to study the influence of pressure, in the nonstatistical behaviour? (CDC2)

vi) Response which is followed by a comment (boxed). The presenter responds the discussant's question and then introduces further information about the research which was not commented during the presentation.

- (37) Presenter: well, I I want to change a bit so my handouts is pretty informative it's very, strict I would say yes informative with all major points I think it would be nice to highlight some important (moments), maybe i'll try to change the style. <LAUGH> I <Discussant: OVERLAP> promotional elements? </OVERLAP> yes, promotional elements, <Unknown speaker: OVERLAP> promotional elements? </OVERLAP> I just want to (xx) one last thing I forgot to mention (either). what surprised me is that in my corpus several handouts had the title 'the handout' itself, that just uh the authors explicitly stated the name of the genre and for me it says much, <LAUGH> this means that the handout maybe is not a well-established genre and while side of this thing (it was a) strive just to legitimize their, (genre) producing and text producing activity. (LDC5)

5.1.3 Participants in the exchange

Examples of metadiscoursal turns, as well as of the three main functions of discoursal turns, have already been presented in the previous section showing some turns are keener to be performed by one participant than by others. Table 7 summarises the types of turns taken by the three main speakers.

Type of turn	Chair				Discussant				Presenter			
	Ling.		Chem.		Ling.		Chem.		Ling.		Chem.	
	N.	%	N.	%	N.	%	N.	%	N.	%	N.	%
Metadiscoursal turns												
opening comment	8	42	10	29	-	-	-	-	3	4	-	-
turn bid	-	-	-	-	-	-	2	3	-	-	-	-
turn allocation	-	-	7	20	-	-	-	-	11	17	2	4
repair interaction	-	-	1	3	-	-	1	2	2	3	1	2
turn organisation	-	-	2	6	-	-	2	3	-	-	1	2
middle comment	3	16	5	14	-	-	-	-	-	-	-	-
closing comment	8	42	10	29	-	-	-	-	2	3	2	4
Discoursal turns												
comment	-	-	-	-	24	41	27	45	12	18	16	32
question	-	-	-	-	15	25	11	18	-	-	-	-
comment + question	-	-	-	-	11	19	11	18	-	-	1	2
question + comment	-	-	-	-	1	2	2	3	2	3	1	2
quest. + comm. + quest.	-	-	-	-	3	5	1	2	-	-	-	-
comm. + quest. + comm.	-	-	-	-	3	5	1	2	-	-	-	-
comm. + quest. + comm. + quest.	-	-	-	-	2	3	1	2	-	-	-	-
response	-	-	-	-	-	-	1	2	33	50	26	52
response + comm.	-	-	-	-	-	-	-	-	1	2	-	-
Total	19		35		59		60		66		50	

Table 7. Types of turns and speakers

In the following subsections I comment the results shown in the table.

Chairs' participation

Results concerning the types of turns reveal that unsurprisingly the chair's turns in both disciplines are metadiscoursal turns. They do not take part in the discussion *per se* while playing the role of chair (some chairs in the DSs of both conferences also play the role of presenters and discussants).

Opening comment, turn allocation, middle comment and closing comment are the most frequent metadiscoursal turns in the corpora. These turns are

considered in DSs as typical chair's turns. Results show that in both disciplines, the major functions performed by the chair are those of opening and closing the discussion. However, although all the sessions in Chemistry are open and closed by the chair, in Linguistics two of them are done by the presenter. Another common chairs' turn is turn allocation. It is one of the most frequent in Chemistry, which is not taken by the chair in Linguistics but by the presenter. There are other minor turns taken by the chair in Chemistry like turn organisation and repair interaction turn, which are neither taken by this speaker in Linguistics.

Discussants' participation

Discussants' main role in the DSs is focused on the dialogue engaged with the presenter; thus, discursal turns are exclusively or mainly taken. Results show discussants' turns are commonly comments, questions, and comments followed by questions. Although comments are the most frequent turns in both disciplines, the percentage is slightly higher in Chemistry and discussants in Linguistics are more inquiring using more question turns. Despite the expected attention paid in the discussion *per se*, there are also a few instances of discussants' metadiscursal turns in Chemistry, i.e. turn organisation and repair interaction turns.

Concerning turn bid, discussants commonly indicate non-verbally, by raising their hand or nodding, their willingness to open a new exchange with the presenter; they can even accompany it with facial expressions like eyebrows raise and/ or chin lift. It is only when discussants realise they are not able to call the chair's attention and therefore to accomplish their goal, that they use verbal language. There is only one example in Chemistry of verbal turn bid (see Example 17).

Although the dialogue in the DSs is commonly engaged between the discussant and the presenter, it may also be held between the discussant and previous or new discussants. The reasons for these unexpected contributions, which push

the presenter into the background, may be due to direct references to the discussants (see Example 38) and/or their expertise or experience in the topic of discussion (see Example 39). In the first example, it seems the question was initially addressed to the presenter; however, two the members of the audience, due to their connection with the journal mentioned are the ones who respond the discussant. They reasonably consider they are the ones who should better answer the question.

(38) Discussant 2: Tony should have asked this one but I have heard of the possibility that uh that in E-S-P journal they didn't actually know what articles were going in until after they had written the editorial <LAUGH > is that, is that, another new development, is that so_ <Discussant 3: OVERLAP> that was a new development </OVERLAP> <Discussant 2: LAUGH> and so it be- it became very very difficult to uh get_

Discussant 3: now, what you don't know, you don't know until very soon before the journal's wrapped up. you know that a week before <Discussant 2: OVERLAP> yeah </OVERLAP> the the (points it's going to give) and what and you make the decision yourself. on what's what's what's going to be <Discussant 2: OVERLAP> yes but I mean, you do need need an editorial before_ </OVERLAP> well maybe he did, but... <LAUGH> (LDC10)

Discussant 2: I was rather surprised, cuz I thought oh in that case_ so that's that's why I had to write it very generally because uh, because <Discussant 2: LAUGH> you don't actually know

Presenter: so there might be a degree of frustration in common in that uh timing

Discussant 4: (xx)

Discussant 2: yes, I agree, yeah (LDC10)

Discussant 3, editor emeritus of the journal, overlaps making a joke (“that’s a new development”) to distance from the delicate issue brought to the fore. Whereas, discussant 4, one of the current editors, responds taking an actual turn. It is not until the discussant that has opened the turn takes a follow-up turn to comment the response with a joke, that the presenter takes part in the discussion making also a follow-up comment.

In Example 39, the discussant takes a follow-up turn to position as odd with presenter’s response. However, although the presenter has overlapped to express his alignment with the discussant (“yes I think that’s right”), the discussant has shown satisfaction (“okay. I’m done then”) and the presenter has

used a middle comment to conclude the dialogue and open a new one; another discussant does not consider the discussion over and takes a follow-up turn to state his position which he considers will be a valuable contribution because of his expertise.

- (39) Discussant 2: um but_ doesn't that mean something about possibly some (xx) and I think that this is the (xx) <Presenter: OVERLAP> yes I think that's right </OVERLAP> of that but okay. i'm done then. <LAUGH>

Presenter: last one

Discussant 1: no I think I can shed light on this because I spent a lot of time with it, an N-H-O tissue (xx) even while shifting enzymes, found that it is due like you said (xx) today the studied effect (xx), found two (xx) tissues, one by deorganization the other by inductive effect from the charge and you get there are very deep studies that include John Jensen, Richard (xx) the whole (xx) shift in the enzyme without any low barrier (xx) (CDS1)

Presenters' participation

Presenters as discussants focus on the dialogue, responding discussants' questions and replying with comments to discussants' comments. As already mentioned, the presenter in Linguistics also takes the chair's role to allocate turns. Nevertheless, response is the most frequent presenter's turn in both disciplines. They respond all discussants' turns which are questions or contain questions, as well as the comments that seek a response (i.e. suggestions, only one instance in each discipline). Regarding comments, data in Table 7 shows a mismatching in the number of instances of discussants' comments and presenters' comments; it seems that all the comments made by the discussant do not receive a verbal reply. Most of the comments that start discussion are replied by the presenter, only one instance in Linguistics and three in Chemistry are not verbally replied. Furthermore, some of the discussant's follow-up comments neither receive linguistic reply, nine in Linguistics and six in Chemistry. This phenomenon is discussed in Section 5.1.4 when describing the sequence of the dialogue. There are other minor discoursal and metadiscoursal turns also taken by presenters in both disciplines.

On the other hand, as represented in Figure 15, sometimes an unknown speaker takes the floor. Their participation is very low, only three examples have been identified in Chemistry and two in Linguistics. In those instances, the speaker tries to repair interaction (in Chemistry, see Example 21) or makes a comment giving her opinion on previous intervention (in Linguistics):

(40) Unknown speaker: very nice (LDC8)

5.1.4 The sequence of the dialogue

The exchange is considered the basic unit of the interaction (following Sinclair et al. 1972) because it consists of the contribution of at least two participants. There are different levels of complexity in the dialogue between the discussant and the presenter. It can be two-turn exchange or more-than-two-turn exchange. Two-turn exchange occurs when the discussant makes a comment or asks a question and the presenter verbally replies to it. In the corpus on Chemistry around 70% of the interaction between discussant and presenter is two-turn exchange; in Linguistics the percentage is lower, nearly 58%. Example 42 illustrates two-turn exchanges.

(41) Discussant: yes I found that very interesting because uh, I occasionally find authors who um, quote paper presentations in in in their publications. and sometimes the papers that have never been published after them so I was wondering maybe um, handouts especially informative ones give you extra exposure, so that um, conference participants can take it home with them, look at the main results and quote them in their own publications uh and that would explain why even uh handouts which are simply uh uh a print printout of the PowerPoint, uh are equally useful cause you can take them home as uh as as data to use in that in that way, uh so maybe informative handouts are are more effective also <xx>

Presenter: I agree I think that (these are) effective, but still not all presenters think in the same way (LDC5)

The examination of 38 exchanges in Linguistics and 34 in Chemistry has revealed that sometimes the discussant's comment does not receive the presenter's verbal response instead, non-verbal language is used to finish up the exchange (nearly 3% of two-turn exchanges in Linguistics and 9% in

Chemistry). A possible reason for this situation is that discussants with those comments make a contribution to clarify or bring to the fore any aspect covered in the presentation. Discussants do not elicit a response, but they finish the comment summing up the purpose of their intervention.

- (42) Discussant: yeah this is extremely interesting because there's a history associated with it. back in the nineteen thirties when transition state was formulated it was formulated there was a big concern (xx) you raise. [...] so I just wanted to make that, (contribution). (CDC7)

or showing agreement with the presenter.

- (43) Discussant: I I have sort of two questions slash observations I was struck uh hearing this by how specific it might be to this particular discourse community. [...] I think your question about disciplinary preferences is really interesting cause I think this handout style is very specific to this discipline. (LDC5)

More-than-two-turn exchange occurs when the presenter's reply to the discussant's comment or question does not finish the exchange, but motivates the discussants follow-up comment or question, which in turn can also originate the presenter's follow-up response. Until eight-turn exchanges have been identified in both corpora, which means that until three follow-up turns have been taken by the discussant and the presenter. In Example 44, the presenter finishes the exchange after two follow-up turns.

- (44) Discussant: yeah (very nice good job) as usual but uh my question is about, the driving force independence of the isotope effect. obviously you do see some fall off a very large driving force but what does that mean in terms of using less higher model and also using Martha's theory to predict changes in either rate or isotope effect...uh i- do you have any sense of that or that you can tell us right now

Presenter: well I mean i- I mean (Dao Ming) has been sending me, uh numbers, calculated numbers, ya- no I I I really haven't- worked- through it- well enough to give those kinds of answers, so uh no, I hear that- you know tunneling's not terribly important to hear, me, (xx)

Discussant: well they said that, you can see uh, (so called) semi-classical temperature dependence even when there is tunneling you have to be care- I mean it's very hard, to show tunneling when you don't see the diagnostics <Presenter: OVERLAP> well </OVERLAP> it could be going on it could not, you don't know

Presenter: well th- I mean this is a matter of you know comparing experiments and calculations and <Discussant: OVERLAP> yah </OVERLAP> Dao Ming's confirmations against the numbers are other calculations, might suggest something that-

Discussant: it's the driving force dependence that we are really interested to see what comes out of it

Presenter: well it's_ you know part of it_ there certainly_ part if it has to do with, uh. and y- you might think of it in Westheimer terms but certainly there's a- a decreasing importance of zero-point energies as you go to var- as you go to (vary uphill) reactions but it's not the whole explanation. and then there's something having to do with amide harmonicities that I don't understand which also might match up with the seen effect, but so far we you can tell it's the tunneling explanation (xx) so (CDC4)

However, as it also happens in two-turn exchanges, the discussant's follow-up turn may not give rise to the presenter's verbal response (around 24% of the more-than-two-turn exchanges in Linguistics and 18% in Chemistry). In the example below discussant final turn shows alignment with presenter's response.

(45) Discussant: you really mean to suggest in your last diagram that the rhetorical filters are so unproblematic and homogeneous

Presenter: oh, no, absolutely not, it's just an oversimplification. just so that I can talk about something, um make a generalization as a as a departure point for our discussion, obviously it's not, it's extremely complicated. and actually i've spent a lot of time studying the development, the emergence of this rhetoric of description in geology, by looking at how in_ the discipline emerged in the e- seventeen hundreds and how geologists gradually became, um, obligated to use a rhetoric to to prove that what they were seeing was real and so exact- it's very complicated

Discussant: yeah i'm pleased to hear that because for much of us in this room a lot of our instructional tasks are precisely to teach students the rhetoric (xx) so i'm pleased to hear the response (LDC2)

These two small specialised corpora show that speakers tend to perform short exchanges, in terms of number of turns. Two-turn exchange is the most common in the DSs examined, being more frequent in Chemistry than in Linguistics. There is also a considerable number of exchanges with longer sequence, more-than-two-turn exchanges, with follow-up turns which are more frequent in Linguistics. Furthermore, there is a significant percentage of exchanges in both disciplines, mainly those with follow-up turns, where the presenter's verbal response is not elicited. This behaviour could be explained from pragmatics. Since it seems presenters, whenever they can, among other reasons because they are constrained by time, choose to follow the maxim of relation and be relevant avoiding taking a new turn when it is not necessary. By

doing so, they finish the exchange with their current discussant and open the floor for a new exchange with a new discussant.

5.1.5 Dialogic exchange patterns

Results show the dialogic exchanges follow certain patterns in the discourse. I have identified 24 different patterns in Linguistics of the 38 exchanges examined, and 21 in Chemistry of the 34 exchanges; 10 out of them are common in both disciplines (see Table 8).

Type of exchange	D t1 ⁴⁶	P t2	D t3	P t4
One-turn	comm	non-verb resp	-	-
Two-turn	comm	comm	-	-
	quest	resp	-	-
	comm + quest	resp	-	-
	quest + comm	resp	-	-
	comm + quest + comm	resp	-	-
	quest + comm + quest	resp	-	-
More-than-two-turn	comm	comm	comm	non-verb resp
	comm + quest	resp	comm	non-verb resp
	quest	repair int	quest	resp

Table 8. Dialogic exchange patterns

Table 8 shows one one-turn exchange pattern where discussant's comment receives a non-verbal response, six two-turn exchange patterns and three more-than-two-turn where two of the patterns have neither verbal response. However, I have considered for the study only those patterns which are recurrent at least three times in both corpora. Table 9 summarises the recurrent dialogic exchange patterns in Linguistics and Chemistry. Results reveal that only 4 and 3 patterns are recurrent in Linguistics and Chemistry respectively, and only those performed in two turns are common in both disciplines (patterns *a*, *b* and *c*). On the other hand, it is worth noting that these three patterns are the most frequent "openers" of longer exchange patterns in the corpora with

⁴⁶ "tn" stands for position of the turn in the exchange, that is, t1 first turn, t2 second turn and the like.

more than two turns. All in all, pattern *a* appears in a total of 18% of the exchanges in Linguistics and 24% in Chemistry, pattern *b* in 21% and 15%, and pattern *c* in 24% and 32% of the exchanges respectively. These data prove that participants in the discussion sessions in the small corpora analysed in the present study commonly follow these three dialogic exchange patterns (63% of the exchanges in Linguistics and 71% in Chemistry) to open discussion.

Type of exchange	Ref. pattern	D t1	P t2	D t3	P t4	N exchanges	% freq. pattern
Linguistics							
Two-turn	a	comm	comm	-	-	5	13,2
	b	quest	resp	-	-	4	10,5
	c	comm +quest	resp	-	-	4	10,5
More-than-two-turn	d	comm +quest	resp	comm	non-verb resp	3	7,9
Total						16	42,1
Chemistry							
Two-turn	a	comm	comm	-	-	4	11,8
	b	quest	resp	-	-	4	11,8
	c	comm +quest	resp	-	-	4	11,8
Total						12	35,4

Table 9. Recurrent dialogic exchange patterns in Linguistics and Chemistry

As commented in the methodology, the analysis of the moves and the evaluative meaning was conducted in two subcorpora (see Table 5 in Section 4.2.2) comprising 12 exchanges of each discipline. The criterion followed for the selection of the exchanges was to share similar recurrent patterns, thus to follow patterns *a*, *b*, and *c*: *Comment – Comment*, *Question – Response*, and *Comment + Question – Response*. Four exchanges of each pattern in each discipline were analysed in the thesis, and coded for the study as L-E/ CH-E 1-4 pattern comment – comment, L-E/ CH-E 5-8 pattern question – response, and L-E/ CH-E 9-12 pattern comment – question - response.

In the foregoing, results have revealed how interaction is organised in DSs. The next section accounts for the exploration of evaluation.

5.2 Evaluation

The description and discussion on how evaluation is expressed in the DSs of CPs is divided in two parts. In the first part, findings on linguistic evaluation are discussed. The second part is devoted to the examination of how linguistic utterances co-occur in the corpus with paralinguistic and/or kinesic features, to result in the multimodal expression of the evaluative meaning.

The instances of linguistic evaluation that illustrate the different appraisal resources during the section are provided with their immediate context to facilitate the understanding of their evaluative meaning (see all the instances of linguistic evaluation used in the corpus in Appendix E). However, in some cases, as a prosodic perspective has been taken for the interpretation of evaluation, a closer examination of the whole move the utterance belongs to is necessary. In Section 5.3 of this Chapter, evaluation, both linguistic and non-linguistic, is fully discussed to see the role appraisal plays in the construction of the generic structure (see Appendix F).

5.2.1 Linguistic evaluation

The examination of the evaluative language employed in the 24 dialogic exchanges (see Table 5) shows an extensive use of the three categories described in the Appraisal model: attitude as the evaluation *per se*, engagement as the position of the authorial voice and negotiation of other voices, and graduation as scalability in terms of intensify or amount and prototypicality (see definition of the model in Chapter 2).

A closer look at the quantitative distribution of each category in the corpora reveals differences between the two disciplines (Table 10). One interesting feature is that, by comparing percentages, the distribution of the three categories in Linguistics is not as different as it is in Chemistry. Whereas in Linguistics attitude is the highest expression of appraisal, in Chemistry graduation gets the first position with a difference of about 20% with the less

common expression of evaluative meaning in this discipline, engagement. In addition, percentages of attitude are not so different between disciplines (around 30%), major differences appear with engagement and graduation, being engagement more frequent in Linguistics and graduation in Chemistry. This tendency is common to both speakers (discussants and presenters) in Chemistry; whereas discussants in Linguistics use more graduation than engagement, but as I said differences between categories in this discipline are not significant.

	Linguistics				Chemistry			
	Discussant		Presenter		Discussant		Presenter	
	N	%	N	%	N	%	N	%
Attitude	36	37.1	78	39.0	29	31.9	64	36.8
Engagement	28	28.9	65	32.5	22	24.2	36	20.7
Graduation	33	34.0	57	28.5	40	43.9	74	42.5
Total	97	100	200	100	91	100	174	100

Table 10. Linguistic evaluation and categories of appraisal

These disciplinary differences could find an explanation in Hyland's (2004) reasoning of differences between soft- and hard-fields of research. In his words, soft-knowledge is more interpretative and less abstract, since the work with human subjects gives less control of variables and greater diversity of results. On the other hand, hard-knowledge tends to be more specialised and emerges in a more linear way, the community is more familiar with previous research and they rely far more on general understanding, shared background, and the acceptance of proven quantitative methods. In view of this, findings in the appraisal categories could be explained in the following terms. Soft-sciences seem to demand researchers' interpretation, that is, the expression of their attitudes; whereas in hard-sciences researchers appear to value more knowledge based on factual data. It does not mean that in soft-sciences any opinion is accepted, researchers' positions are also founded on experimental results and previous studies, but because of the subject of study there is more room for personal interpretation. On the contrary, in hard-sciences this kind of

interpretation appears not to be so common but observable and measurable data. That could be a reason for the highest expression of graduation in Chemistry. It is possible that graduation were used as a strategy to express researchers' position since they do it as openly as in Linguistics. We cannot forget that by graduation we are talking about force, turning the volume up or down (intensifying and mitigating) and quantifying a term, and about focus grading a term according to prototypically sharpening and softening it. Furthermore, the subject of study in hard-sciences involves quantitative approaches and therefore measurable data to describe and gradate when referring back to the experiment or the results. As for engagement, in Linguistics, possibly because of the general interpretative knowledge attributed to soft-sciences, the negotiation of other voices apart from the authorial voice is more relevant. This seems to suggest that in Linguistics researchers are more concerned about making clear their positions either making allowances for alternative positions and voices (dialogic expansion) or alternatively rejecting or suppressing contrary positions (dialogic contraction). Hylands (2004) also notes that writers in soft-sciences put a lot of effort in establish an understanding with readers because of the interpretative nature of the knowledge.

Discussion of each appraisal category is opened in next sections of this Chapter. I will turn to the appraisal meaning that is expressed by evaluative utterances in DSs. Martin and White (2005) postulated the general tendency of the expression of this interpersonal meaning in written discourse. According to them, graduation scales attitude and, to a lesser extent, engagement. In addition, an utterance can convey attitude or engagement. Table 11 summaries findings on the structure of the evaluative utterances in the corpus.

Certainly the most frequent expression of evaluation in DSs is in a single utterance, that is, one utterance – one appraisal meaning, e.g. [...] *these different types* [...] (L-E) or [...] *a slow step* [...] (CH-E5). This way of attitudinal expression is more frequent by the presenters and in Linguistics. Nonetheless, as argued by Martin and White (2005), it is also noticeable the

expression of grading attitudinal meaning. These authors did not comment on the position of the two utterances (attitude and graduation) in the evaluative structure; however, results show graduation commonly precedes attitude (e.g. the expression of positive appreciation *interesting* is intensified with the adverb *quite* in [...] *that's uh quite interesting* [...]) (CH-E9) rather than following it (e.g. the adjective *great* that shows appreciation is intensified with the comparative form *-er* in [...] *the individual responsibility being greater* [...]) (L-E1). If we consider both positions (attitude + graduation and graduation + attitude) percentages of gradated attitude show minor disciplinary differences, with values around 30-35%, being slightly higher in Linguistics.

	Linguistics				Chemistry			
	Discussant		Presenter		Discussant		Presenter	
	N	%	N	%	N	%	N	%
Attitude								
Att.	18	53	49	63.6	12	44.5	35	55.6
Att. + Att.	1	2.9	1	1.3	1	3.7	2	3.2
Att. + Grad.	-	-	8	10.4	3	11.1	3	4.7
Grad. + Att.	12	35.4	17	22.1	5	18.5	16	25.4
Att. + Att. + Grad.	-	-	-	-	1	3.7	-	-
Att. + Grad. + Grad.	1	2.9	-	-	1	3.7	1	1.6
Grad. + Att. + Grad.	1	2.9	1	1.3	2	7.4	3	4.7
Grad. + Att. + Att.	1	2.9	-	-	-	-	-	-
Grad. + Grad. + Att.	-	-	-	-	-	-	2	3.2
Grad. + Grad. + Att. + Grad.	-	-	-	-	-	-	1	1.6
Eng. + Att.	-	-	1	1.3	2	7.4	-	-
Total	34	100	77	100	27	100	63	100
Engagement								
Eng.	28	100	60	95.2	19	95	33	91.7
Eng. + Eng.	-	-	1	1.6	-	-	-	-
Eng. + Grad.	-	-	2	3.2	-	-	-	-
Grad. + Eng.	-	-	-	-	1	5	3	8.3
Total	28	100	63	100	20	100	36	100
Graduation								
Grad.	20	100	28	93.3	17	77.3	27	81.8
Grad. + Grad.	-	-	2	6.7	5	22.7	6	18.2
Total	20	100	30	100	22	100	33	100

Table 11. Structure of evaluative utterances

There are many other combinations of two or more utterances of attitude and graduation, or even between attitude and engagement, but the frequency of each combination is not relevant as numbers reveal (see examples in Appendix E). Two instances of these more complex expressions of evaluation done by the presenters are the following. The first example from Linguistics, [...] *which kinda gives the game away immediately* [...] (L-E3), follows the structure, graduation (softening with *kinda*) + attitude (negative appreciation with *gives the game away*) + graduation (intensification with *immediately*); the second example from Chemistry, [...] *they're a little bit slower than acetyl cholinesterase* [...] (CH-E3), is structured also in four utterances that express graduation (mitigation with *little*) + graduation (mitigation with *a bit*) + attitude (negative appreciation with *slow*) + graduation (intensification with *-er than*).

Regarding engagement, speakers generally express their position about the voice that is evaluating in a single utterance, for example the expression *I think* in [...] *I think you can say the same thing* [...] (L-E1), or *of course* in [...] *when things bind very tightly of course they pull on and don't come off* [...] (CH-E8). Accordingly, data shows that instances of gradated engagement or even of combination of two utterances that convey engagement values are irrelevant in this corpus and therefore no worth commenting.

If we move to the third category, results reveal about fifty percent of the instances of graduation in the corpus are not showing the gradability of attitudinal meaning or of engagement values, but they are commonly expressed in a single utterance, for example the intensifier *completely* in, [...] *the experiments are performed in, completely apolar medium* [...] (CH-E11). The tendency that seems to be followed in Chemistry, the greater use of graduation, is also confirmed in this second foray to the evaluative model. Speakers in this discipline construe multiple graduation with two utterances, e.g. *quite a bit*, a practice that does not seem to emerge in Linguistics (there are no instances in

the corpus of its use by discussants and it is insignificant for presenters). In view of these findings I think it is necessary to reconsider the status given to graduation in Martin and White's (2004) model for DSs under exploration in the present thesis. These authors see the semantics of graduation central to the appraisal system. Nonetheless, the importance is attributed because of, as they postulate, gradability is a general property of all attitudinal meanings and of the engagement system. Martin and White note "attitude and engagement are domains of graduation" (ibid.: 136). The data analysed, however, seems to disclose this sub-system of meanings, of up-scaling and down-scaling, does also play a major role in the discourse of DSs, independently of the other two sub-systems. Moreover, it appears that gradability of engagement values, contrary to findings of these authors, is not a general feature in the particular dialogic discourse of DSs.

The three dimensions of the appraisal system are articulated at the same time into other categories, as described in Chapter 2. In the next sub-sections, discussion of findings on a close exploration at this level can also shed some light on disciplinary differences.

Expression of attitude in DSs

Attitude is defined in the present thesis in four domains (see in Section 4.3.2 the differences between Martin & White's (2005) model and the one adjusted for the purpose of the present dissertation): affect, judgement, appreciation, and acknowledgement. Briefly, affect expresses feelings, judgement judges characters, appreciation evaluates the worth of things, and acknowledgement expresses agreement. The last attitudinal resource has been added to the model for the analysis of dialogues in DSs.

Results on examination of the four types of attitudinal meaning have shown that unsurprisingly in both disciplines appreciation is the most common category (see Table 12). Appreciation is the evaluation of things, not only of concrete things but also of abstract things. Judgement is the second most

frequent attitudinal category in the two disciplines. And contrary to my expectations, that foresaw higher use of judgement in Linguistics, there are no substantial differences between disciplines, being even slightly higher the percentages in Chemistry. Discussants in Linguistics seem to have different criterion of selection of attitudinal resources, since judgement is not as popular as for the other speakers but acknowledgement is their second choice. Finally, there is a substantial difference in the use of affect between discussants and presenters. Data reveal this category is more frequently chosen by discussants than by presenters in both disciplines.

	Linguistics				Chemistry			
	Discussant		Presenter		Discussant		Presenter	
	N	%	N	%	N	%	N	%
Affect	4	11.1	6	7.7	4	13.8	2	3.1
Judgement	6	16.7	19	24.4	8	27.6	17	26.6
Appreciation	18	50	47	60.2	17	58.6	37	57.8
Acknowledgement	8	22.2	6	7.7	-	-	8	12.5
Total	36	100	78	100	29	100	64	100

Table 12. Expression of attitudinal meaning in DSs

It is also worth mentioning the use of acknowledgement by discussants in Linguistics, in comparison with the complete omission of this attitudinal resource by their counterparts in Chemistry. Acknowledgement has been defined as the expression of agreement or converging on a topic. This outstanding difference between the discussants' use could be interpreted in Hyland's (2004) terms, for soft-sciences researchers there is a need to establish an understanding with the audience. I have considered this argument valid to interpret the highest employment of engagement in Linguistics, now it could also shed some light on the use of acknowledgment by discussants in Linguistics. Acknowledgement commonly emerges in overlapping, discussants as listeners verbally express their alignment with the presenter (see O'Keeffe & Adolphs' study of backchannels (2008)). Such attitudinal meaning could be considered to constitute positive politeness towards the face wants of the presenter. This sign of understanding seems not to be expected at this level by

discussants in Chemistry who rely more on facts than on interpretation and who do not consider necessary to acknowledge verbally.

In short, appreciation and, to a lesser extent, judgement are the two resources with the highest number of examples in the corpus, which allow to see semantic and disciplinary tendencies in DSs. Differences have been observed in the types of words that express the attitudinal meaning. Accordingly, whereas appreciation is commonly conveyed by adjectives, judgement is generally expressed by verbs. This, on the one hand, contradicts Martin and White's (2005: 53) findings on written texts who only found adjectives in judgement; on the other hand, it confirms Hood and Forey's (2005) results on the study of evaluation in the introductory section of conference plenary presentations who also found verbs, among other words, to express judgement. Examples will be provided later in this discussion on appreciation and judgement.

There are not many instances of the other two attitudinal resources, affect and acknowledgement. Thus, it is difficult to make an interpretation on the linguistic utterances. I would like, however, to mention the types of words used in the few examples found in the corpus (see instances in Appendix E). Affect is the semantic resource used by the speaker to express feelings. In DSs affect is expressed with verbs such as *strike*, *want*, and *surprise*; adjectives like *tempted*, *curious*, *schizophrenic*, *afraid*, and *sorry*; interjections like *oh* and *no?*, and nominal groups like *a fondness for*. Conversely, the utterances more frequently used to express acknowledgement are *yeah* and *yes*. Other instances are *yes sir* and *right*, as well as gradated utterances such as *yeah exactly*, *for example yes*, and *right to a certain degree*.

The distinction between invoked and evoked evaluative meaning is explained in Section 5.3, in the discussion of evaluation in the generic structure, but some introduction to this question is necessary at this point. Most of the attitudinal utterances have inscribed evaluative meaning, that is, when a lexical choice is

intrinsically evaluative (with positive or negative polarity), e.g. the positive inscribed evaluative meaning of *interesting* or *good*, and the negative meaning of *problem* or *default*. However, sometimes it is the context that governs the polarity of the word and leads to an evaluative interpretation that evokes the evaluative meaning. Evoked evaluative meaning has been proved to be significant in the corpus, where the examination of evaluation follows a prosodic perspective rather than the analysis of discrete utterances. Interpretation of the context, for example, determines the polarity of utterances that do not convey a defined polarity per se, such as *small* in [...] *I I don't think is **small** [...]* (CH-E11), where interpretation attributes positive evaluative meaning to the adjective. Prosodic interpretation can also confer double polarity to the same utterance, such as the modal verb *can* that expresses positive judgement of capacity in [...] *we **can** get these kinds of inhibitors [...]* (CH-E8), and conveys negative evaluative meaning in [...] *it's not going to mean, they **can** take that back [...]* (L-E9), where the negative attitude that precedes *can* evokes the negative meaning to the affirmative form of the modal verb.

Now, I will move to the discussion of the results on appreciation and judgement in DSs. The qualitative-based approach adopted in the present thesis to examine multimodal expression of evaluation does not aim at making generalisations of linguistic aspects, mainly because the amount of data is not enough to do it, but to describe full expression of evaluation. Therefore, the interpretation of linguistic evaluation has been done not on the frequency of use of the utterances, but on the function in the DSs of the different semantic evaluative resources. I try to see tendencies of use in the two disciplines. Moreover, I also note when a semantic pattern is recurrent in the corpus.

Results reveal discussants appreciation seems to pursue two main goals. Discussants can express their position towards the research presented, or towards presenters' response, showing alignment with the presenter with positive appreciation, like for example in [...] *you've got a **very good** book [...]*

(L-E4) or [...] <Discussant: OVERLAP> it's **interesting** </OVERLAP> [...] (L-E12); or positioning as odd with the research and criticising it with positive or negative appreciation, e.g. [...] I would expect in such case, **quite large**, kinetic isotope effects [...] (CH-E11), or [...] they certainly are *dissolute about wasting time* [...] (CH-E3).

On the other hand, discussants can express appreciation towards any aspect of the research, with the dual polarity of the resource, e.g. [...] **good formed consciousness** [...] (L-E9), [...] the company's **failing** [...] (L-E1). This kind of appreciation, contrary to the first type, is a mere evaluative description of the research presented or of any aspect related to it but does not attempt to show discussants' position in relation to presenters' position. In addition, discussants can also show negative appreciation of their own question. Only one example has been found in the corpus, where the discussant overlaps to recognise, after the presenter's complaint, the difficulty of her question in [...] <Discussant: OVERLAP> yeah, I think it's **very unfair** (xx) </OVERLAP> [...] (L-E10).

Regarding presenters, results appear to reveal three primary purposes. They can show positive appreciation of the discussant's comment or question. To express their attitude presenters seem to follow a pattern formed by the adjective *good/ very good/ great* and the nouns *issue* or *question*, like in, [...] this is a **good** question [...] (CH-E8), [...] that's a **great** question [...] (L-E9), or [...] that raises a **very good** question Charlie [...] (CH-E5). But they can also express positive appreciation like in [...] it's **interesting** though [...] (L-E1). In addition presenters can show their attitude towards discussants comments or questions with negative appreciation, like in [...] I'll have **a week** to think about it won't I [...] (L-E10), where the presenter expresses the difficulty of the question.

The second purpose of presenters to use appreciation in the corpus is to express their attitudes towards discussants' positions showing acknowledgement with

positive appreciation, like in the following move where the presenter replies to the discussant's comment with [...] *that's that's good I mean it is partly semantic but semantics are **important** [...]* (CH-E2). Or rejecting discussants' comments with positive or negative appreciation, like in [...] *these are from proximity complexes. but well actually i it it it's **quite large** [...]* (CH-E4), where the presenter contradicts the discussants' interpretation of showing results of isotope effects from separated reactions when they are from proximity complexes, and he describes the proximity as being *quite large*.

In addition, presenters as discussants can also show positive or negative appreciation of any aspect related to the research, like for example in [...] *Cornell website is **rich** with this sort of thing [...]* (L-E8), or [...] *the (tunneling) effect is **quite important** [...]* (CH-E11, Example 151). A recurrent pattern is used by presenters to emphasize a feature of the research, the verb *to be* followed by *interesting* that can be intensified with *very* or mitigated with *quite* e.g. [...] *what was **interesting** [...]* (L-E6, Example 99), [...] *it's **very interesting** to see [...]* (CH-8), or [...] *that's uh **quite interesting** [...]* (CH-E9).

In the foregoing, data have revealed that from the purposes that appreciation seems to accomplish in the corpus of DSs the most relevant for the interpretation of interpersonal relationships between the participants are those that evaluate what the others have done or believed; that is, when discussants show alignment with presenters or criticise the research, and when presenters appreciate discussants' comments or questions, or show acknowledgement or rejection of them. Findings seem to show disciplinary differences between these purposes. Whereas discussants in Chemistry basically (90%) use appreciation to express their position (showing alignment or criticism), in Linguistics appreciation of any aspect of the research is slightly more frequent (56%). In addition, the instances found in the corpus also reveal a greater tendency of discussants in Chemistry to use language that expresses criticism more than alignment (70% and 30% respectively), whereas in Linguistics the

tendency is the opposite (17% and 83%). As for presenters, in Linguistics they commonly express attitudinal meaning to appreciate any aspect related to the research (73%); in Chemistry differences between this function and that of acknowledging or rejecting discussant's position are not so important being slightly higher the appreciation of the research (48%). This reveals presenters in Chemistry choose to express their position towards discussants' comments more than their counterparts in Linguistics (40% and 15% respectively). However, in both disciplines presenters seem to have a tendency to reject discussants' positions more than to acknowledge them (90% in Chemistry and 83% in Linguistics).

The other attitudinal meaning, judgement, evaluates people. It may be enlightening for the exploration of this resource to close look at the addressees of judgement. There are, however, few instances of discussants' judgement that could reveal the tendency of use of this type of attitudinal meaning (see Appendix E); therefore, I focus on the discussion of presenters' judgement, in which examination has showed disciplinary differences. Presenters in Linguistics express positive and negative judgement towards the subjects of the research, a type of addressee that does not appear in Chemistry since here the object of study is not human subjects. In the next examples the presenters judge the capacity of the students, [...] *they can get as good as they want* [...] (L-E9), [...] *he didn't understand a thing* [...] (L-E6).

Other sources of judgement that seem to be attributed mainly to presenters in Linguistics are those that refer to the discussant indirectly, with the use of inclusive *you* (e.g. [...] *you need to be able to dip down and articulate and be able to describe the procedure* [...] (L-E9) and references to the audience (e.g. [...] *you won't believe this but* [...] (L-E4), or directly (e.g. [...] *you still don't see quantification* [...] (L-E1). One example of judgement of inclusive *you* appears in Chemistry. It is expressed with the verb *expect* that conveys the idea that something will happen because it seems likely, e.g. [...] *you can compare with what when you expect* [...] (CH-E6)

Finally, another focus of exclusive, or almost exclusive, judgement in Linguistics is when presenters judge themselves with the use of the pronoun of first person singular, *I*. This commonly appears to show positive self-judgement of capacity expressed with the verbs *can* and *try*, like in [...] *but I can* [...] (L-E10) or [...] *I try to make them geologists* [...] (L-E10). Only one instance of this type of self-judgement was found in the corpus of Chemistry expressing negative capacity, [...] *I I forgot to mention* [...] (CH-E4)

However, self-judgement in Chemistry is generally expressed with reference to exclusive *we*. That includes the presenter and the group of research he or she belongs to. As in Linguistics self-judgement of capacity is commonly conveyed by the verbs *try* and *can*, e.g. [...] *we've been trying to do that* [...] (CH-E8) and [...] *I don't think we can say yet* [...] (CH E5). In addition in Chemistry the research community is also judged, although only two instances are found in the corpus. In the first example, [...] *it's a reasonable thing to do or perhaps it wasn't a reasonable thing to do* [...] (CH-E1), the presenter is judging the extensive use of a method. In the second, [...] *there's been some numerical modeling of the kinetics of the cholinesterases recently* [...] (CH-E5), he is judging positively other researchers who have been able to provide not long ago numerical modeling.

Results on judgement have brought to the fore that the most relevant difference between presenters lays on the grounds of self-judgement, where first person singular is preferred in Linguistics and first person plural in Chemistry. This choice could be related to the actual way of doing research, because as noted by Hyland (2004) research in hard-sciences demands high investment of money and involves the work of a team. Conversely, in Linguistics, and in soft-sciences in general, research seems to be cheaper and, although there are notorious groups of research, investigation is more frequently done by one or two scholars. That could be the reason why in Chemistry self-judgement seeks shared responsibility, but also acknowledgement of team work. This seems to be a common practice of this discipline, as it is also proved in the

presentations, where the last slide often shows the institutions that have given financial support to the research and a list of the people involved in it.

Expression of engagement in DSs

Engagement is the dimension of appraisal that expresses the position of the authorial voice and the negotiation of other voices in the discourse apart from the authorial voice. When the source of an attitude is other than the authorial voice, allowing for dialogic alternative, the utterance is called heterogloss (after Bakhtin 1981). Martin and White (2005) distinguish two types of heteroglossic resources, dialogic expansion and dialogic contraction. According to these authors, in utterances of dialogic expansion the authorial voice makes space for alternative positions (entertain), or attributes the proposition to an external source (attribute). In contrast, in utterances of dialogic contraction the authorial voice positions as odd or rejecting some contrary position (disclaim), or presents the proposition as highly warrantable rather than directly rejecting other positions (proclaim). During the analysis of the data I have invested engagement with a pragmatic dimension. In my understanding, dialogic expansion when the speaker indicates that its position is but one of a number of possible positions (entertain) is an example of mitigation of the authorial voice, a strategy of self-protection of positive face. In addition, speakers do not want to impose upon listeners' beliefs by making unmitigated assertions. Following Varttala's (2002) study of hedging in scientific research articles, mitigation constitutes negative politeness towards the face wants of the listener but also reduces authorial responsibility. On the other hand, I consider that in dialogic contraction the authorial voice is unmitigated, even when speakers suppress alternative positions rather than rejecting them (proclaim). Furthermore, utterances of dialogic contraction when the authorial voice fends off other positions (disclaim) could be interpreted by the listener as a FTA (Brown and Levinson 1987) towards their positive face wants, that is, the satisfaction of having ones value approved. The distribution of the two types of engagement, dialogic expansion and dialogic contraction, in the corpus is summarised in Table 13.

	Linguistics				Chemistry			
	Discussant		Presenter		Discussant		Presenter	
	N	%	N	%	N	%	N	%
Dialogic expansion	22	81.5	46	70.8	13	59.1	22	61.1
Dialogic contraction	5	18.5	19	29.2	9	40.9	14	38.9
Total	27	100	65	100	22	100	36	100

Table 13. Expression of engagement in DSs

Data reveal the following disciplinary differences. Whereas in Linguistics discussants and presenters mainly choose to mitigate the authorial voice with utterances of dialogic expansion, in Chemistry percentages of expansion are higher than those of dialogic contraction but differences are not as big as in Linguistics. This appears to indicate a tendency in Chemistry to position as odd, reject, or simply set against other positions using unmitigated authorial voice that is not so frequent in Linguistics. Nonetheless, discussants and presenters in both disciplines preferably choose to mitigate their voice in the propositions, reducing authorial responsibility. In addition, discussants in Linguistics seem to make more dialogic space for other possible positions apart from the authorial voice than presenters. This difference is not significant in Chemistry. Findings in Linguistics could be interpreted as a sign of indirectness associated with criticism strategies identified in previous studies on academic spoken genres (Mauranen 2000, 2004; Wulff et al. 2009). The high use of dialogic expansion in Linguistics seems to be in line with the expression of attitudinal meaning in this discipline where discussants and presenters appear to avoid expressing, to a greater extent than in Chemistry, their positions towards their dyads' positions. The higher use of mitigation of the authorial voice by discussants in Linguistics does also overlap with their higher inclination to show alignment with presenters rather than criticising as discussants in Chemistry do.

A close look at the two types of dialogic values reveals that participants in the discussion generally use expansion to make dialogic space for other

possibilities (entertain) rather than invoking a dialogic alternative attributing the proposition to an external source. Only six instances of dialogic attribution appear in the corpus of Linguistics, which follow the common introductory pattern *x say/ tell/ call*. Examples from discussants are, [...] **she said** *ev// she's so tired [...]* (L-E11), [...] **I was told that [...]** (L-E2), and [...] **what they call deep learning [...]** (L-E9); from presenters, [...] **they'll call up and say [...]** (L-E4), [...] **he says** <READING> [...] (L-E10), and [...] **the the instruction says within the confines of [...]** (L-E3). These data indicate that 91% of dialogic expansion in Linguistics and 100% in Chemistry is used to mitigate the authorial voice. Utterances that convey expansion can be divided in two types, those that include the pronoun with a direct reference to the speaker or to the listener. The most frequent utterances of this group are *I think, I don't think* and *you know* (e.g. [...] **I think** *it's quite different [...]* (L-E11), [...] **I don't think** *we can make a definitive answer [...]* (CH-E5), [...] **that's because ya know** *business is in trouble [...]* (L-E1); other instances that also appear in the corpus (three times or less) are: *I wonder if, I guess, I mean, I suppose, to me, my point is, (in) my understanding, we assume, and you see* (see all the examples of engagement in Appendix E).

The utterances *I mean* and *you know* (and their variations *ya know, you see*) deserve a special mention. Biber et al. (1999: 981) also found both expressions are very common in conversation. However, they were excluded from the analysis of evaluation since, according to them, they behave more like discourse markers than like evaluative utterances. Alternatively, Wulff et al. (2009) consider *you know* as one of the most prominent patterns of hedges in DSs. I support the latter interpretation since I consider the speaker when referring to the listener and involving him/her in the proposition somehow seems to reduce authorial responsibility.

The other type of dialogic expansion is the use of verbs and adverbs. As in personal utterances, some of them are recurrent in the corpus like the modal verbs *would, might, and can*, and the verb *seem* (e.g. [...] **I would** *expect in*

such case [...] (CH-E11), [...] some of them **might** you know, there **might** be [...] (L-E12), [...] there **can** be anxiety [...] (L-E9), [...] the bound ligands that, uh **seems** to be more favorable for [...] (CH-E5); and others are not but I consider interesting to mention them, such as: *as appear, tend to, perhaps, and probably*.

Regarding dialogic contraction there are few instances of this type of engagement expressed by discussants in both disciplines to consider any preference between showing rejection of other voices (disclaim) or the authorial voices expressing others' propositions as highly warrantable (proclaim). However, presenters seem to prefer proclaim dialogic contraction rather than directly rejecting other positions; in Linguistics in 63% of the instances and in Chemistry in 71%. Nonetheless, the unmitigated authorial voice fends off other voices generally expressed with *but* like in [...] *it's not just it depends it's not just uptake from the program description, but how sophisticated you are* [...] (L-E3). Other utterances used with this function are *no, no never, and though*.

As for proclaimed contraction, *actually* is the most common utterance, like in [...] *and then actually the tran- after transition state the charge has been transferred* [...] (CH-E7), although there are other choices such as *of course, certainly, indeed, must, should, and fact in in fact and the fact that*.

Semantic choices to express engagement seem to be more limited than the wide diversity of, mainly, adjectives and verbs that speakers use in the corpus to show attitudinal meaning, and where few utterances and patterns are recurrent.

Expression of graduation in DSs

The third domain of the evaluative model is graduation. Following Martin and White (2005) graduation operates at two levels, to grade according to intensity or amount, or to grade according to prototypicality, what these authors call force and focus. In the present thesis, the expression of force has been

classified into three categories: intensification, mitigation, and quantification. Intensification is the semantic evaluative resource speakers use to grade up qualities, processes, modalities, and nouns; whereas mitigation is used to grade them down. As for quantification, it grades in terms of amount. In addition, the model describes two types of focus, sharpening and softening. Focus up-scales or sharpens and down-scales or softens the specification of a category according to prototypicality.

Findings on graduation are summarised in Table 14. The analysis has shown that force is the most common resource of graduation in DSs, and intensification the most frequent evaluative expression of this resource in both disciplines. In addition, discussants tend to mitigate more than presenters, and quantification is higher in Chemistry, mainly when comparing presenters. As for focus, speakers in Linguistics choose this evaluative resource more frequently, being sharpening in presenters a relevant option.

		Linguistics				Chemistry			
		Discussant		Presenter		Discussant		Presenter	
		N	%	N	%	N	%	N	%
Force	Intensification	13	39.4	25	43.9	23	47.9	39	52.7
	Mitigation	7	21.2	7	12.3	6	12.5	7	9.5
	Quantification	9	27.3	12	21.0	16	33.3	20	27.0
Focus	Sharpening	1	3.0	9	15.8	3	6.3	6	8.1
	Softening	3	9.1	4	7.0	0	0	2	2.7
Total		33	100	57	100	40	100	74	100

Table 14. Expression of graduation in DSs

As already commented, around half of the graduation that appears in DSs scales utterances that express speakers' attitude, the other half plays a mayor role grading semantic choices that do not convey evaluative meaning. In the first group graduation can precede or follow attitude. A close look at the position of this semantic resource in the appraisal structure shows that when graduation follows attitude, the most common way to express evaluative meaning is with comparatives such like *slower*, *greater*, and *longer*, and also

superlative comparatives like *highest*, where it is grammar that forces the order. When graduation precedes attitude, a recurrent pattern emerges in the corpus, the adverbs *very* and *quite* followed by an adjective, such as, *very different/ interesting/ informative/ serious/ small*, and *quite different/ interesting/ important/ large/ interpretative*. See all the examples in Appendix E. The most frequent evaluative meaning conveyed by graduation of attitude in the two disciplines is the intensification of appreciative meaning. It is also worth mentioning that around 75% of utterances of graduation express intensification, yet this percentage is lower for discussants in Linguistics (58%) who seem to prefer mitigation and softening. This tendency, to a lesser degree, is also followed by discussants in Chemistry who, as their counterparts mitigate affective meaning, 25% of the utterances of graduation. However, these percentages do not involve many instances in the corpus and no recurrent patterns can be identified. Examples of mitigated attitudinal meanings are, [...] *it is almost impossible to observe [...]* (CH-E10) where the adverb mitigates what the presenter describes as extremely difficult to observe, with the negative appreciation conveyed by the adjective; or [...] *I want I'm tempted to call it a genre chain [...]* (L-E8); here the positive expression of self-judgement shown by the verb *want* is mitigated in the self-repair strategy with the verb *tempted*.

The examination of graduation of non-evaluative meaning, surprisingly, shows the tendency in both disciplines to express quantification rather than intensification, as the general inclination of graduation indicates. That made me close look at instances of this type of semantic resource. Quantification, grading according to amount (showing imprecise reckoning of number, mass or presence, and of extent in time or space), seems to express also intensification (e.g. [...] *I've found a lot of uptake from the program description [...]* (L-E3) or [...] *we get all all this once [...]* (CH-E4); mitigation (e.g. [...] *who had actually more or less copied from the the statements [...]* (L-E3) or [...] *catalytic acceleration of about ten to the fourteenth fold [...]* (CH-E3); or just to scale without expressing neither intensification nor mitigation (e.g. [...] *there might be some interesting differences [...]* (L-E12). The identification of

the three functions confirms the general tendency of graduation, since quantification that intensifies is the most frequent choice. However, there are few instances of quantification in the corpus involving semantic repetitions, except for the use of **all** that intensifies. Regarding semantic intensification, the adverbs *always* and *still* are the most common, like for example in [...] *their competence will **always** be situated [...]* (L-E9) and [...] *we're **still** working on that [...]* (CH-E8).

As for the expression of mitigation as the second type of graduation, a recurrent utterance used by speakers in both disciplines is **just**. This adverb is defined by Martin and Rose (2005) as an expression of engagement; however, I consider it, instead, an expression of graduation following Lindemann and Mauranen (2001). These authors study the functions of *just* in academic speech and observe the most often use of the adverb is with minimising function (it can be paraphrased as *only*, *merely*, or *simply*); but *just* can also have an emphasising function (*absolutely*, *really*). Minimising and emphasising can be considered similar to the terms used in the dissertation, mitigation and intensification. In addition, they also found other two functions where the adverb is not expressing evaluative meaning, those are particularising function (*exactly*) and specificatory function between temporal and locative. These authors also identify a number of instances of ambiguous functions. Findings confirm Lindemann and Mauranen's results showing *just* is also generally used in DSs as mitigator like in [...] *is that_ is **just** the trial and the error [...]* (L-E6) or [...] *then **just just** don't add neutral reagent [...]* (CH-E10). There is one example of *just* with a specificatory function, but it is not of interest for the thesis, [...] *we **just** redoing those experiments [...]* (L-E8). In addition, I have attributed the adverb an ambiguous function in [...] *I I've uh been **just** recently corresponding with the PCM group [...]* (CH-E1), playing the role of intensifier or having a specificatory function.

The use of focus of DSs, as already said, appears to be quite limited in both disciplines. However, despite the few instance in the corpus, softening is

commonly expressed by *sort of* or *kind of*, e.g. [...] *you've **sort of**, managed to capture [...]* (L-E4), or [...] *where you see this **kind of** mock up [...]* (L-E8). When sharpening, the choices are more and there are no recurrent utterances. Nonetheless, two types of semantic information seem to be repeated, conveyed by instances such as: [...] *our **own** solvent [...]* (CH-E1), [...] *their **own** goals [...]* (L-E9), [...] *we **all** have busy weeks [...]* (L-E4), where the pronouns are sharpened by the adjectives *own* and *all*; and the idea of authenticity with the adjectives *original*, *real*, and the adverb *truly* in, [...] *the four step the **original** four step model [...]* (L-E4), [...] *how much of **real** personal stuff [...]* (L-E11), [...] *they are **truly** centered [...]* (CH-E6) (see all the examples in Appendix E).

To finish this section about linguistic evaluation, I consider interesting to compare my findings with Hyland's (2005), whose approach to study evaluation in academic written discourse has many adherents in the field. This scholar organises interactional resources in five sub-categories: hedges, boosters, attitude markers, self mention, and engagement (see full description in Section 2.2.1). I have compared the list of these types of metadiscourse items proposed by him (ibid.: 2005: 220-224), with the utterances that have emerged in the corpus to express evaluation in DSs (see Appendix E). The observation has revealed that attitudinal meaning, as considered in the present thesis, is conveyed with a wide variety of utterances. Only a few instances coincide with the list given by Hyland, those are: *important*, *interesting*, *drastic*, *expect*, *strikes* (the forms *striking* and *strikingly* in Hyland), and *surprises* (*surprised*, *surprisingly* in Hyland). Regarding engagement, the term is also used by Hyland to refer to those markers addressed to the readers to focus their attention or to bring them into the discourse, in his words "writers are able to either highlight or downplay the presence of their readers in the text" (ibid.: 53). The understanding of this category in the two models seems to be rather different. In the present study engagement expresses the position of the authorial voice and the negotiation of other voices. From this perspective, it is not surprising that only three utterances of engagement in DSs are

considered as such by Hyland, i.e. *assume*, *must*, and *should*. Most of the utterances belong in other categories. Thus, *in my opinion*, *perhaps*, *possibly*, *guess*, *seems*, *appears*, *tend to*, *ought*, *should*, *would*, *maybe*, *may*, and *might* are considered hedges; and *actually*, *certainly*, *clearly*, *in fact*, *indeed*, *never*, *of course*, and *think* boosters. The classification into hedges and boosters is, nonetheless, related to the two types of engagement values identified in the model and which I consider interesting in the present study, dialogic expansion and dialogic contraction, that is, when the authorial voice is mitigated and when it is not. On the other hand, regarding the conjunction *but*, which is the most frequent choice of speakers in the DSs analysed to express dialogic contraction, Hyland does not consider it an engagement marker but an interactive resource of the kind of transition markers, which, according to him, help readers interpret pragmatic connections between steps in an argument (ibid.,: 50). Finally, the third dimension in the model, graduation, embraces Hyland's boosters and hedges. Utterances of intensification that are considered boosters by Hyland are the adverbs *never* and *always*; and instances of mitigation that lay on the realms of hedges are *possible*, *generally*, *certain degree* (*certain amount/ extent/ level* in Hyland), *often* and *quite*. In addition, the adverb *still* that accomplishes the function of intensification in DSs is described as a transition marker by this scholar.

The above discussion reveals that even though there are some differences between the interpretation of certain items in the two models, mainly in the realms of engagement, a considerable correlation between them has been proven to exist. Nonetheless, there are many utterances that are only used in the corpora analysed in two studies and that cannot be compared. In addition, the model that is followed in the present dissertation has categories that are not in Hyland's. Mainly, the model includes two categories, boosters and hedges, most of the instances of engagement and graduation used in the corpus; in addition there are not sub-categories under the heading of attitudinal meaning to identify what is being evaluated. Yet, I consider the distinction of these

categories is enlightening to bring to the fore disciplinary differences between the semantic evaluative resources used in the DSs of the two conferences.

5.2.2 Multimodal evaluation

In the foregoing, an account of the semantic evaluation used by speakers in DSs has been discussed. However, as explained in previous chapters, this thesis aims at exploring evaluation from a multimodal approach considering other modes of expression that co-occur with linguistic evaluation. From this perspective, I focused attention exclusively on presenters, on how they express evaluation as speakers in the DSs and on the type of evaluative reaction they perform when listening to discussants' evaluative utterances. Appendix B in the CD-Rom contains video recordings and transcripts of the corpora of dialogic exchanges.

Results have confirmed the initial hypothesis that has foreseen linguistic evaluation of presenters as speakers tends to be co-expressed with kinesics and/or paralinguage (see Table 15). In both disciplines, multimodal evaluation seems to be over twice as often as linguistic evaluation.

	Linguistics				Chemistry			
	P as speaker		P as listener		P as speaker		P as listener	
	N	%	N	%	N	%	N	%
multimodal	108	62.1	5	5.8	84	63.6	5	6.7
linguistic	59	33.9	2	2.3	48	36.4	3	4
linguistic + ? ⁴⁷	7	4	4	4.6	-	-	-	-
kinesic	-	-	7	8	-	-	16	21.3
none	-	-	59	67.8	-	-	51	68
?	-	-	10	11.5	-	-	-	-
Total	174	100	87	100	132	100	75	100

Table 15. Presenters' expression of evaluation and reaction to discussants' evaluation

Regarding presenters' reaction, they do not commonly show any kind of evaluative expression during discussants' linguistic evaluation (indicated in the

⁴⁷ No video recording, kinesic recourses presupposed when possible.

table with the value “none”). When they evaluate, however, differences between disciplines are revealed. Whereas in Chemistry they seem to prefer the expression of kinesics, in Linguistics they use multimodality and kinesics equally. The non-verbal reaction chosen by presenters in Chemistry is consistent with discussants’ evaluative behaviour in this discipline, who do not express the attitudinal meaning of acknowledgement that commonly appears overlapping when discussants are also listeners.

As noted in the methodology, two major problems have arisen in the collection of data that will affect results in this broader approach of the analysis. The presenters in Linguistics were not in focus during a few seconds in a reduced number of dialogic exchanges. In consequence, it is not possible to know whether they were using kinesics to co-express with linguistic evaluation (as speakers and as listeners) or to give a non-verbal response (as listeners).

The second problem concerns Chemistry, since the image was not good because of light conditions and the result was the impossibility to detect facial expression and gaze. For eyes direction, assumptions had to be made on body and head orientation. Despite these problems, I have considered data is valid for this analysis which does not intend to make generalisations, but to be considered as a first attempt to deal with the interpersonal meaning of evaluation in DSs from a perspective that has not been taken before, to see possible tendencies and to pave the way for a new line of research in the field of academic discourse.

Linguistic evaluation and other modes of expression

Once the multimodal expression of evaluation has been proven, a close look at each of the modes that co-occur can reveal more about the role of non-linguistic expressions. Findings summarised in Table 16 show linguistic evaluation commonly co-expresses with kinesics, e.g. in [...] ***I think it's quite different*** [...] (L-E11), *I think* is co-expressed with a metaphoric gesture, palms up moving from side to side, anticipating and intensifying the evaluative

meaning conveyed with *quite different*. Additionally, co-occurrence of the three modes is also worth noting with a high percentage of instances in Chemistry, e.g. in [...] **high** *eh convergence criteria* [...] (CH-E4) the adjective appreciates positively the criteria but the attitudinal meaning is intensified phonetically and kinesically with a metaphoric gesture of palm down moving forward that describes the abstract idea implied in *high*.

	Linguistics				Chemistry			
	speaker		listener		speaker		listener	
	N	%	N	%	N	%	N	%
linguistic + kinesic	80	79.3	5	100	49	58.3	5	100
linguistic + paralinguistic + kinesic	11	10.9	-	-	30	35.7	-	-
linguistic + paralinguistic	5	4.9	-	-	5	6	-	-
linguistic + paralinguistic + ?	5	4.9	-	-	-	-	-	-
Total	101	100	5	100	84	100	5	100

Table 16. Multimodal expression of evaluation in DSs

As data indicate, the co-occurrence of semantic evaluation and paralanguage is limited. Identification of the paralinguistic aspects considered in the analysis was carried out “semi-automatically”, that is, through the interpretation of the waveforms registered in ELAN, to minimise errors derived from an intuitive identification. However, low frequency of paralanguage should not underestimate their value to convey evaluative meaning. The reason for the low number of occurrences is possibly the approach taken in the study, where the starting point of the analysis has been linguistic evaluation, rather than the examination of the evaluative function of paralanguage and kinesics, independently of their co-expression with semantic evaluation. As Biber et al. (1999) briefly introduced, kinesics and paralanguage can convey “stance meaning”. I have perceived during the analysis the evaluative contribution of these non-linguistic features when they do not co-occur with linguistic evaluation, but this would be an issue for further research. In addition, in a number of occurrences video recording is not available in Linguistics (“?” in the table). Nonetheless, the utterances have been part of the analysis since they

are co-expressed with paralinguistic, although we do not know whether or not the presenters do in addition co-express with kinesics.

Data from Chemistry should not be taken as definitive because, as mentioned, the quality of the video recording did not allow the annotation of face expression and gaze properly. Therefore, the default of kinesic data may affect results, decreasing the number of occurrences in the multimodal co-expression with linguistic evaluation and with paralinguistic. Nonetheless, it is important to note the high percentage of the multimodal expression of evaluation with the co-occurrence of linguistic and kinesic features (around 79% in Linguistics and 58% in Chemistry), as well as with the co-expression of the three modes, linguistic, paralinguistic, and kinesic (about 11% in Linguistics and 36% in Chemistry). These results highlight the importance of kinesics in the expression of evaluative meaning. Findings on the co-expression of semantic evaluation and kinesics are presented in the next section.

Another issue that is interesting to discuss is the relation between the types of appraisal meaning conveyed by presenters with semantics and the multimodal expression of evaluation, Table 17 summaries findings. Regarding linguistic evaluation, results have shown it expresses nearly equally the three dimensions (attitude, engagement, and graduation) in Linguistics, being slightly higher the expression of attitude; conversely, in Chemistry graduation is higher and engagement is lower (see Table 10).

	Linguistics				Chemistry			
	speaker		listener		speaker		listener	
	multimodal expressions		multimodal expressions		multimodal expressions		multimodal expressions	
appraisal meaning	N	%	N	%	N	%	N	%
attitude	51	50.5	2	40	44	52.4	5	100
engagement	31	30.7	3	60	16	19	-	-
graduation	19	18.8	-	-	24	28.6	-	-
Total	101	100	5	100	84	100	5	100

Table 17. Multimodal and appraisal in DSs

Multimodality, however, is used to express mainly attitude in the two disciplines (about 50%), with a considerable difference with the other two dimensions. In addition, engagement is more common than graduation in Linguistics (about 31%), but the relation is inverse in Chemistry where more graduation is expressed in a multimodal way (about 29%).

These results are not surprising but they follow the linguistic tendency already detected in Linguistics to express engagement and to convey graduation in Chemistry. All in all, non-linguistic resources, and essentially kinesics, co-express with semantic evaluation, where half of the utterances convey attitudinal meaning.

Co-expression with kinesics

Kinesics deserves special mention since it is the most frequent mode chosen by presenters to co-express with linguistic evaluation in both disciplines, when the presenter is the speaker, or co-occurs with the discussant's linguistic evaluation, as listener. A total of 276 kinesic expressions have been analysed which co-occur with 202 utterances that convey semantic evaluative meaning.

The first approach to examine this non-linguistic expression of meaning is to identify the distribution of the four different types of kinesics: gesture, head movement, gaze direction, and facial expression. Results summarised in Table 18 reveal head movement and gesture are the most frequent expressions of kinesics. Whereas differences between these two are not significant in Linguistics, in Chemistry instances of gestures are higher. Facial expression is also significant in Linguistics. As for Chemistry, as already commented, data on gaze and facial expression should be disregarded, because the low quality of the image has not allowed detecting facial expression (only one instance where the presenter undoubtedly smiles (CH-E2, Example 72)), and assumptions on body and head orientation were necessary to identify changes of eyes direction. Because this situation, I do not dare to compare percentages between disciplines.

	Linguistics				Chemistry			
	speaker		listener		speaker		listener	
	N	%	N	%	N	%	N	%
gesture	48	34.8	-	-	57	54.8	1	5.6
head movement	45	32.6	8	50	41	39.4	13	72.2
gaze	19	13.8	2	12.5	5	4.8	4	22.2
facial expression	26	18.8	6	37.5	1	1	-	-
Total	138	100	16	100	104	100	18	100

Table 18. Types of kinesics in DSs

In addition, the exploration of how these types of kinesics combine shows the presenters' preference to use one kinesic feature to co-express with semantic evaluation, being this tendency greater in Chemistry (76% in this discipline and 58% in Linguistics). Instances of two kinesic features at a time are also significant in the corpus (35% in Linguistics and 23% in Chemistry), whereas co-occurrences of three types of kinesic features are incidental.

If we move now to how actually the co-expression of linguistic evaluation and kinesics takes place, the analysis has shown interesting results about when kinesics is expressed in relation to the utterance. Two aspects deserve an explanation before going further. On the one hand, throughout the present dissertation I have used the terms co-expression and co-occurrence to refer to the expression of a non-linguistic feature that emerges in the discourse motivated by the evaluative meaning conveyed in the linguistic expression. Nonetheless, these terms are not precise since kinesic features are not always expressed exactly at the same time as the semantic evaluation or they last more than the appreciative word. On the other hand, transcription of kinesic features, as described in the methodology, does not follow the accurate definition of three phases that Kendon (1980) proposes for gestures: preparation, stroke or apex, and retraction. Results show that for gestures preparation and stroke co-express with the evaluative utterance. For the rest of kinesic features, literature has not described any structure. My observations bring me to the conclusion that for gaze and facial expression, using Kendon's terms, neither preparation nor retraction occurs; and that for head movement, it is performed in two

phases, stroke and retraction, being only the apex co-expressed with the utterance. ELAN played a crucial role in the identification of micro expressions and hands and head movements that last milliseconds; without this software it would have been extremely difficult, and in some cases impossible, to detect certain types of kinesics and the exact position they are performed in relation to the evaluative utterance. This type of exploration relates to McNeill's (1992) phonological rule that governs speech and gesture synchrony, where the stroke precedes or ends at the phonological peak syllable of speech. However, as commented in the present study the examination of position of kinesic features is not so rigorous.

Five positions were identified in the corpus (see video recordings of the dialogic exchanges in Appendix B in the CD-Rom): i) The most common position, about half of instances in both disciplines (51% in Linguistics and 55% in Chemistry), is when the kinesic feature exactly co-occurs with the utterance, like in the example, where the positive appreciation expressed with the adjective *good* co-occurs with tilting head to one side. The gesture unit lasts the same as the evaluative utterance⁴⁸.

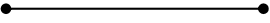
[...] that includes **good** ideas, so that points to (all takers) [...] (L-E1)



ii) In the second type (24% in Linguistics and 21% in Chemistry), kinesics co-occurs with the semantic evaluation and then extends, the example below illustrates this position. A gesture of rotating hand is co-expressed with the utterance of graduation of softening, *sort of*. Gesture and utterance are in semantic synchrony expressing the same meaning. Unlike the first type of position of fully co-occurrence, the gesture unit extends beyond the utterance, in the example it also embraces *literature review*.

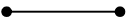
⁴⁸ The following examples have not been numbered as they exclusively illustrate kinesics position.

[...] they *tend to* have a **sort of** literature review uh uh section [...] (L-E12)



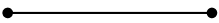
iii) Another way to position kinesics is immediately before the utterance. Kinesic features preceding the evaluative expression anticipate the semantic and pragmatic meaning of the utterance and intensify it. Thus, there is not temporal co-expression. In the next example, a gesture of opening palms up and moving them to the sides showing five fingers anticipates positive judgement, *assume*, quantified with *fifty-fifty*.

[...] that *really* has no impact in the isotope effect so we **assume fifty-fifty** (CH-E9)



iv) The kinesic feature can also precede the evaluative utterance and co-occur with it, like in the example below where head shakes intensifies the comparative superlative that conveys positive appreciation before saying it.

[...] a disordered structure either static or dynamic and it fits **much better** with a *centered* hydrogen [...] (CH-E6)



There are disciplinary differences in the use of this position and the previous one. Whereas the position of time asynchrony is more frequent in Chemistry (12% in this discipline and 4% in Linguistics), co-occurrence with previous utterance is more common in Linguistics (19% and 11% respectively).

v) Finally, the least frequent situation is found when the same kinesic feature co-occurs with several utterances and extends beyond the evaluative meaning. In the example, the presenter with *I think* raises eyebrows, looks up, and tilts head to one side. The kinesic features co-express with the modal verb *might*, that mitigates the authorial voice with dialogic expansion, and the intensifier *more*. But they extend beyond the evaluative utterances co-occurring with the

non-evaluative expressions between the utterances, *undergraduate statements we [...] call them, until a personal.*

they're *very different*. um **I think** undergraduate statements we **might** call them **more** a personal statement (L-E11)

Findings have shown the tendency is that kinesic features are time synchronised with linguistic evaluation. Yet, it is also important to consider the number of instances where kinesics co-occurs with the utterance and the apex is extended in the discourse. Less frequent but also with a considerable relevance is kinesics which apex comes from previous utterances. In addition, position seems to be related to the function of kinesics in the multimodal expression of evaluation, an issue that is discussed in the next section.

The role of non-linguistic modes of expression

In this part of the chapter, results on the exploration of the function that paralinguistic and kinesic features accomplish when co-occurring with semantic evaluation are discussed. Yet, it has been necessary first to focus on the description of the different types of features, since a close relation seems to be between the types and the role they play.

Paralanguage, phonetic stress (loudness up) and longer pronunciation of syllables, is co-expressed with evaluative utterances of attitude (commonly of appreciation) and engagement to intensify the evaluative meaning they convey. For example, positive appreciation is intensified with long syllabic duration in [...] *what you're doing is very **nice** examination [...]* (L-E4)⁴⁹, and negative appreciation is phonetically stressed in [...] *a **bad** experience [...]* (L-E6) and head moving forward. Instances of paralinguistic intensification of the semantic meaning conveyed with engagement are [...] *and it **appears** that for normal kcat [...]* (CH-E5), where the utterance of dialogic expansion co-occurs

⁴⁹ The utterance that co-expresses with paralinguistic features is boxed.

with the two paralinguistic features, phonetic stress and longer pronunciation of syllables and a gesture of fist up moving forward; and [...] *okay **actually** if you uh in- inject C-L-O minus [...]* (CH-E10) where the utterance of dialogic contraction is intensified phonetically and with a gesture of separating palms down. In addition, paralanguage also co-occurs with graduation, frequently with utterances that express intensification like in [...] *so **essentially** is the same [...]* (CH-E4) where the utterance of graduation that is intensifying the positive appreciation is phonetically stressed and co-expressed with a gesture of palms down moving forward.

Few instances of individual laugh appear in the corpus; however, this paralinguistic feature deserves a special mention. As described in the methodology, it has been included in the analysis because of its inherent quality to express emotions. Findings reveal laugh can intensify speakers' attitude toward what has been said like for example in [...] *it will be something like probably twenty which is, well we calculated is quite a bit. <Presenter: **LAUGH**> [...]* (CH-E11), where the presenter is rejecting a critical comment, and laugh seems to intensify the presenter's attitude who positions as odd with the discussant. But laugh can also express the speaker's attitude towards what is going to be said immediately after, an act that in the instances from the corpus could be interpreted as a politeness strategy to self-protect positive face. In the next example, [...] *but it's not going to mean, they can take that back and have that competence at home so they need to be to become <Presenter: **LAUGH**> multi competent [...]* (L-E9), where the presenter laughs to introduce the final comment, possibly because she wants to show she is conscious, as the audience is, that what she is saying is difficult to attain, and she does not want to be judged.

Regarding kinesics, four types of kinesic features have been considered in the analysis: gesture, head movement, gaze, and facial expression. Findings have shown gesture is the most frequent feature used by presenters in both disciplines, followed by head movement (differences between the two are low

in Linguistics, see Table 18). In addition, the study of these kinesic features, and particularly of gestures, has received full attention by scholars (as reviewed in Chapter 1, Section 1.2.1). Consequently, I focus discussion mostly on the role of gestures and head movements in the co-expression with semantic meaning conveyed in DSs. The reason to do so is two fold; on the one hand, their extensive use in the corpus (a total of 106 instances of gestures and 107 of head movements) in contrast with the use of the other two. On the other hand, the impossibility of making a disciplinary contrastive approach of the co-occurrence with face expression and gaze because of the default in the compilation of data.

The examination of gestures was based on the studies of Bavelas et al. (1989, 1992), Kendon (2004), and McNeill (1992) who describe the functions and the types of gestures in conversation contexts. Findings in the present thesis underpin the proposals of these scholars. Consequently, I have defined a framework, with the categories employed by them, to examine the gestures that co-express with semantic evaluation in DSs.

The first step in the analysis was the study of the type of gestures. Following McNeill (1992) four types were identified: i) Iconic gestures have a formal relation with the semantic content of the speech that refers to concrete processes or objects. Like for example in [...] *when thing bind **very** tightly [...]* (CH-E8), where *very* intensifies the adverb *tightly*, that already conveys the idea of very firmly, the whole expression co-occurs with bringing palms up closer to each other. Or the co-expression of *huge* with a gesture of separating palms in [...] *these **huge**, binding isotope effects [...]* (CH-E8) in the same exchange. ii) Metaphoric gestures are also pictorial and relate to the abstract content of the speech. For example, vagueness or imprecision can be expressed with a gesture of rotating hand(s) with the same semantic meaning as the utterances it co-occurs, such as: *can* in [...] *there **can** be anxiety [...]* (L-E9), where the gesture also seems to express the idea of possibility conveyed by the modal verb that mitigates the authorial voice; *sort of* in [...] *a **sort of** literature*

review [...] (L-E12), where the utterance and the gesture soften this type of review; or *quite* in *[...] it's quite large [...]* (CH-E4), where the adverb intensifies the adjective with quantification of imprecise amount like the gesture. Conversely, graduation of sharpening and intensification can also be expressed with metaphoric gestures, for instance in the co-expression with the adverbs *particularly* and *still* in, *[...] ornithology particularly the Cornell website [...]* (L-E8), where a gesture of “ring” hand shape implies the idea of precision as the adverb; and in *[...] we're still working on that [...]* (CH-E8), where the adverb intensifies the idea of continuity as the gesture that co-expresses of palms up moving forward does. iii) Beats are gestures that are not pictorial but tend to have the same form regardless the content of the speech. In addition, they mark as significant the pragmatic content (Morris 1977) of the word or phrase, unlike iconic and metaphoric gestures which relate to the semantic content. For example, the gesture of palm(s) moving forward co-occurs in the corpus intensifying the pragmatic meaning of positive appreciation in *[...] even with a high convergence criteria [...]* (CH-E4) and *[...] that turns to be the same number [...]* (CH-E8), in addition *high* is phonetically stressed; intensification in *[...] we get all all this once previous imaginary frequency [...]* (CH-E4) and *[...] so so essentially it's the same [...]* (CH-E4); sharpening in *[...] the only way I can answer your question [...]* (L-E8); and mitigation in *[...] the bound ligands that, uh seems to be more favorable [...]* (CH-E5). iv) The fourth type of gestures is deictics. These gestures are commonly known as the gestures of “pointing”. They refer to the concrete, like people in *[...] we all have busy weeks [...]* (L-E4), where the negative appreciation co-occurs with a gesture of pointing at the audience with palm down; or abstract processes like in *[...] but I I've been just recently corresponding with the PCM group in uh Pisa [...]* (CH-E1), where the presenter points at the screen with the utterance of dialogic contraction because during the presentation he has referred to the PCM model.

Despite the low number of instances, interpretation of quantitative data reveal different disciplinary tendencies in the use of these four types of gestures that

co-express with linguistic evaluation, that need to be confirmed in a larger corpus. The most frequent are metaphoric and beats; however, whereas the two types are used almost equally in Linguistics (46%), beats are the most common in Chemistry (51%) and metaphoric gestures are the second choice in this discipline (23%). In addition, deictic and iconic gestures are incidental in Linguistics, but in Chemistry iconic have a noteworthy use (17%). The interpretation of these results needs a further step in the analysis because it relates to the function of gestures.

Before moving to the findings on the role of gestures in DSs, I consider necessary to go over the rules that govern synchrony of speech and gesture postulated by McNeill (1992), since I will refer back to them during the discussion, those are: phonological, semantic, and pragmatic synchrony (see description in Chapter 1, Section *Gesture*). Of major interest for the present study, however, are semantic and pragmatic synchronies. When the speech and the gesture are in semantic synchrony they express the same meaning at the same time, like instances of metaphoric and iconic gestures; but when they are in pragmatic synchrony they express the same pragmatic function, like examples of beats.

Regarding functions, Kendon (2004) describes three primary functions of gestures: referential, interpersonal, and pragmatic. When a gesture accomplishes a referential function it makes a representation of any aspect of the utterance, those are metaphoric and iconic gestures. Interpersonal gestures, according to Kendon, show how interaction is organised. In this respect, I follow Bavelas et al. (1989, 1992), who identify four types of functions under the descriptor of interactive gestures: marking the delivery of information, citing the other's contribution, seeking a response, and turn coordination. Results show that in the corpus of DSs only gestures that mark the delivery of the information are co-expressed with semantic evaluation. Like in the example of a deictic gesture of the concrete where the presenter points out at the audience in [...] *we all have busy weeks* [...] (L-E4); here the gesture delivers

shared information that can be paraphrased as “you know what I am talking about”. Another interactive gesture of this type appears when the presenter seems to demand the audience attention putting the finger up with the utterance of positive affect in [...] *is any one taping this please?* [...] (L-E4). Interactive gestures do not show either semantic or pragmatic synchrony with the speech but add pragmatic meaning beyond the semantic evaluation. I will go back to this issue in the discussion of pragmatic gestures.

I have adopted Kendon's (2004) categorisation of pragmatic gestures that distinguishes three types: performative, parsing, and modal. With performative functions gestures show the move or the speech act the speaker is engaged in. For example in [...] *I'm awaiting for any sort of comment back from them* [...] (CH-E1), the presenter folds arms at the back with *sort of* and the gesture is maintained during all the response. This gesture is in pragmatic synchrony with the speech showing, as the semantic evaluation does, rejection of the discussant's comment. With parsing functions gestures show punctuation in the discourse like for example in the comparison [...] *they are all rate-limited by deacylation. rather than acylation* [...] (CH-E5), where the utterance is co-expressed with a gestures of moving one hand to one side, in coordination with the first part of the comparison, when the presenter has moved the other palm up the two gestures could be considered as structuring the discourse. Finally, gestures that perform modal functions show how the utterance is interpreted, those are the instances given to illustrate beats, where the gesture of palm moving forward intensifies the pragmatic meaning of the utterance either showing positive appreciation of grading with intensification, sharpening, or mitigation.

Another function has been identified in the corpus, when gestures accomplish a cohesive function. McNeill (1992) defines a fifth type of gestures, cohesives, to refer to those gestures that link parts of the discourse. In addition, according to this author, these gestures could be performed by any of the other four types of gestures. I think McNeill is describing here a function rather than a type of

gesture, since, on the one hand, the parameters he uses to define the other gestures are not used here (like the form of the gesture and the type of reference); on the other hand, the fact that it could be performed by any of the other types is showing a function is accomplished with it. An instance of the cohesive function of the gesture is performed in the example given to illustrate deictic gestures of abstract aspects like processes in [...] *but I I've been just recently corresponding with the PCM group in uh Pisa [...]* (CH-E1), where the reference to the presentation with the gesture of pointing at the screen link the two parts of the talk the presentation of the research and the discussion session.

It is noteworthy the relationship between the type of gestures and the function they accomplish when co-expressing with linguistic evaluation in DSs. Referential function is performed by metaphoric and iconic gestures which are in semantic synchrony with the speech, while pragmatic functions are performed by beats in pragmatic synchrony with the linguistic evaluation. Moreover, cohesive and interactive functions seem to be commonly performed by deictic gestures. Therefore, it is not surprising that findings on the functions reveal similar tendencies to those brought to the fore with the examination of the type of gestures. That is, referential and pragmatic functions are the most frequent in the corpus, as metaphoric gestures and beats are. Furthermore, whereas in Linguistics gestures accomplish both functions equally, in Chemistry there seems to be a major tendency to use more gestures with pragmatic functions and less with referential function (that is performed with metaphoric and iconic gestures). In addition, the most frequent pragmatic function expressed by both disciplines is the modal function. Finally, cohesive and interactive functions are not significant; nonetheless, instances of interactive function have only been found in Linguistics, while cohesive function is only carried out in Chemistry.

Head movement is the other kinesic feature that plays an important role in the co-expression with linguistic evaluation. Findings have revealed the most

common head movements that co-express in the corpus with linguistic evaluation are: head shake, nodding, tilting head to one side, and moving head forward. Other minor head expressions are moving head up and moving head down; the latter is accompanied by eyes aversion, an aspect that will be commented later. As the quantitative interpretation of gestures, and as any interpretation of this type in the present study, the type of head movement preferred by each discipline should be understood exclusively as showing possible tendencies but not as definitive distributions of percentages of use, since the number of instances is too limited because of the qualitative approach of the analysis. Nonetheless, there seems to be a preference in Chemistry for nodding (56%) and tilting head to one side (19%), whereas in Linguistics there does not appear to be a clear difference between lateral movement and tilting head to one side (22% each one), and nodding and moving head forward (18% each one).

Regarding the function of shaking head that co-occurs with linguistic evaluation, findings have shown it accomplishes pragmatic functions of the modal type, since it shows interpretation of the utterance. Three types have been observed, the first type occurs when head shake conveys the same negative polarity as the linguistic utterance, like in [...] *I think is quite different* [...] (L-E11), where the presenter shakes head with the negative appreciation. The second type, already observed by McClave (2000), appears when the head movement co-occurs with an expression of uncertainty, the function is accomplished in examples such as [...] *it's something like crystal packing force* [...] (CH-E6), where quantification of imprecise reckoning co-expressed with head shake, or in [...] *your eh statements are very different I think from what grad statements* [...] (L-E11) where the utterance of dialogic expansion that mitigates the authorial voice co-occurs with head shake. The third type of modal function is intensification. To date, this interpretation has been widely accepted by scholars (Goodwin 1980, McClave 2000, Schegloff 1987) as the function that head shake accomplishes when it co-occurs with evaluative expressions. These scholars consider head shake in this situation

different from negation; however, findings in the corpus made me underpin Kendon's (2002) position, who considers these instances accomplish the function of intensifiers because of their reference to an implied negative in the utterance (see discussion in Chapter 1, Section *Head movement*); for example in [...] *it fits **much better** with [...]* (CH-E6), where lateral head movement co-occurs with the comparative superlative of positive appreciation to intensify the implied negative in the utterance, the head shake could be paraphrased as "there is no other that fits better than it".

Results of the exploration of head nods have brought to the fore pragmatic and interactive functions. Two types of pragmatic functions of modal have been identified in the corpus. The head movement expresses the same positive meaning as the evaluative utterances, like in [...] *that's an **interesting** issue [...]* (CH-E7), [...] *that's a **great** question [...]* (L-E9), [...] *that raises a **very good** question [...]* (CH-E5). And head nods intensify the semantic evaluation in instances such as [...] *that **clearly** has significant problems [...]* (CH-E1), [...] *the charges_ distributions is **just** normal [...]* (CH-E7), or [...] *handout, is **very** informative [...]* (L-E2), where the adverbs express dialogic contraction, mitigation, and intensification respectively but they do not show the presenter's attitude. In addition, head nods also accomplish this pragmatic function in the following examples, [...] *so **I don't think it's small** [...]* (CH-E11) and [...] *they are **very different in my understanding** [...]* (L-E9), where the head movement shows the interpretation of the proposition intensifying the presenter's position. On the other hand, the interactive function of head nods is accomplished when co-expressing with a particular type of backchannels. In these situations head nods show acknowledgement, like the utterances they co-occur with that express agreement with the discussant (convergence token after O'Keefe and Adolph (2008), see their contribution in Section 2.4), such as in [...] *<Presenter: OVERLAP> **right** </OVERLAP> [...]* (CH-E2).

The examination of the instances of titling head to one side has revealed that in most of the cases this movement seems to have an intensification function, like

in [...] *you don't see accumulation of the intermediate you **only** see it really when [...]* (CH-E3) or [...] *that includes **good** ideas [...]* (L-E1), where the head movement co-occurs with the utterances of mitigation and positive appreciation respectively. A similar function can be attributed when the presenter moves head forward or up like in, [...] *they **tend to** have [...]* (L-E12) and [...] *I've tried using this <Discussant: OVERLAP> uh </OVERLAP> before with totally **unrelated** subject [...]* (L-E10) (see Appendix B in CD-Rom).

Regarding facial expression, two types are the most common in the corpus of Linguistics, smiling and raising eyebrows. There are other expressions but they are not so recurrent like frowning, opening wide eyes, or wrinkling nose. It is widely accepted that facial expressions show emotions (Ekman 1972); however, findings have revealed that when they co-occur with linguistic evaluation they intensify the meaning conveyed by the utterance or express the presenter's attitude, showing affection but also judgement or appreciation. Nonetheless, even when intensifying utterances that convey attitudinal meaning facial expressions seem to be in addition showing the presenter's attitude that can be the same as the utterance or not. For example, in [...] *it's **very** serious [...]* (L-E2) the presenter raises eyebrows with the intensifier *very* stressing it like a phonetic stress; but in [...] *is any one taping this please? <LAUGH>... **oh** you are okay [...]* (L-E4), the utterance of positive affect *oh* also co-occurs with raising eyebrows, the facial expression intensifies the utterance but at the same time expresses the same evaluative meaning of surprise; however, in [...] *the wrong kind of unconsciousness can lead to the **wrong** kind of consciousness [...]* (L-E9), the second *wrong* co-occurs with raising eyebrows that can be interpreted as adding affective meaning to the utterance of negative appreciation; it could be paraphrased as "can you believe it?" referring to the relation between unconsciousness and consciousness. In addition, it seems that raising eyebrows is used as an intensifier, whereas smiling co-occurs with attitudinal utterances and is used to add this type of evaluative meaning, for example in [...] *it's fifty degrees_ uh I'm sorry, fifty*

degrees Celsius, sorry, thinking in Celsius these days [...] (L-E10), where the presenter smiles with the negative utterance of affect *sorry* to convey with the facial expression that she feels ashamed.

Finally, the last kinesic feature analysed in the corpus was gaze. Results have shown that when the presenters change gaze direction they seek eye contact or look away from the discussants. Eye contact as postulated by Kendon (1967) serves in communication to make sure the interlocutor takes account of one's position, this could be considered an interactive function, like in [...] *they don't give **any** credit, but they can give discredit [...]* (L-E12), where the presenter positions about literature reviews and with the intensifier *any* he looks at the audience, it seems it is not only to the discussant that he wants to communicate his attitude towards this issue. On the other hand, aversion of eyes expresses attitudinal meaning. Kendon (1967) also observes it tends to occur at points of high emotion. In the corpus, aversion of eyes occurs frequently when the presenter is listening how the discussant positions as odd with him/ her, like in [...] *there's one aspect that surprises me and one that **doesn't** [...]* (CH-E12) where the discussant shows he is going to criticise some part of the research presented, the presenter moves head down and forward implying aversion of eyes that can be interpreted as the presenter is embarrassed with the situation. In addition, the presenters also change gaze direction to look up, which seems to have a parsing function marking the structure of the discourse, like in [...] *anxiety caused from the **wrong** kind of unconsciousness [...]* (L-E9), where a look up co-occurs with *wrong*.

There is another aspect conceptualised by Kendon (2004) that I consider enlightening for the analysis, the way in which the gesture achieves the pragmatic function. I have observed, however, that in the corpus this could be applied not only to the pragmatic function of gestures but to the functions of any kinesic feature. Thus, the function can be fulfilled in combination with the meaning of the evaluative utterance and the immediate context (those are the cases where the gesture anticipates the meaning). This is the most frequent

situation in both corpora although it is higher in Chemistry (96% in this discipline and 84% in Linguistics). For example, in [...] *the intermediate is **just** barely less stable [...]* (CH-E3), an iconic gesture of slightly raising one palm (facing palms down) and showing a difference of levels co-express with the adverb *just* and anticipates the negative appreciation expressed immediately after, *less stable*. In addition, as the difference marked by the hands is insignificant the gesture also combines with the meaning of the adverb that, together with *barely*, mitigates the appreciation. Another way to achieve the function is when the kinesic feature adds meaning beyond the evaluative component, for example in [...] *this is a **good** question [...]* (CH-E8), where the presenter appreciates positively the discussant's question with *good*, but at the same time points out at the discussant and looks at the audience. The interpretation of the kinesic features adds meaning to the positive evaluation of the discussant, who seems to get a higher position in the audience. Finally, kinesics reaches beyond the utterance to operate in relation to the implied meaning of the utterance, like when presenter overlaps with *yes* (CH-E3) and the expression of acknowledgement co-occurs with a gesture of arms folded expressing rejection of the discussant's comment and accomplishing a performative function; however, this strategy is insignificant in the corpus (about 1%) (see Appendix B in the CD-Rom).

The above discussion has brought into focus the roles that non-linguistic features accomplish when they co-occur with linguistic evaluation. Results have revealed that paralanguage and kinesics also have commonly pragmatic functions, either to intensify the semantic evaluation or to express the presenter's attitude. Other roles have been identified, however, like the referential function of gestures, and the interactive function of nodding, as the most relevant. The next section brings to the fore the connection of evaluative meaning with the generic structure of the dialogic exchanges.

5.3 The generic structure and the evaluative meaning

The interactive nature of DSs opens expectations about the central role that evaluative meaning can play in the organisation of the information in dialogic exchanges. The exploration of the generic structure of the exchanges confirms the hypothesis and reveals that the majority of the moves, in the structure of the different exchange patterns, show their rhetorical function through the expression of attitudinal meaning. This is the convergent point of the structural analysis and the analysis of evaluation. The present section examines the corpus of the 24 dialogic exchanges, segmenting the turns in the different moves and marking in bold letters the verbal evaluative utterances. Appendix F compiles the generic information and the verbal evaluation of each exchange.

In the next sections, discussion is opened on the results of the generic structures of the three patterns of dialogic exchanges, Comment –Comment, Question – Response, and Comment + Question – Response, and the evaluative meaning expressed in the different moves. In the discussion of the discussants' moves the non-verbal reaction of the presenters is also considered, thus when no comment is made it is because there is no kinesic response or because, in the case of Linguistics, the presenter is not in focus (these few instances have also been indicated in the discussion). Appendix B in the CD-Rom includes the analysis of video recordings and transcripts of all the dialogic exchanges.

I would like to note that, although I cannot always be sure of the correct interpretation of the data, I would like to advance a possible explanation for the speakers' and listeners' choices. At some points, it is necessary to go back to the talk where the speaker presents the research to understand the discussion and to be able to make an approximation to the most correct interpretation.

shown three moves can be used to accomplish this function: opening the turn, contextualising the comment, and making the comment. The second and the third move appear in all the exchanges. The first move, *Opening the turn*, opens the dialogue announcing the comment like in Examples 46 and 47, or showing discussants' reaction to the presentation like in Examples 48.

(46) yeah I have, a comment on on the people (xx) [...] (L-E1)

(47) one one comment [...] (CH-E1)

(48) it **strikes** me that [...] (L-E4)

When announcing the comment the discussants state they do not have the intention of asking for research facts or for the presenters' opinion (Webber 2002), but they are going to challenge the presenter to reply to their comments. I say challenge because at this stage the presenters still do not have any clue about the discussants' position on the presentation. The discussants have not yet given any evaluative sign, that is, any verbal or non-verbal expression of their attitudes towards the presentation. The discussants open expectations about their comments, but the presenters have to wait for the next move/s to see the discussants' position. On the other hand, when showing the reaction to the presentation the discussant may show alignment or not with the presenters' position. In Example 48 from Linguistics the discussant opens the turn to show his positive evaluation of the presentation. He praises the research, establishing good rapport with the presenter. The discussant uses positive evaluation to express his attitudinal judgement, *strike*, to show the impression the research has caused on him. In pragmatic terms (Brown & Levinson 1987), he expresses positive politeness towards the face wants of the presenter. With this kind of opening presenters can feel relaxed because discussants show they are on their side and they value their work. This move is optional since it only appears in three exchanges; however, it has been called *Opening the turn* to distinguish it from other initial moves. Here, discussants do not provide ideational content contrary to what happens in the first moves of the other six exchanges analysed.

The second move is *Contextualising the comment*. Before making the comment, discussants consider necessary to make a reference to previous experience in all the exchanges except for CH-E3 where the discussant chooses to check his understanding of the research. In both situations they prepare the presenters for their comments providing the background information to understand them and in some cases also showing their attitude. The reference to previous experience is compared in the thesis to Ventola's semiotic spanning (1999), since different modes of meaning are involved and links are formed between the actual discourse and the discourses discussants have previously experienced. Thus, discussants can refer to previous exchanges in the DSs, like in Example 49.

- (49) **greatly I I I think it was said** to (xx) **some** of the comments that have come out here
(**in red and blue**) [...] (CH-E2)

The move starts with an intensified expression of engagement that shows dialogic expansion with *greatly I I I think*, opening the discourse to other voices but also reducing authorial responsibility. The discussant seems to self-protect positive face from criticism. The others' comments are gradated with the pronoun *some*, rather than referring to all the comments made during the DS. In addition, the discussant uses the utterance of dialogic expansion *it was said*, rather than nominalising who made the comments. It seems the discussant does not want to impose upon listeners' beliefs. Thus, the resources he uses constitute a negative politeness strategy towards the face wants of the addressees, previous discussants. In addition, the description of the comments as, *in red and blue*, shows negative attitude towards previous exchanges, where discussants have shown some discrepancies with the presenter. The discussant uses a metaphor to show his negative appreciation of the comments, identifying negative comments with "red", since it is the colour of the ink generally used when making corrections on paper. In this way, the discussant is expressing certain alignment with the presenter, who seems not to have to expect any face

threatening act (FTA). The presenter, on his part, nods to apparently showing acknowledgement.

Discussants can also refer to their own research to contextualise the comment. In this way, they show they are interested in the same area as the presenter, and this may give authority to the comment because they are not talking from the distance but they know about the topic of the research presented like in Examples 50 and 51. This situation may be challenging specially for novice researchers whose lack of confidence may see in this a potential threat, since they are not the only ones in the session who have done research on the topic, thus they are not the only ones who master that specific area of knowledge. I would say that when discussants show they have also been involved in the exploration of the very same topic, the relationship that is established between the discussant and the presenter, and also between the discussant and the audience, is somewhat different than the relationship established between them when the discussant is an outsider to the field. When the discussant is also a knower, as the presenter, they speak from a position of authority that is not held by the other discussants.

- (50) I I'm in the process of looking at uh these purpose statements in technical design [...] (L-E3)
- (51) uh I **can support** that we we studied the (xx) uh stability and **extremely independent** of the model of the solvent K. since we are **criticizing** PCM model. <Discussant: **LAUGH**> uh we were designing in Gaussian our **own** solvent [...] (CH-E1)

In Example 50 from Linguistics there are not evaluative markers that tell about the attitude of the discussant. However, in Example 51 from Chemistry, the discussant has considered it is not enough to say that his group of research has examined stability, *we studied [...]*, but he adds the utterance *I can support*. This positive judgement makes explicit the discussant's capacity to trust him and gives more credibility to his research⁵⁰. He seems to prepare himself to

⁵⁰ It would be interesting to analyse from an ethnographic approach the relationship of power between the participants. For example, if the discussant were an influential scholar in the field

show he positions as odd with the presenter, an interpretation that is meaningful when considering the presenter's non-verbal response to it; that is, looking down. In addition, stability is described as *extremely independent*, where the adjective evokes positive appreciation that is intensified by the adverb. At this point, the presenter shows acknowledgement nodding. The discussant also gradates the description of their solvent sharpening it with the use of the adjective *own* rather than just saying *our solvent* indicating that the specification is prototypical (Martin & White 2005). Besides, in the middle of this reference to his research to contextualise the comment, the discussant evaluates the talk as a criticism to a model of analysis, *since we are criticizing P-C-M model*. This direct expression of FTA is mitigated, on the one hand, by the use of the inclusive pronoun *we*, and on the other, by a paralanguage expression of attitude, laugh; to what the presenter responds again looking down. The aversion of eyes might express negative attitude (Argyle et al. 1981) or embarrassment (Kendon 1967), thus possibly self-protection of an FTA.

The third type of reference to previous experience to contextualise the comment is to refer to the research presented. Discussants refer to the part of the presentation they are going to focus on the comment like in Examples 52 and 53, or they refer to the entire presentation like in Example 54.

- (52) [...] when you're showing the um, well the part that you blacked out **generally** the situating (xx) <BACKGROUND NOISE> <Presenter: OVERLAP> yes mhm mhm </OVERLAP> that **all** that [...] (L-E1)
- (53) okay. **do you mind I said** the isotope effects you show after a separated reactions to (CH-E4)

In Example 52 from L-E1, the discussant gradates her attitude using *generally* to mitigate the description that follows it, and the adjective *all* to intensify the repetition of the pronoun *that*. Here, there is not an evaluative sign about the attitude of the discussant toward the presentation yet. Thus, the presenter seems

the meaning of the utterance *I can support* would be different, since his words would be much more highly valued by the research community of the conference.

to be relaxed. She stays behind the lectern, smiling while arranging her notes and looking at them rather than at the discussant. In Example 53 from Chemistry the discussant also refers to the presentation. The evaluative utterance used to open it, *do you mind I said*, where *mind* is phonetically stressed (as the analysis of the sound waveforms registered in ELAN reveals), indicates a critical comment is going to be expressed. Such mitigation of the criticism, on the other hand, constitutes a negative politeness strategy towards the face wants of the presenter. However, the presenter does not allow him to finish the comment but, as explained later, corrects the discussant's understanding of the research.

Discussants can also make a broad reference to the presentation but at the same time provide a more comprehensive and subjective description of the research. They do not simply refer to presenters' research remaining on the sidelines, but their contribution is evaluative, expressing their attitude and engagement, and in this way showing their position towards the research like in Example 54 from Linguistics.

- (54) [...] what you're doing is **very nice**, examination of processes of glocalization where you got this, **essentially original little** heartland of product and then you got the world and then you got the world and then, they're coming together but there's **still** that local element too so and it's an embri- it's an **embryonic** community that you've **sort of, managed** to capture at its beginning and you can trace and see [...] (L-E4)

The discussant in a previous move (Example 48) has already shown a positive reaction to the presentation. Here he opens the move appreciating the investigation, *very nice*; where the adjective is intensified linguistically with the adverb and phonetically with longer syllabic duration. Besides, he appreciates positively the object of analysis, *heartland of product*, with *original little*, which in turn are intensified with *essentially*. In addition, he praises the approach adopted, with the adverb *still*, as well as the capacity of the presenter to examine an *embryonic* community (with the problems for the analysis that this may cause) which is described as *you've sort of managed to capture* rather than simply saying *you have captured*. The presenter's reaction

to this exhibition of politeness of positive face is to keep eye contact with the presenter most of the time, to nod now and then, and to use convergence token *yeah* to mark agreement (O’Keeffe & Adolphs 2008).

Furthermore, to contextualise the comment the discussant can also make two types of references, first to his own research and then to the research presented. In both cases he refers to previous experience. This is the case of Example 55 where the discussant has also done research on the same topic as the presenter and refers to it, as discussed in Example 51, and he continues the negative evaluation initiated there to refer to the talk.

- (55) [...] and in the manual which you referred to there are three parameters when you talked to calcium there are six parameters that are **explicitly** and **totally** defined the the solvent **but** when you put the O-six numbers in and then change the solvent that your default solvent that you are modifying you have changes of three kcals **or even higher** [...] (CH-E1)

The discussant appreciates positively the parameters of the manual as *explicitly and totally* defined, conveying the idea that there should not be any problem when using them. However, he shows disagreement with the presenter’s results which is expressed by dialogic contraction with the concessive *but*, and the utterance *or even higher* to evaluate negatively the unexpected changes in the results presented. The presenter responds nodding apparently showing acknowledgement, as he has done before.

Finally, the discussant can also refer to personal academic experience, like in the Example 56 from Linguistics where the discussant moves back to old days when he studied at the university. No evaluative meaning is expressed in this move.

- (56) when I studied um presenting [...] (L-E2)

Apart from contextualising the comment with a reference to previous experience, discussants can also do it by checking their understanding of the

research. That is, they want to make sure the comment will be based on right suppositions like in Example 57.

- (57) and **I suppose** the serine cholest- cholinesterase haven't been subject to the same, uh evolutionary pressure as the synaptic o- <COUGH> ones that you mentioned, <Presenter: OVERLAP> right </OVERLAP> [...] (CH-E3)

Here *I suppose* shows the discussant thinks that the process he describes is probably true based on what he knows, since it has not been mentioned during the presentation. This utterance expresses dialogic expansion, but also the presenter's implicit positive appreciation of the methodology followed. The presenter confirms the supposition, with the linguistic expression *right* as well as nodding and looking down. Although a confirmation cannot be considered evaluative, its multimodal co-expression might be interpreted as a kind of self-protection of positive face, maybe because he has to admit this lack of information that has been considered relevant for the discussant.

The last move taken by the discussant is *Making the comment*. Results have revealed that discussants can criticise the research like in L-E1, L-3, CH-E1, and CH-E3 (Examples 58, 59, 60, and 61); or to show alignment with presenters like in L-E4 and CH-E2 (Examples 62 and 63). I have decided to use the more general expression "Showing alignment with the presenter" rather than "Praising the research", in opposition to "Criticising the research", to include those instances where the discussant does not praise but just shows alignment, CH-E2 (Example 63). There is an exchange in the corpus where the function of the comment is ambiguous, L-E2 (Example 64). When criticising, discussants rationalise their criticism on the basis of previous contextualisation.

In exchange L-E1, the discussant has contextualised the comment with a reference to the research presented (Example 52), where no evaluation has hardly been shown. It is in the comment, Example 58, that the presenter finds the discussant uses a negative politeness strategy to mitigate assertions that contradict the presenter's beliefs. The present is not in focus in this move and

during her turn. She is again in focus in the last part of her intervention (Example 79).

- (58) [...] **to me**, that **seems not so much like** an education of the company's **failing but just**, what organizations are looking for this data cuz it's **just one failing**, <Presenter: OVERLAP> **yeah** </OVERLAP> **I think** you can say **the same** thing in a (xx) paper **very well**, they base everything (has to) **ya know** (you quantify this) (L-E1)

Two utterances of dialogic expansion open the move to reduce the authorial responsibility, *to me* and *that seems*; and the negative appreciation *not*, also mitigated with *so much like*. The relaxed face expression and the presenter's behaviour during the previous move changes after the discussant positions as odd with her. Now, she looks attentively at the discussant with serious face expression, tighten mouth, opening wide eyes and raising eyebrows. Dialogic contraction and intensification, the concessive *but* and the adverb *just*, show the discussant's disalignment with the presenter; to what the presenter's reaction is to acknowledge, *yeah*. Besides, the discussant describes the activity of the company with negative appreciation, *failing*, repeating the term twice; a term that has not been used by the presenter. In the last part of the turn, the discussant states her position with dialogic expansion, *I think* and *ya know*, and the expression of positive appreciation towards her interpretation of the research, *the same* and *very well*.

In Example 59 the discussant comments on the findings of her own research (see contextualisation in Example 50) which object of study is the same as the presenter's. It is not that the findings contradict the research presented but they contribute with an exploration that the presenter has not done but somehow has taken for granted.

- (59) and I've found **a lot of** uptake from the program description <Presenter: OVERLAP> **yeah** </OVERLAP> and also **the more** uptake, **the less** likely they were to be accepted <two or more speakers: OVERLAP> mm </OVERLAP> so so **the majority** of the students that were refuted were students who had **actually more or less** copied from the the statements the uh program descriptions (L-E3)

The discussant starts by intensifying the amount of uptake from the program with *a lot of*. This seems to be an aspect shared by both researchers to what the presenter shows agreement with *yeah* (the presenter is not in focus). However, when the discussant comments on her actual contribution, those seem to be unexpected findings as shown by the audience's response with an expression of surprise *mm*. She uses intensifiers of negative appreciation, *the more uptake the less* and *the majority*, to gradate the number of students. Then the discussant identifies those students whose applications have been rejected as those who *actually mores or less* copied from the program. First, she positions the authorial voice as highly warrantable with *actually* and then she quantifies the amount of information copied with the mitigating expression *more or less*.

On the other hand, in Example 60 the discussant continues the negative evaluation ha has initiated in move 2 (Example 55).

(60) [...] so there is **something hidden inside** wh- which is **not really well understood** by Gaussian people (CH-E1)

The discourse marker *so* introduces his position, which is summarised in a single sentence. He expresses negative appreciation of the research presented gradated with quantification in *something hidden* and intensified with *inside*. Furthermore, the discussant expresses negative judgement of Gaussian people, to which he is part of, appealing to their intellectual capacity, *not [...] understood*, and intensified with *really well*. The use of *Gaussian people* can be compared to the use of other interpersonal markers, like inclusive pronouns. Although these are out of the scope of the analysis, it is worth noting the functional role of Gaussian people could have here as either a mitigation of the authorial voice or as an intensifier, since the discussant is talking not only on his behalf but on behalf of the whole research community that follows the Gaussian approach.

In the next example from Chemistry, Example 61, the discussant has previously checked his understanding of the research (Example 57). However, after the presenter's confirmation, the discussant shows explicit criticism that is expressed with evaluative meaning.

- (61) [...] **but** they **certainly** are dissolute about **wasting time**, uh <Presenter: <OVERLAP> **yes sir** </OVERLAP> they've got this alternative binding site where they **have to wait** 'till i can get in, <Presenter: OVERLAP> **yes** </OVERLAP> uh and then they accumulate the tetrahedryl intermediate which makes the **overall** reaction go **slower than** uh <Presenter: OVERLAP> so </OVERLAP> it **might** have (CH-E3)

The discussant shows his authorial responsibility with dialogic contraction, *but* and *certainly*. Negative appreciation of the process used by the presenter is expressed with the following utterances: *wasting time*, *have to wait*, *slower than*. And he gradates the reaction, intensifying it with the quantifier *overall*. In addition, the discussant seems to have the intention of making a suggestion with dialogic expansion, *it might have*; however, he is interrupted by the presenter. The presenter's reaction to this comment is the following, at the first sight of criticism, the use of *but*, he looks at the discussant (note that during the confirmation in the previous move the presenter looks down). The change of gaze direction to seek eye contact might be interpreted here as used to communicate the presenter's attitude (Argyle et al. 1981), possibly of surprise. After each utterance of negative appreciation, the presenter agrees verbally, *yes sir* and *yes*, and finally takes the turn leaving the discussant with the words frozen on his lips. In addition, from the first expression of negative appreciation, *wasting time*, the presenter is arms folded (until the end of the comment and partially during the entire response) and nodding. The arms folded gesture is crucial for the interpretation of the presenter's reaction to the criticism. Although he is, verbally and non-verbally acknowledging, I consider the performance could be an act of self-protection from the FTA. As noted by Axtell (1997: 82) folded arms are interpreted by social observers as a gesture that says "I am taking a defensive posture" or "I disagree with what I am hearing".

The other type of comment a discussant can choose to make is to show alignment with the presenter. Discussants may praise the research presented like in Example 62, where the discussant summarises the positive attitude already expressed in moves 1 and 2 (Examples 48 and 54).

(62) [...] so **I think** you've got a **very good** book coming out of this (L-E4)

He opens the comment with the discourse marker *so*, and uses dialogic expansion, *I think*, to mitigate the authorial voice. In addition, he positively appreciates the research presented as the possible source of a *very good* book. The discussant chooses to follow a positive politeness strategy during all the turn to make the discussant feel good and her values are shared.

Discussants can also refer to general knowledge to show they share presenters' views. In Example 63 the discussant has already contextualised the comment (Example 49) by making a reference to previous exchanges in the DS, in fact this is the last exchange in the discussion. It seems the discussant thinks some of the comments and questions already made are just a problem with semantics, how things are called, but not a real disagreement with the presenter and his research. Thus, he considers necessary to clarify it, in doing so, he is supporting the presenter's position.

(63) [the comments ...] relate **a bit** to the to the distinction that **some** people make between transition structure, as opposed to transition state. that's one point. <Presenter: OVERLAP> **right** </OVERLAP> the second point regards the word tightness, which **I think** there are three different senses in which it gets used. **sometimes** it relates to energy, **sometimes** it relates to structure, (geometry) **sometimes** it relates to stiffness. <Presenter: OVERLAP> **right**. </OVERLAP> **and that's all** (CH-E2)

As in the contextualisation, the discussant does not want to impose upon the others' beliefs, discussants and the research community; thus he mitigates his assertions with *a bit* and vague expressions, *some* and *sometimes*. He presents the authorial voice open to other voices, *I think*, but he appreciates positively

his position with *and that's all*. The presenter shows acknowledgement with the utterance *right* and nodding during all the comment.

Finally, one can also find instances that show an ambiguous intention. Example 64 from Linguistics is part of an exchange where the discussant recounts an anecdote moving to his old studying days at university. The semiotic spanning apparently causes general laugh. These episodes of laugh have been called non-flouting humour (Cutting 2000), of the kind of arising from entertaining anecdotes (see Wulff et al.'s (2009) exploration of general laugh in DSs).

- (64) **I was told** that **the most important** information on the handout was your name <LAUGH> and that um you had to give a handout so that people would remember you **ya know** on the bus going home <LAUGH> (L-E2)

It could be considered that the discussant deprecates the topic of the presentation, the analysis of a corpus of conference handouts. Instead of making a comment showing his position, the discussant attributes the proposition to an external source, *I was told*, who simplifies the relevance of the handouts to the author's name; the intensification of positive appreciation shows it, *the most important* information. However, the discussant does not position as odd with the external voice. After the utterance of dialogic expansion, *ya know*, the presenter starts nodding until the end of the comment possibly as signal of acknowledgement.

Presenter's turn

Presenters can also structure their turn in three moves: opening the turn, replying to the comment, and rationalising the position; being obligatory only the second move. The first move is *Opening the turn*. As the discussant does, the presenter can open the turn by announcing the intention of making a comment like in Example 65, or by showing the reaction to the discussant's comment like in Example 66.

- (65) well I'm **just** gonna that comment on that **as well** [...] (CH-E1)

In Example 65 from Chemistry, the presenter shows his want of making a comment as the discussant has done. However, it might be noted that the discussant's comment has turned to be a criticism (Example 60). Thus, the presenter mitigates his intention with the adverb *just*. Meanwhile, the intensifier *as well* shows positive face protection also announcing a possible rejection of the discussant's comment.

The second example of opening move, Example 66, shows the presenter's reaction to the discussant's comment (Example 66). This example from Linguistics has been already discussed by Wulff et al. (2009: 88). As they note after the discussant's positive comments on the presentation (Example 62) with *so I think you've got a very good book coming out of this*, the presenter responds "mak[ing] fun of the fact that the preceding compliment had come from a somewhat influential person and gets two rounds of laughter by pretending to check that the comment has been officially recorded".

(66) oh, is any one taping this **please**? <LAUGH> ... **oh** you are **okay**, <LAUGH> [...]
(L-E4)

From an evaluative point of view, the presenter uses negative politeness strategy to finish the question, *please*, and smiles. The pragmatic function of the smile possibly goes beyond the utterance and refers to the implications of the whole question, as she is making fun of the discussant's comment. During the question she is pointing at the discussant, but in *this please* and the pause she puts the finger up, like demanding attention. Then, she looks at the camera and remembers the whole event is actually being recorded. Contrary to the first *oh*, that opens the move but appears not to convey evaluative meaning, the second *oh* seems to express the emotional feeling of surprise, which is intensified with the facial expression of raising eyebrows. That shows pragmatic synchrony of speech and gesture (McNeill 1992). The presenter also expresses positive appreciation of the situation, *okay*, which completes the joke and causes the second round of general laugh. The meaning of the marker *okay*

is enriched with the co-expression of palm up pointing at the discussant, looking at him, and smiling (the presenter keeps on smiling during the pause while the audience is laughing). The multimodal expression of *okay* with the interactive gesture (Bavelas et al. 1989) might be paraphrased as “That’s fine. I have it recorded and I can use it to try to publish my book”.

The second move is *Replying to the comment*. This is the obligatory move of presenters in the exchange Comment – Comment. In this move they can reject the discussant’s comment like in L-E3, L-E4, CH-E1, CH-E3, and CH-E4 (Examples 67 – 71); or acknowledge it like in CH-E2 (Example 72). A third type of reply has been identified. When there is a rhetorical pair in the same move, that is, acknowledgement – rejection or rejection – acknowledgement like in L-E1 and L-E2 (Examples 73 – 75). Ostensibly these functions are expressed mainly with the help of interpersonal evaluative meaning.

Presenters reject the discussant’s comments when they imply criticism as in the following examples. In Example 67, the presenter mitigates her authorial voice with *I think* and *I mean*, to express positive acknowledgement in *you are right*. This utterance is gradated with an expression of quantification *to a certain degree* that shows with a negative politeness strategy partial rejection to the discussant’s position.

- (67) <OVERLAP> I **yeah** and I **think** that I **mean** </OVERLAP> I **think** I I **think** you are **right to a certain degree**, [...] (L-E3)

In Example 68, after announcing a potential rejection in the previous move with *I’m just gonna that comment on that as well* (Example 65), the presenter uses the dialogic expression of expansion *I mean* to introduce that he positions as odd with the discussant’s argument. He refers to the discussant’s approach, the Gaussian method, with positive appreciation, *one thing*, as if the discussant were comparing two things that cannot be compared. In this way the presenter expresses distance from the PCM method, the one adopted in the research. The

distance is intensified by loudness up *one*, as the analysis of the sound waveforms shows, and a metaphoric gesture of showing one palm up and moving it forward, which is pragmatically synchronised with the speech.

- (68) [...] **I mean** what's in Gaussian is **one thing but** I I've uh been **just recently** corresponding with the PCM group in uh Pisa and I'm awaiting for **any sort of** comment back from them and in in this regard [...] (CH-E1)

Immediately after that, *but* is used to introduce an idea that may be interpreted as trying to protect positive face, to have his values approved. That is, the presenter has also been accused by the discussant of criticising the PCM model (Example 51). Now the presenter tells that he has informed the PCM group of the problems found with their model during the investigation. This does not mean that he is showing in this conference that the PCM model presents certain problems, but that he has also informed the group who has developed the model. The concessive conjunction co-occurs with a deictic gesture of the abstract kind, pointing out at the screen, since during the presentation he has referred to the model. He gradates the act of corresponding with the group by quantifying it in terms of proximity in time, *recently*, which is intensified with *just* and by seeking eye-contact with the audience or with the discussant⁵¹. The adjective *any* to refer to their awaited comments can be paraphrased as “it does not matter which”, an idea that is intensified with the utterance *sort of* and folding arms at the back. This gesture is maintained during the rest of the move.

In Example 69, the rejection is even more indirect. The discussant has criticised the reaction describing it as *slower* (Example 61). The presenter, arms folded (a gesture adopted already during the discussant's comment), replies repeating the adjective but mitigating its meaning twice with *little* and *a bit* in it is *a little bit slower*. The gesture of the G-family or finger bunch (Kendon 2004) is also used. Here, it seems to be a semantic synchrony between

⁵¹ I cannot be precise at this point since the image is not clear, but gaze direction change has been detected, before he was looking at the screen.

speech and gesture showing the same meaning at the same time. All the fingers are brought together implying, by reducing the space between them, the small difference of speed in *bit slower*.

(69) so serum cholinesterases those are butyrylcholinesterase. they're a **little bit slower than** acetyl cholinesterase [...] (CH-E3)

However, presenters may choose to be more direct when rejecting some contrary position, like in Example 70 with the use of *no*; an expression of dialogic contraction expressing disclaim. In this exchange, the presenter interrupts the discussant's comment (Example 53), since he seems to be going to construct a criticism on the grounds of a misunderstanding of the research. This appears to be a reaction of positive face protection.

(70) **no** these are from complexes [...] (CH-E4)

In the next example from Linguistics, Example 71, the presenter after making fun of the discussant's compliment of writing a book out of the research (Example 66), she considers the more literal meaning of the appreciation to reject it also with *no*.

(71) [...] **no** [...] (L-E4)

The other way of replying to the discussant's comment is by acknowledging it, that is, by admitting or accepting that their comments are valid like in Example 72. The discussant has shown alignment with the presenter. He seems to give him a hand with the negative comments made during the DS, trying to protect the discussant's positive face by giving an explanation to the comments on the difference of the terminology used (Example 63).

(72) **that's that's good I mean** it is **partly** semantic but semantics are **important**. (CH-E2)

The presenter shows acknowledgement during the discussant's turn. Now, he accepts the discussant's argument with the positive adverb *good*, intensified with the palm moving up and nodding during the entire phrase *that' that's good*. However, he sees semantics only as part of the problem. Thus, the presenter uses a negative politeness strategy and mitigates his position with dialogic expansion, *I mean*, and quantifying the discussant's position as *partly*. With the adverb the presenter uses a gesture of palm down moving backward which I think expresses the same pragmatic function as the linguistic utterance of mitigating. Finally, he appreciates the discussant's comment positively with *important*, which is followed by the presenter's smile. I consider the face expression is also a sign of positive appreciation towards the discussant's contribution.

A more complex response is found when the presenter expresses a rhetorical pair in the same move. That is, they reject the discussant's position and then acknowledge part of the comment (Examples 73 and 74) or they acknowledge the discussant's comment and then reject the assumption made on it (Example 75). The rhetorical pair is expressed by the dialogic contraction described by Martin and White (2005) as proclaim: concur-concede. In Example 73 the presenter opens the move, and the turn, appreciating positively the discussant's position with *interesting* but showing contraction with *though*, which announces she is not going to accept the comment. The rejection is explicit with the expression of negative judgement of capacity, *don't see*, intensified with the temporal adverb, *still*.

- (73) yeah it's **interesting though**, _by_ and large you **still don't see** quantification in a mission statement, [...] (L-E1)
- (74) [...] **but** you raise a **good** issue about what corporate like changing and the individual responsibility being **greater**, okay, [...] (L-E1)

Then, the presenter rationalises her position (see Example 78) and steps back with *but*, in Example 74, to show positive politeness towards the face wants of the discussant. The change of rhetoric in the move is paralinguistically

intensified with loudness up. She praises the contribution of the comment with a positive appreciation also phonetically stressed, *good*, which shows she acknowledges that part of the comment. Finally, the presenter describes the issue brought to the fore. In the description, she expresses her positive attitude with the utterance of intensified appreciation *greater* but also with paralinguistic features of phonetic stress and long syllabic duration.

The next Example from Linguistics, Example 75, illustrates the other type of rhetorical pair used to reply to the discussant. The presenter is replying to the discussant's comment, who seems to deprecate the topic of the research telling an academic anecdote and causing an episode of general laugh (Example 64).

(75) **yes** handout, is **very informative but** it's **very serious** (for everyday) (L-E2)

The presenter's response seems to be done also with an ironic tone and it is overlapped by the audience's laughter. A rhetorical pair is used by which the authorial voice first presents as agreeing with the discussant, with *yes*, only to step back and to indicate a rejection of what is presented as an assumption, with the conjunction *but*. The interjection *yes* is co-expressed with raising eyebrows and tilting head to one side. Kinesics might be interpreted as deploying negative attitude showing resignation towards the discussant's comment, what he has been taught at the university about the role of academic handouts. It could be paraphrased as "what can I say?" In this respect, although it could be contradicting the acknowledgement, the presenter is anticipating the rejection. In the acknowledging utterance she positively appreciates handouts with *very informative*. She follows the discussant's line of argument who talks about *the most important information* of the handout. The intensifier *very* is co-expressed with a quick nod that intensifies this function. In addition the presenter nods with *informative*, and the head movement is maintained until the end of the comment intensifying her position in the concessive utterance. Here handout is positively appreciated with *very serious*, where the presenter raises eyebrows with *very*, and moves the head up with *serious*. The rejection refers

to the last part of the discussant's comment, since it is *very serious* to be read *on the bus going home*, in the presenter's words *for everyday*.

The last rhetorical move of the presenter is *Rationalising position*. After stating the position towards the discussant's comment, some presenters choose to explain their attitudes. They do it by referring to previous experience like in CH-E1, CH-E3, and L-E1 (Examples 76 – 78); or introducing further information about the research like in L-E4 and CH-E3 (Examples 79 and 80). As noted in the discussant's move 2, these references to previous knowledge are instances of semiotic spanning. Thus, presenters may rationalise their position referring to the research. In Example 76, the presenter after rejecting the discussant's comment and apparently protecting from the accusation of criticising the model adopted in the research (Example 68), considers further explanation is necessary about his attitude towards this last aspect.

- (76) [...] and it's uh <Presenter: LAUGH> I said it's a **reasonable** thing to do or **perhaps** it wasn't a **reasonable** thing to do to use PCM but it is a **very widely** used method that **clearly** has **significant problems** uh for, **you know** if you **want to** do calculations of this type for vibration frequencies **let alone** for isotope effects. (CH-E1)

The presenter chooses to express embedded evaluation (Goodwin 1980) to open the move. That is, he avoids explicit verbal evaluation, instead of that he laughs. Laugh co-occurs with looking down, tilting head to one side, and making a gesture of palm up pointing at the screen. On the one hand, laugh, gaze, and head movement anticipates verbal evaluation. As he states, he has judged positively the use of PCM method during the presentation as a *reasonable* thing to follow. He intensifies the adjective moving palms up to one side. Now, he changes his position to describe it as *n[ot] a reasonable* thing to use. However, he does not make an assertion to express it but reduces the authorial responsibility with *perhaps* and co-expresses it with head nod. The co-occurrence of nodding with an utterance of dialogic expansion could be interpreted as contradiction of the pragmatic information that the two modes are conveying. As I said, *perhaps* seems to reduce the authorial voice;

however, kinesics is giving support to the utterance. Furthermore, the speed of the pronunciation of this second part of the sentence is higher than the speed of the first part, *or perhaps it wasn't a reasonable thing to do to use PCM*. I think this change of mind from a positive to a negative judgement on the use of the model is the pragmatic meaning anticipated by the embedded evaluation. On the other hand, the interactive gesture of pointing at the screen also anticipates the reference to the presentation. The presenter quantifies the use of the method with *very widely* which is loudness up. The whole phrase, *very widely used method*, is co-expressed with head nods and palms up moving up and down to the sides. Like beats (McNeill & Levy 1982), the movement of head and hands accompanies the words indicating they are significant not only semantically but also because of their discourse-pragmatic content (Morris 1977). The quantification is relevant because it contrasts with the utterance of negative inscribed appreciation (Martin & Rose 2003) of the use of the PCM method that follows it, *problems*. The negative attitude is intensified with various strategies. It is phonetically stressed, introduced by an expression of dialogic contraction that shows authorial responsibility, the adverb *clearly*, which is co-expressed with a head movement of nodding that seems to intensify the highly warrantable proposition; and intensified with the adjective *significant*. Finally, the presenter uses dialogic expansion, *you know*, to exemplify one of the problematic uses of the model. He expresses positive affect of desire with *if you want*, where the verb co-occurs with the interactive gesture of palm up pointing out the screen to refer to his research. In this respect, the negative attitude towards the use of the method is intensified with the evaluative utterance *let alone*, co-expressed with arms and palms up to the sides moving up and down, tilting head quickly to one side, and loudness up on the verb *let*.

In the following example from Linguistics, Example 77, the presenter rationalises her attitude towards the discussant's comment about purpose statements referring to her experience as a researcher. She opens the move mitigating the authorial voice with *I think*, to express her partial disagreement (as she has stated in move 2, Example 67) with the negative adverb *not*

intensified with *just*; and to introduce her position also with dialogic contraction with the concessive *but*. This conjunction co-occurs with a metaphoric gesture, describing circles with palm up, and moving the head forward. Kinesics anticipates the abstract concept that introduces the concessive sentence, the adjective *sophisticated*. This movement is repeated during the entire sentence, *but how sophisticated you are*.

- (77) [...] **I think** it's **not just** it depends it's **not just** uptake from the program description, **but** how sophisticated you are so there are people like in linguistics who because this **the the instruction says** within the confines of our research expertise, you have people listing course numbers, <LAUGH> I </U> **you know** I'm interested in linguistics six twenty two, <LAUGH> six fifty one, six **whatever** </U> which is which al// which **kinda gives the game away immediately but** then you have others who **ya know** <Discussant: OVERLAP> **yeah exactly** </OVERLAP> like electrical engineering but **actually** show that they have um **ya know** they have research experience and they **ya know** they have research interests as well so both in the background move and why I wanna do this program (L-E3)

The presenter supports her position with a complex construction of utterances, where the authorial voice attributes the proposition to some external sources invoking dialogic alternative. First, we find the voice of the instructions to write the purpose statements with *the instruction says*. Then, she describes a type of statements which she appreciates negatively. She uses dialogic expansion, *you know*, to introduce the voice of one applicant from Linguistics to exemplify them. The negative appreciation expressed towards this type of statements is deployed kinetically and paralinguistically making fun of the applicants and causing two turns of general laugh. However, this type of evaluation, where explicit verbal assessment is not chosen, is out of the scope of the thesis. The presenter evaluates the negative consequences of these statements with the metaphoric utterance *gives the game away*, which is intensified with *immediately* and the phonetic stress of *away*. This attitudinal expression is also softened with *kinda*, which co-occurs with palms up pointing at the discussant and looking at her. This interactive gesture, accompanied with eye-contact, might be interpreted as the presenter citing the discussant's contribution; it can be paraphrased as "as you said" (Bavelas et al. 1995). At this point the presenter is showing the part of the comment where she agrees

with the discussant. The discussant acknowledges with *yeah exactly* where the utterance that expresses acknowledgement, *yeah*, is intensified with the adverb *exactly*. Then, the presenter rationalises the second part of the reply, the reason why she positions as odd with the comment. The concessive *but* introduces it. Although she uses three times the dialogic utterance of expansion *you know*, the expression of contraction *actually* co-expressed with palms down moving back and forth quickly intensifies her position and fends off alternative voices.

Presenters can also refer to knowledge based on their experience (not only academic but also personal) to rationalise their position, like in Example 78. In move 2 the presenter uses a rhetoric pair first rejecting the discussant's comment (Example 73) and then praising it (Example 74). The first step followed in the reply is rationalised in this move.

- (78) [...] mission statement **tends to be more broad** uh statements, um it's **inspirational, gimmicky**, lines which have meaning to them, [...] (L-E1)

In Example 78, the presenter describes positively what seems to be the cause of disagreement, what the discussant has not been able to see, with the adjectives *more broad*, *inspirational*, and *gimmicky*; intensifying them with long syllabic duration. She does it with dialogic expansion, mitigating her authorial responsibility with the use of *tends to be*, rather than saying *is*. Then, she praises the discussant's comment with *you raise a good issue about [...]* (Example 74). Here, she rationalises her position since, as the discussant has brought to the fore an aspect that has not been discussed during the presentation, it seems it deserves the presenter's attention in Example 79. The presenter is in focus from *you got get more out of [...]*.

- (79) [...] and that's because **ya know** business is **in trouble** we have a **global competitive** environment, you got to **get more out of** your people and that includes **good** ideas, so that points to (all takers) (L-E1)

She opens the move with dialogic expansion, *ya know*, mitigating the authorial voice to show negative attitude towards the topic. She describes business with inscribed negative appreciation, *in trouble*; as well as environment as *global competitive*, where *global* is sharpening the noun and *competitive* is also showing negative appreciation. Even the expression *get more out of* expresses negative judgement. This utterance co-occurs with a metaphorical gesture that represents the abstract concept, clenching one fist and moving it towards the presenter. The only sign of positive appreciation is found in *good ideas*, which is co-expressed with tilting the head to one side. That could be interpreted as the positive side of the situation, of the competitive business world.

Finally, presenters can also rationalise their position with a reference to a somehow personal academic experience. In Example 80, the presenter has rejected the compliment of writing a book out of the research presented. In this move she explains why. It seems it involves a lot of time and effort to carry out that kind of research.

- (80) [...] because **you know** it's um it it is **a lot of** work you **won't believe** this but I had we **all** have **busy** weeks and with **all** my contacts now **they'll** call up and **say** oh **ya know** Gina we're having something special and we're we've invited local restaurant owners we want to show them a new way to invite people leaving if they don't want our wine can you come, <Unknown speaker: LAUGH> and then **of course** get up at four in the morning, <Presenter: LAUGH> **ya know** the mountains go back to Milan where I work uh, (L-E4)

The presenter uses dialogic expansion all throughout the move with *you know*, and its more informal variant *ya know*. She expresses negative attitude towards the research with the quantifier *a lot of* and the judgement of the audience towards it, *won't believe*. Both utterances co-occur with a metaphoric gesture of resting hand to the chin, a gesture that seems to convey relevance to the utterance like the presenter seriously reflecting towards what she is saying; in a way, it intensifies the pragmatic meaning of the utterances. Nonetheless, this gesture is deployed during the entire sentence *it it is a lot of work you won't believe this*. The next expression of attitude in the move is part of one of those cases of self-repair already discussed in Chapter 4, *I had we all have*. As noted

then, this evaluative device is out of the scope of the analysis since the thesis exclusively focuses the analysis on evaluative semantics and the co-expression of non-linguistic features. Thus, in this example it is worth noting solely the use of the adjective *all* to quantify sharpening the pronoun *we* which is intensified with the facial expression of frowning. The audience is included as the affected part of what seems to be a complaint about the amount of work they have. It is expressed with the negative appreciation *busy weeks*, that co-occurs with moving palm down forward towards the audience. This interactive gesture seems to be marking the delivery of the information (Bavelas et al. 1995). Then, the presenter describes how the research is done. The use of the adjective *all* to quantify and intensify *my contacts* can also be interpreted as conveying negative attitude, since it seems to imply the reiterated idea of having too much work. The utterance co-occurs with a gesture of palms down moving to the sides. This gesture intensifies the negative attitude because it could be paraphrased as “what can I do?”. The presenter invokes a dialogic alternative attributing the next proposition to an external source, the contacts that call for an interview, with *they’ll call up and say*. She also reports her answer to the request with direct speech with an utterance of dialogic contraction that rules out alternative positions, *of course*. This is co-expressed with loudness up (as the software reveals), opening wide eyes, and looking up and then at her notes. The multimodal expression shows the presenter’s attitude of great enthusiasm for what seems to be an undeniable proposal that she should not accept. Next, she explains the effort these kinds of interviews involve, getting up very early in the morning. This is followed by paralinguistic evaluation with her laugh and palms down moving forward alternatively. Laugh may show her negative feelings towards having to get up at four in the morning, but also towards what is described with the gesture. Kinesics here could be interpreted as what McNeill (1992) called language-like gestures as part of Kendon’s continuum. These are gestures similar to gesticulation but grammatically integrated in the utterance. In the example they fill the grammatical gap slot of the verb and preposition “driving up and down through” *the mountains*. However, I consider that this language-like gesture

has also a pragmatic meaning showing the presenter's attitude. The journey she is describing seems to be not smooth but uncomfortable as mountain roads tend to be, and long driving far from where she works.

The other way of rationalising the reply to the discussant's comment is introducing further information. Presenters may consider necessary to explain their attitudes towards discussants' comment, to discuss about some aspect of the research that has not been mentioned during the presentation. In Examples 81 and 82, presenters open the move with *one thing I didn't mention* and *I forgot to mention*, respectively. These openings show clearly the kind of strategy the presenter has chosen in this move. However, whereas in the first example there is no sign of evaluation, in the second example the use of the verb *forgot* shows self negative judgement. The presenter seems to follow the strategy of protecting positive face initiated in the previous move (Example 70), where he has interrupted the discussant's potential criticism with direct rejection, because there appears to be a misunderstanding due to the lack of information that is presented in this move.

In Example 81, the presenter underpins the indirect rejection deployed in the previous move (Example 69) on more instances of mitigated evaluation. He expresses imprecise reckonings of numbers with the adverb *about*, twice. The second time, the entire utterance *about ten fold slower* is loudness up, stressing each single word while it is co-expressed with beats of finger bunch moving up and down. The non-verbal features intensify the evaluative meaning of the utterance where the core evaluative item, the adjective, shows positive appreciation and is, in addition, intensified with the comparative form.

- (81) [...] one thing I didn't mention about acetyl cholinesterase is the, catalytic acceleration of **about** ten to the fourteenth fold which is **not too greatly different than** the dollar value of the federal debt in the United States <LAUGH> uh </U> butyrylcholinesterase are **about** ten fold **slower** and so in the concentration region where you do not see substrate activation you don't see accumulation of the intermediate you **only** see it **really** when the, second molecule substrate binds to the peripheral site there **must** be, **some kind of** allosteric information relay to the active site that's leading to the accumulation site of the intermediate. so we get a picture

where the intermediate is **just barely less stable**, before substrate activation. then is the acyl enzyme intermediate (CH-E3)

Another instance of comparison is used during the move with the utterance *not too greatly different than*, where the positive appreciation of the catalytic acceleration, *not [...] different*, is intensified with several strategies. First, the negative particle is phonetically stressed (as the register of the waveforms shows). Then, the adjective is intensified with the two adverbs *too* and *greatly*. Finally, the presenter tilts the head to one side with *not too* and separates hand from the chin with *too greatly*. The second part of the comparison is a mundane reference *the dollar value of the federal debt in the United States* that causes general laugh. Then, the presenter gradates the identification of accumulation of the intermediate with the adverb *only*. It expresses mitigation and co-occurs with a gesture of palm down moving in circles and tilting the head to one side. The gesture could be interpreted as the metaphoric expression of the abstract concept implied in the proposition. That is, the presenter initially states that *you don't see accumulation of the intermediate* then with *you only see it* he shows there is one possibility of seeing accumulation of the intermediate. Then, this possibility is intensified with the adverb *really* that is co-expressed with beats moving forefinger up. When describing the existence of allosteric information, the presenter first reduces the authorial responsibility with the dialogic expansion expressed by the modal verb *must*, and then the utterance *some kind of* gradates it. I think that the gesture of palm down moving up and down made during the entire sentence, *there must be, some kind of allosteric information*, can be interpreted as intensifying the graduation; that it, showing allosteric information is of a type among a possible range that is expressed with the hand movement, or it could also be interpreted as the abstract idea of information as printed out on a paper or shown on a screen. Finally, the last deployment of evaluation in this move occurs when describing the intermediate as *just barely less stable*. The negative appreciation of the adjective that is given by the pronoun in the comparison, *less stable*, is mitigated twice with *just* and *barely*. The presenter also employs kinesic

resources to describe the stability of the intermediate. He positions palms down at the same level when he commences the description, that is with *so*. But it is with *just* that the presenter anticipates the appreciation slightly raising one palm and showing the difference of levels. This could be considered an iconic gesture (McNeill 1992) since it bears a close relationship with the semantic content of the utterance.

In Example 82 from Chemistry, the presenter also introduces new information about the research to rationalise his position. As noted above, this information is needed since the discussant seems to misunderstand some aspect of the research. The presenter opens the move with negative self-judgement, but he appreciates proximity complexes, the origin of the misunderstanding, since the discussant thought the presenter was talking of separated reactions (Example 53).

- (82) [...] I I **forgot** to mention these are from proximity complexes. but well **actually** i it it it's **quite large**, <Presenter: **LAUGH**> <COUGH> in one case we've had a complex that didn't work to converge **even** with a **high** eh convergence criteria we get **all all** this once previous imaginary frequency but in that case eh the calculations are done on separate substrate but we calculated binding well **not** binding **but** calculated equilibrium isotope effect for this **particular** case and there was no change in in isotope effects so so **essentially** it's **the same**. (CH-E4)

The presenter proclaims his authorial voice with *actually*. The adverb is phonetically stressed and also co-occurs with moving the forefinger to the cheek, a gesture that lasts until the beginning of the next utterance (*i it it*). This gesture might be intensifying the authorial voice. The positive appreciation made with the adjective *large* is mitigated by the expression of imprecise amount, *quite*, that in turn is co-expressed with a movement of rotating one hand. This is an example of semantic synchrony where the speech and gesture express the same meaning at the same time. After stating that, the presenter laughs showing possibly positive appreciation towards the situation, since it contradicts the discussant's interpretation. Then, he describes one of the complexes and evaluates its negative convergence in the most favourable

conditions with *even with a high* convergence criteria; where *even* intensifies the negative behaviour and *high* appreciates positively the criteria which is in turn intensified, phonetically and kinesically with palm down moving forward. The presenter also uses graduation to intensify *this once* with *all*; being the entire utterance, *all all this once*, co-expressed with a gesture of palm down moving forward where only the preparation of the gesture co-occurs with the evaluative utterance *all all*. The next evaluative instance in the move is *well not binding but*, which was already commented in the methodology as an example of self-repair strategy, where *well* marks the self-repair. The utterance is evaluative in *not [...] but* showing dialogic contraction. This utterance is co-expressed with a gesture of palms positioned one in front of the other describing cycles. A metaphoric gesture that, on the one hand, might be interpreted through the movement as the change of mind expressed in the utterance; but on the other hand, the parallel position of the hands anticipates the abstract idea of equilibrium that is introduced later. The presenter also uses graduation to sharpen in *this particular case*, being the adjective co-expressed and intensified with a quick nod and palms down moving forward. Finally, he describes that there is no change in isotope effects and reiterates this idea evaluating it. He positively appreciates the lack of change with *the same* and intensifies it, first with *essentially*, which is phonetically stressed and palms down are moved forward, and then co-expressing the utterance, *essentially is the same*, with head nods.

From the above discussion, the role evaluative meaning plays to accomplish the rhetoric function of each move has become evident. Table 19, in the next page, summaries the moves in the exchanges. It is necessary to note that moves that have been described in the discussion as unclear or unrealised have been attributed a rhetoric function in the table, showing what I consider is the final intention of the speaker. That is the case of the exchange from Linguistics L-E2. The discussant in move 3 seems to deploy an ambiguous intention (Example 64); however, I consider that, despite the ironic tone of the comment, a criticism of the research is underlying it. In exchange CH-E4 from

Chemistry, the discussant's speech is interrupted by the presenter in move 1. Thus, he really does not take move 3 but he has time to show his intention of making a critical comment. These two moves have been marked in the table in grey letters.

	Discussant			Presenter		
	Move 1	Move 2	Move 3	Move 1	Move 2	Move 3
	Opening the turn	Contextualising the comment	Making the comment	Opening the turn	Replying to the comment	Rationalising position
L-E1	Announcing the comment	Referring to previous experience	Criticising the research	-	Rejecting - Acknowledging the discussant's comment	Referring to previous experience
L-E2	-	Referring to previous experience	Criticising the research	-	Acknowledging - Rejecting the discussant's comment	-
L-E3	-	Referring to previous experience	Criticising the research	-	Rejecting the discussant's comment	Referring to previous experience
L-E4	Reacting to the presentation	Referring to previous experience	Showing alignment with the presenter	Reacting to the discussant's comment	Rejecting the discussant's comment	Referring to previous experience
CH-E1	Announcing the comment	Referring to previous experience	Criticising the research	Announcing the comment	Rejecting the discussant's comment	Referring to previous experience
CH-E2	-	Referring to previous experience	Showing alignment with the presenter	-	Acknowledging the discussant's comment	-
CH-E3	-	Checking understanding of the research	Criticising the research	-	Rejecting the discussant's comment	Introducing further information
CH-E4	-	Referring to previous experience	Criticising the research	-	Rejecting the discussant's comment	Introducing further information

Table 19. Moves in the Comment – Comment exchange

The analysis has shown that *Opening the turn* move is not frequent in the corpus, neither for the discussant nor for the presenter. According to Halliday (1970), this move has a primary textual metafunction, however interpersonal metafunction is also expressed with evaluative language in three of the five exchanges with this move. This might seem evident when reacting to the talk or to the question because the speakers are expected to show their attitude towards it, but also one example in the corpus expresses graduation when announcing the comment.

Unsurprisingly, interpersonal meaning is expressed in *Making the comment* and *Replying to the comment*. It is here that evaluation controls the expression of the rhetorical function of the moves, when the discussant makes a criticism or shows alignment with the presenter, and when the presenter rejects or acknowledges the discussant's criticism or alignment. Criticism of others' research may give rise to an FTA (Thompson 1997), which may also appear when the criticism is rejected. The analysis has shown interesting findings. Except for two exchanges, one from each discipline, discussants criticise the research and presenters reject discussants' criticism. Even when discussants show alignment, presenters have something to object. However, there is only one example in a Chemistry exchange (CH-E3) of FTA "on-record" (Brown & Levinson 1987: 94) in which there is no attempt to repair the FTA by politeness strategies. Myers (1989) finds this is also a very uncommon choice in research articles.

Contextualising the comment and *Rationalising position* are the moves that express more ideational meaning. However, interpersonal meaning is also present. Discussants tend to contextualise the comment briefly and move to the comment to express their attitudes. Only in two examples (CH-E1 and L-E4) contextualizations are longer than comments and are actually showing discussants' positions. Alternatively, presenters' replies tend to be shorter than rationalisations and it is rationalising the position the move that burdens with evaluative meaning.

A disciplinary difference is revealed by the presenter when replying to the comment. In Linguistics, presenters use rhetorical pairs (rejection – acknowledgement or acknowledgement – rejection) to reply to the comment. This might be interpreted also as a politeness strategy at the rhetorical level. Yet, these pairs are not used in Chemistry where the presenters either reject or acknowledge the discussants' comments.

(Webber 2002). Results show the discussant can accomplish this purpose in a maximum of three moves: opening the turn, formulating the question, and reformulating the question. Only the second move appears in all the exchanges, so it is the obligatory move for the discussant.

The first move in the exchange is *Opening the turn*. This type of move is used by discussants to announce the illocutionary force of their intervention. In the small corpus analysed only one discussant takes this move. In Example 83, the discussant opens the turn without expressing either any type of interpersonal information.

(83) (thought) question [...] (L-E7)

The second move, *Formulating the question*, is the obligatory move that is taken by all discussants. Questions have been classified in two groups: backward questions and forward questions. The criterion for this distinction is the degree of reflection that is demanded to the presenter. Backward questions are information-eliciting questions that appear to seek answers on some aspect within the scope of the talk and which are not going to pose any problem for the presenter. Forward questions appear to be more challenging questions. Although they are also within the scope of the research presented, they go beyond seeking “quick” answers and presenters are forced to reflect on a topic that maybe they have not thought before.

Backward questions are found in three exchanges, Examples 84, 85, and 86. In Example 84, the discussant uses a negative politeness strategy and mitigates the positive judgement of the capacity of the presenter, *confirm*, with the modal verb *can* to formulate the question. The question causes a round of general laugh because the discussant is making a joke with the reference to Jim Martin. In a previous discussion session a reference to appraisal theory has already caused an episode of general laugh (see the comment to this episode in Wulff

et al. 2009: 87), since it seems in the context of the conference there are not many adherents of Jim Martin's theory.

- (84) **can can you confirm** that the author of the thirty page handout was Jim Martin?
<LAUGH> (L-E5)

In Examples 85 and 86 direct questions are formulated without any expression of attitude, with *are [...] taught* and *is there [...]*. Although passive voice in the example from Linguistics (Example 83) could be considered a mitigation strategy to avoid asking directly about the methodology used by the present, *do you teach field notes in geology*, I think the question means what it does, and the discussant shows interest in how the discipline is taught in general not only by the presenter. In this example, the presenter overlaps twice to respond the question with dialogic contraction. She denies the two options presented by the discussant with the adverb *no*, to what the discussant has no alternative but to ask a second question. The expression of engagement co-occurs with a quick nod and the face expression of closing eyes with the first *no*. Kinesics intensifies dialogic contraction.

- (85) are field notes taught in geology, <Presenter: OVERLAP> **no** </OVERLAP> or are they examined? <Presenter: OVERLAP> **no** </OVERLAP> so, how does... what does the student do? (L-E6)
- (86) uh is there any role uh for electron transfer processes, **particularly** in the case of the iodide (CH-E7)

Example 86 from Chemistry shows an expression of evaluation, but not of attitude, but of graduation. The discussant in the second part of the question sharpens the specification of transfer processes with the adverb *particularly*.

Forward questions that potentially might pose some kind of problem for the presenter are quite frequent in the DSs. In Example 87 the discussant opens the move with negative politeness, mitigating his authorial voice with *I'd _I'd_ like to know*. Then, he uses dialogic contraction to introduce the topic of the question with *the fact that*, presenting his position as highly warrantable. On

the other hand, to mitigate the object of query and possibly to self-protect from being judged, the discussant grades it in terms of amount with the adjective *certain*, and uses the infused mode of intensification (Martin & White 2005) *sometimes*. I consider the adverb a kind of mitigation in the up/ down scaling.

- (87) [...] **I'd _I'd_ like to** know how this relates to **the fact that certain** steps **sometimes** moves are optional in the macrostructure of the genres (L-E7)

In Example 88, the discussant evaluates the presenter's findings with a negative intensified appreciation, *big controversy*. However, this term of inscribed attitude is already used by the presenter; thus, although the discussant seems to check confirmation of her appreciation (she even uses the confirmation question *right?*), this can be interpreted a rhetorical question. After that, the discussant asks a direct question, which is followed by another question on the grounds of the positive answer of the previous one.

- (88) Carol are you finding that this is happening in a// this is a **big controversy**, right? but i// are we is this going to cross science that they're using these multiple, approaches and if so how do they cite them? [...] (L-E8)

This strategy of formulating a second question underpinned on the previous one is also employed by discussants in Examples 89 and 90. In Example 89 the discussant makes a suggestion. Webber (2002: 236) describes suggestions as the more neutral type of question. In addition, this author notes that suggestions might also imply criticism, as the discussant suggests a solution that the presenter apparently has not considered. In this exchange, the suggestion might be interpreted as a criticism but the discussant uses a negative politeness strategy to introduce the second question, to protect the positive face of the presenter. It could be interpreted that the discussant anticipates the reason why the presenter has not followed the methodology suggested. The use of the adverb *just* mitigates the situation.

- (89) what about stabilizing the tetrahedryl intermediate in the first step or or **just** you don't see that cause you're following this uh ih- uh release. (CH-E5)

In Example 90, the information-eliciting question seems 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, *is it possible*. 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 is mitigated with dialogic expansion expressed by the modal verb and mitigated by the adjective in *would it be possible*.

- (90) 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. (CH-E8)

Finally, in Example 91 the discussant makes a suggestion to contribute to the debate with a possible explanation for some aspect of the talk. He opens the move with *to what extent* to mitigate the suggestion and also expresses mitigated negative appreciation of the research, *apparent discrepancy*. The discussant does not want to impose upon the presenter's beliefs and uses negative politeness strategies. However, he makes unmitigated deployment of his authorial voice to introduce the suggestion, *the fact that*, to step back and to use dialogic expansion to self-protect his face with *perhaps*.

- (91) **to what extent** is the **apparent discrepancy** with crystal structures a reflection of **the fact that** the crystal structure is an average **perhaps** of the two different tauvomers (CH-E6)

The last move that the discussant can take in this type of exchange is *Reformulating the question*. In this move discussants consider necessary to explain with other words the questions they have asked. They want to make sure they are understood by the presenter. Only one example has been found in the corpus, Example 92. In move 2 of this exchange, the discussant has asked a rhetoric question, a question, and a follow-up question (Example 88). It seems

the discussant evaluates the situation and considers the information she is trying to elicit is not clear enough and thus reformulates the question twice. She employs the introductory phrase *in other words*.

- (92) [...] in other words let's say you gave a **scientific** paper would you **also** refer to a **website** you know what I'm saying? In other words how are these used intertextually? (L-E8)

The discussant opens the move describing a hypothetical situation, where the object of the example is sharpened, *scientific paper*. Then, she asks a question and it is with the intensification of the verb with *also* that the contrast between the object of the hypothesis made in the question, *a scientific paper*, and the object of the question, *a website*, brings to the fore the attitude of the discussant. In this context, the adjective *scientific*, apart from grading the noun, is showing positive appreciation, whereas *website* seems to show negative appreciation as being a source of information maybe not academic enough to be included in a *scientific paper*. This negative attitude follows the one expressed in the first part of move 2, where the findings on the research are described as a *big controversy*. Then the discussant makes a checking question, *you know what I'm saying?*, and makes the second reformulation where evaluative language is not used.

Presenter's turn

The presenter, in an attempt to answer the discussant's question can structure their turn in four moves: opening the turn, responding the question, expanding the topic of the question, and closing the turn. However, only the second move appears in all the exchanges. The first move, *Opening the turn*, can be realised in two ways showing their reaction to the question like in Example 93, or repeating the question line in Example 94. In the first example from Chemistry, the presenter appreciates positively the question with the adjective *good*. In the second example from Linguistics, the presenter just repeats the question without showing any semantic sign of attitude.

- (93) uh that so this is a **good** question [...] (CH-E8)
(94) well how they are used intertextually [...] (L-E8)

Nonetheless, in both cases the presenters face forward questions. Thus, in Example 93 the presenter's 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 kinesics 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. In Example 94 the repetition of the question might indicate the presenter is thinking about the response, somehow she could be gaining time to answer the question.

The second move is *Responding 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 more, and after that to take up the answer (Examples 95 - 103, Exchanges L-E5, L-E6, CH-E5, CH-E6, and CH-E8). On the other hand, in roundabout responses presenters sidetrack from the subject of the question to eventually provide an answer (Example 104, CH-E7) or not (Example 105, L-E7, and Examples 106 and 107, L-E8). In addition, roundabout responses can also reintroduce the response to end up the move.

Presenters might give a straightforward response to a backward question, like in Example 95. The presenter has been questioned about the authorship of certain material that comprises the data of the analysis (Example 84). The response is given amid laughter from the audience caused by the reference to Jim Martin. The answer is a categorical denial expressed with dialogic contraction, *no* is intensified with *never* in *no never*. The adverb also intensifies the action in *I've never heard*. The first evaluative utterance co-occurs with

shaking the head that intensifies the denial, and opening wide eyes and raising eyebrows with *no*, a face expression that might be interpreted as surprise. This straightforward response is very short; however, since the question is of the type yes/no and it seems more a joke than a real question, that is probably the type of response expected in terms of length.

(95) <LAUGH> **no never** I have heard, I've **never** heard or seen Jim Martin (L-E5)

Forward questions that include a suggestion also provoke straightforward responses, like in Examples 96 and 97. In the first one, the presenter indirectly rejects the suggestion on the grounds of the arguments already anticipated by the discussant, *or or just you don't see that cause you're following this uh ih-uh release* (Example 89). The presenter repeats the verb, *don't see*, to articulate the move. It includes a description where the authorial voice is mitigated with *probably* but, on the other hand, the mitigation is phonetically stressed (as the analysis of sound waveforms indicates) intensifying the dialogic space made for other positions.

(96) we don't see it either in thyo acetyl thyo choline turnover, kcat over K-M is the explanation state of catalysis, or in acetyl choline turnover which is **probably** rate limited by acylation. [...] (CH-E5)

(97) the the cases where the proton is centered according to neutron fracture, is a **truly c-centered** hydrogen deuterium uh uh uh they give **enough** data that you can compare with what when you **expect** if it were a disordered structure either static or dynamic and it fits **much better** with a **centered** hydrogen. so they are **truly centered**. [...] (CH-E6)

In Example 97 the presenter rejects the suggestion made in the question. He acts to self-protect himself from the negative FTA during the query. The discussant has mitigated his positive appreciation of the research with *the apparent discrepancy with crystal structures* (Example 91). The presenter focuses on negating the disordered structure described by the discussant, apparently a false premise to start the suggestion. He describes the structure as *centered*; an adjective that, in contrast with the inscribed negative appreciation of the noun *discrepancy*, expresses positive appreciation. The adverb *truly*

intensifies the description of the structure, *truly centered*. This idea opens and closes the response. In the opening, the utterance *truly c-centered hydrogen* is intensified with the co-expression of beats of phonetic stress and movement of head nods. The presenter nods again with *centered hydrogen*, and with the adverb in the last utterance, *truly centered*. The discussant also describes a hypothetical situation laden with positive attitude, such as: the quantification of *data* with the intensifier *enough*, the positive judgement of the inclusive *you* with the verb *expect*, and the comparative superlative *much better* co-expressed and intensified with head shake (Kendon 2002).

As noted above, move 2 can be more elaborated even if it is opened with a straightforward response. Thus, the presenter might give a clear response and then expand it, to close the move reintroducing the answer to the question from a different perspective. Two instances of this complex rhetoric strategy have been found in the corpus in exchanges L-E6 and CH-E8. In the first exchange from Linguistics, Example 98, the straightforward response does not show any semantic expression of attitude.

(98) they make it up as they go... [...] (L-E6)

However, the presenter elaborates on it with an example. She might consider that the backward question *so, how does... what does the student do?* (Example 85) (which follows *are field notes taught in geology, [...] or are they examined?* that has received a categorical denial) is not fully answered and more information is needed to be understood.

(99) [...] what was **interesting** when I showed_ when I talked to Philippe, about this, is, he recollected an- wa- a **bad** experience he'd had on his_ on that first third year undergraduate field outing he **didn't understand a thing** of what he was supposed to be seeing and he **certainly did not know** how to write about it and so he **just can't** make it up, [...] (L-E6)

In Example 99, the presenter reports an academic experience of one of her students (semiotic spanning). First, she expresses her attitude towards the talk

with Philippe with inscribed positive appreciation *what was interesting*. Then, the academic incident is portrayed with negative attitude. The experience is described with inscribed negative appreciation, the adjective *bad*, that co-occurs with phonetic stress and head moving forward, non-linguistic features that intensify the attitude. Negative evaluation is also expressed to judge the capacity of the student *he didn't understand a thing, he certainly did not know*, and *he just can't*; where the negative meaning of the verbs is intensified verbally and kinesically. *A thing* quantifies the incapacity of the student and co-occurs with phonetic stress and head moving forward. *Certainly* expresses dialogic contraction fending off alternative positions and co-occurs with shrugging one shoulder and tilting head to one side. And finally the mitigator *just* is co-expressed with the palms down moving quickly back and forth. The metaphorical gesture co-occurs also with the negative modal verb and can be interpreted as anticipating the semantic meaning of the main verb, *make it up*.

After expanding the response, the presenter reintroduces the answer. In Example 100, she opens the expression of this function with a self-repair device signalled by the discourse marker *well*. The evaluative meaning conveyed in this rhetorical strategy appears in the second part, when the presenter expresses the second thought. That is, what she has described in the example is not how geology is taught but how it is *often* taught. In this context, the adverb mitigates the action, a sign of attitude intensified with the facial expression of raising eyebrows. Mitigation is also employed to take up the core of the response, to reintroduce the straightforward answer, *they make it up as they go...* (Example 98), with *is just this the trial and error*. The evaluative utterance *just*, together with the verb and the pronoun, co-occurs with palms down describing circles alternatively, a metaphorical gesture that anticipates the semantic meaning of the process of learning.

- (100) [...] and so this is how geology, well, this is how it's **often** taught, is that _ is **just** this the trial and the error and by ... well field, writing field notes aren't taught, what to put in them is taught. so you learn what to look for, <Discussant: OVERLAP> uh </OVERLAP> you learn what to see and what not to see (L-E6)

The exchange from Chemistry that also follows this rhetorical strategy, CH-E8, opens the move in Example 101 with a straightforward response to answer 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* (Example 90).

- (101) [...] uh when things bind **very** tightly **of course** they pull on and don't come off so **in fact** we've been we've been **trying** to do that there are a- there are **actually** are ways to do that. [...] [CH-E8]

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 a gesture of bringing palms up closer to each other (the palms have been positioned facing each other at the beginning of the sentence). 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 with unmitigated authorial voice, *in fact*, 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 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. However, in Example 102, the presenter expands the response to describe two experiments and the findings.

- (102) [...] 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 tritium binding isotope effect with (imucile) 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- won't go into details where we, where we measure the, uh the transition state of the binding on the first excursion in. that **turns out to be the same** number [...] [CH-E8]

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 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 to each other moving to one side. 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, following Lindemann and Mauranen's (2001: 466) 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 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 to avoid possible criticism, making it clear he is giving first findings and that they are still working to confirm them. 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. This gesture shows semantic synchrony with the intensifier *also*, since it is a common gesture to express addition. The presenter describes the results of the second experiment with positive appreciation. The verb *turns out to be*, that shows they have a

particular result especially one that they did not expect, is intensified with palms up moving forward. Nonetheless, the positive polarity of the verb is gained with the description of the results as *the same number*, showing similar findings on both experiments. The utterance *the same* is intensified phonetically with loudness up (following the sound registered in ELAN) and with a quick nod. The presenter closes the move taking up the positive answer shown in the straightforward response in Example 103.

- (103) [...] so we're **still** working on that but 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. [CH-E8]

He has expressed it with negative self-judgement of capacity *we've been trying to do* (Example 101). 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 findings on an 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, *interesting* intensified with *very*. He gradates 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. Finally, the presenter also appreciates the interaction with the comparative superlative *much stronger*. The adjective is also non-linguistically intensified, 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 and head nods.

The other type of responses the presenter might choose to make is roundabout responses. Presenters somehow sidetrack from the subject of the question because they do not provide a clear and direct answer. In pragmatic terms, presenters seem to flout the maxim of relation, "be relevant" (Grice 1975). In

Example 104 the discussant formulates a clear and concise forward question, *uh is there any role uh for electron transfer processes, particularly in the case of the iodide* (Example 86). He seeks to elicit precise information. However, the presenter opens the move describing extensively the results of research conducted not on the iodide. It is towards the end the move, with *but for these halite anion uh anion reactions*, that he answers the question.

- (104) hm, um we do uh we do uh loo- we did did look at the uh charge distributions from the reactants in going to the transition state and uh well, the dis- uh the charge distributions **does look** uh **typical** of of uh, uh E- uh **typical** of E-two transformations. but um, but, not not not for these reactions but for E-two animes like weakly bound anions like O-two-minus which has zero-point-four-five (xx) of combined energies and then **actually** the tran- after transition state the charge has been transferred **mostly** into the leading group. so that's a different system and that's uh **quite interesting** but for these uh halite anion uh anion reactions we have been looking at, the charges_ distribution is **just normal** that there's **no** uh, **no drastic** charge disposal into the uh leading group. that's an **interesting** issue. [...] (CH-E7)

The presenter shows positive attitude towards the results of both reactions: the off-the-topic reactions and the iodide. Regarding the results of the first reactions, he describes them with dialogic expansion, *does look* (mitigating the authorial voice), and the charge distributions as *typical*, a positive appreciation in this context. Then, the authorial voice presents the proposition about the transition state as highly warrantable with *actually*. He gradates the transfer into the leading group with *mostly*. Being the adverb intensified with the co-expression of phonetic stress and the forefinger moving forward. This metaphoric gesture bears a close relationship to the abstract idea of the adverbial “in most cases” and the movement expressed by the verb that precedes it, *transfer*. In fact, the presenter makes this gesture already with *has been transferred* then stops and stretches out the arm with *mostly*. Finally, he evaluates the results as *quite interesting* where the adjective, with inscribed positive appreciation, is mitigated with the adverb. After that, the presenter moves to the actual answer to the question that focused on the iodide. He also shows positive attitude towards the results. He describes the charge distribution as *just normal*, where the adjective also gains positive appreciation in this context and it is intensified with the adverb. *Just*, in turn, co-occurs with

phonetic stress and *normal* with a quick nod. These are non-linguistic features that intensify the evaluative meaning of the utterance. This idea is reinforced with the positive evaluation of charge disposal *no drastic*. The adjective co-occurs with palm up moving from left to right showing synchrony with the semantic meaning of *drastic*, as sudden disposal; also intensified with head moving forward. The final evaluation of the results is also positive with the repetition of *interesting* to express appreciation, intensified with the co-expression of head nods.

There are other exchanges, L-E7 and L-E8, (Examples 105 – 107) where roundabout responses are evasive in a way that, as also noted by Webber (2002), they can be recognised as responses although they do not constitute answers. In Example 105 (L-E7) the discussant has asked a forward question that seeks the presenter's reflection on a possible relation between the topic of the talk, textual silences in genre analysis, and the phenomenon of optional moves in the macrostructure of the genres (Example 87). The presenter opens the move with a reference to a well known model of genre analysis, that was postulated by the honouree some years ago and that many scholars nowadays do still follow. He assumes the discussant implicitly refers to it in the question and makes an interpersonal reference *you're talking about*. The discussant does not refute it but shows positive acknowledgement that is gradated with a softening utterance, *for example yes*.

- (105) the_the_ first part the three step you're talking about_ the cars like the cars model <Discussant: OVERLAP> **for example yes** </OVERLAP> the four step the **original** four step model which I **still** have a **fondness for**, uh what **my point is** that if they're missing if they're part of the schema they're part of the prototype of what's expected to be there if they're not there, then you_ it it it raises the question **should** raise the question for as to why they've been omitted why they're not there what's the rhetorical strategy behind omitting a **normally** obligatory move (L-E7)

Then, the presenter gradates the model, sharpening it with *the original*, and deploys positive politeness towards the face wants of the honouree to show his attitude towards the model. He expresses positive affect of desire *a fondness for*, that is intensified with the adverb *still*, *I still have a fondness for*. The

adverb implies this liking for the model lasts over the time. The presenter smiles while paying this compliment to the honouree, but his face expression changes when it seems he is going to state his position to answer the question. He puts on a serious face with the utterance of dialogic expansion *my point is*. However, he does not really answer the question, on the contrary he formulates a question that is the same as the one asked by the discussant. An instance of self-repair betrays the intention of the presenter. He describes in a more elaborated way the situation explained by the discussant and after that he poses the question with *you_ it it it it raises the question should raise the question*. The presenter's first thought is that the discussant has raised the question, as the pronoun *you* indicates. But he reformulates the question to make it impersonal. In addition, he unmitigates the authorial voice with the modal verb *should*. It is worth noting that a gesture of finger bunch moving back and forth co-occurs with the entire sentence. As identified by Kendon (2004), this gesture appears to mark the topic of the speaker's discourse. In this example, it marks possibly the most relevant idea of the response. Nonetheless, the discussant's question remains unanswered in this exchange.

The next example of evasive roundabout response occurs in Example 106 (L-E8). The difference with the former exchange is that here the presenter admits not having an answer for the question. The presenter brings to the fore in the talk the controversy of multimodality in the genre of scientific articles. She presents the examination of the visual data of the *Science* SOM website (Supporting Online Material), the online version of the journal, and compares it with the original in print version. The discussant formulates and reformulates a forward question (Examples 88 and 92) to elicit the presenter's opinion about how multimodality, intertextuality in the discussant's words, is used in scientific articles. The presenter repeats the question and opens this move with a reflection on the term multimodality. She expresses negative attitude towards the term. However, she self-protects positive face, mitigating the authorial voice with the use of semantic graduation and dialogic expansion. By semantic graduation I am referring to the evaluative meaning expressed in the self-repair

strategy at the beginning of the move, *I want I'm tempted to*. There is a mitigation of positive affect of desire conveyed by the verb *want* with the adjective *tempted*, since the adjective expresses the presenter's desire to call it genre chain, even though she knows she really should not. Thus, it could be interpreted that the presenter is doing more than mitigating, since the adjective involves also a change of meaning. In addition, she introduces this utterance with the paralinguistic feature of laugh in two occasions. This might be interpreted as an expression of negative affect, possibly of embarrassment about what she thinks and maybe should not, or even of self-protection of positive face. The first turn of laugh co-occurs with rotating one hand with forefinger and middle finger stretched, a gesture that is repeated during the entire sentence *I want I'm attempted to call it a genre chain*. This metaphoric gesture anticipates and synchronises with the abstract idea of suggesting a change. Dialogic expansion is used with *I think* to introduce the negative attitude towards the term multimodality, since it *requires a new term*. On the one hand, the verb *requires* shows implicit negative appreciation because it implies the change is necessary. The entire utterance *I think the multimodality requires* co-occurs with palm down moving back and forth. On the other hand, the adjective *new* shows inscribed positive appreciation and is co-expressed with a movement of head down. This utterance also co-occurs with a gesture of palm down moving in circles that lasts until the expression of the object, *a new term for talking about about this*. The metaphorical gesture might be interpreted as conveying the abstract idea of the complexity the term involves.

- (106) it it it, <Presenter: **LAUGH**> it, <Presenter: **LAUGH**> **I want I'm attempted** to call it a genre chain, <Discussant: **OVERLAP**> okay </OVERLAP> okay but **I think** the multimodality **requires** a **new** term for talking about about this because of the salience of the SOM and the uh background of of of the original. they refer **mostly** to the SOM website <Discussant: **OVERLAP**> mhm </OVERLAP> be broken down into scales so it's a it's a it's a it's a visual argument that they're having an argument for a visual representation that is indexical as it were and the source of this **particular controversy**, uh, is these, is the video footage (where it can) <Discussant: **OVERLAP**> right </OVERLAP> right? uh and what what this this **brief** footage **actually** means and it's **quite interpretive** and then they have to use these affordances they have to use these drawings where you see this **kind of** mock up, of was the bird from behind, like that or was it like that, because what you saw on the back of the wing if it was like that it's gonna be **different**, then what you saw, if it

was like that. it was the piliated woodpecker it **might**'ve been that it **would**'ve been that if it's the ivory-billed it **would**'ve been that captured video captured, okay so, alright [...] (L-E8)

Then, the presenter gives more details about certain aspects considered in the research. Evaluative meaning is also conveyed at this step. She uses graduation with the quantifier *mostly*. She sharpens negative appreciation towards the topic of the presentation with *particular controversy*. She mitigates negative appreciation of the analysis with *quite interpretive*, where the adverb co-occurs with palm up moving to one side. And she gradates in terms of softening with *kind of* the noun *mock up* when describing the drawings. The presenter also shows negative appreciation, apart from that with *controversy* and *interpretive*, in the description of the video footage with *brief* and in the description of the drawings with *different*. It is worth noting that the four adjectives used to express negative appreciation show inscribed evaluative meaning. Regarding the type of engagement, dialogic contraction appears once with *actually* to introduce the meaning of the footage. Then, three instances of mitigated authorial voice are used when describing the drawings with the modal verbs *might* and *would*.

However, after this long roundabout response the presenter has not answered the discussant's question. In Example 107, she chooses to close the move admitting she cannot give an answer yet. The presenter introduces this idea with a strategy of self-protection of positive face with the utterance *the only way*. Where *the only* is sharpening the noun and co-occurs with palms down moving forward. The presenter formulates a rhetorical question and answers it while, at the same time, she is answering the question formulated by the discussant *it's too soon to tell*. The negative attitude expressed by the temporal adverb is intensified with *too*. After that she moves to the example of the analysis of the website presented in the talk.

- (107) [...] **the only** way I can answer your question is can I generalize from this N of one it's **too soon** to tell <xx> ornithology **particularly** the Cornell website is **rich** with this **sort of** thing and **controversies** in ornithology **tend to be less** about what's

happening in the lab and **more** on the <Discussant: OVERLAP> mhm </OVERLAP>
original original sightings (L-E8)

The presenter expresses graduation to sharpen the website with *particularly* which co-occurs with a gesture of palm up ring hand shape. The metaphoric gesture and the verbal utterance show semantic synchrony implying the meaning of precision. Graduation is also used to soften with *sort of* in *this sort of thing* referring to multimodality. Graduation also appears in the last comparative sentence with the utterance *less [...] more [...]*, where the first adverb mitigates and the second intensifies. The comparative structure that shows the presenter's position is introduced by dialogic expansion mitigating the authorial voice, the verb *tend to be* instead of *is*. Finally, the presenter expresses her attitude towards the data of analysis with *rich*, an adjective that shows positive inscribed appreciation and is co-expressed with phonetic stress, palms up moving to the sides, and head moving forward. There is another marker of attitude to refer to problems in ornithology. She uses the term of inscribed negative meaning *controversies*, which is kinesically intensified with palms up in ring hand shape moving to the sides and moving head to one side.

The third move that the presenter might choose to take in this exchange is *Expanding the topic of question*. In this move the presenter goes beyond the topic of the question and introduces a new aspect related to it. Presenters can raise a question on the grounds of the one formulated by the discussant, like in the next exchange from Chemistry, Example 108. The presenter has given a straightforward response indirectly rejecting the suggestion implied in the question (Example 96). Now, he shows positive politeness towards the discussant's face that might be a strategy to self-protect his own face.

(108) [...] and that raises a **very good** question Charlie why is it <Discussant: OVERLAP>
well </OVERLAP> [...] (CH-E5)

The presenter praises the discussant's question as the source of *a very good question*. The adjective with inscribed positive appreciation is intensified with

the adverb *very*. Kinesically the utterance *very good* co-occurs with head nods. Then, the presenter shows a plea of ignorance to answer the question (Example 109), that is expressed with dialogic contraction mitigating the authorial voice with *I (don't) think*. He uses this strategy three times. In *I don't think we can say yet* the utterance introduces another evaluative expression that shows their incapacity to give an answer. In this context the modal verb *can* shows negative judgement but it is mitigated by *yet*. The temporal adverb implies the meaning “until now” which serves as self-protection for the presenter and it might open positive expectations to the audience. The utterance *we can say yet* co-occurs with a gesture of separating hand from the chin (resting position) and opening palm. After that, he notes they got the observations that could lead to an answer, but again he mitigates the authorial voice with *I think*. Then, he repeats the first idea, using a parallel structure *I don't think we can make a definitive answer*, where *answer* is sharpened with the adjective *definitive*.

- (109) [...] and **I don't think** we **can** say **yet**. **I think** we got the observations **I don't think** we **can** make a **definitive** answer, on what is it and in the interaction between the enzyme and, the bound ligands that, uh **seems to be more favorable** for accumulation and the deacylation [...] (CH-E5)

The presenter describes the interaction between the enzyme and the bound ligands with positive appreciation with *more favorable* where the inscribed evaluative meaning of the adjective is intensified with the graduation. On the other hand, he also employs mitigated authorial voice to express his attitude with *seems to be*. This utterance co-occurs with palm up moving forward, a gesture that can be interpreted as structuring the discourse. However, the presenter appears not to be satisfied with showing a plea of ignorance and attempts to answer his own question.

- (110) [...] **one thing I might** say is that uh, there's been **some** numerical modeling of the kinetics of the cholinesterases **recently** and it **appears** that for normal kcat they are **all** rate-limited by deacylation. **rather than** acylation. and if that's the case there's **probably** there therefore **would've** been a **greater** selection of pressure for maximizing deacylation because it's a **slow** step in the reaction. and here's a, mechanism by which that's occurring. (CH-E5)

In Example 110, he opens this rhetorical function with an utterance that conveys evaluative meaning, *one thing I might say*. Several aspects are worth noting here. First, the presenter maintains the same tone used during the entire move. He uses dialogic expansion expressed with the modal verb but at the same time he intensifies his voice with *one thing*, that co-occurs with phonetic stress and a gesture of moving forefinger up. This utterance intensifies not only the authorial voice but also the attitude of the discussant who is trying now to make a contribution to the topic, after having admitted he is not able to provide an answer. Then, the presenter makes a reference to the findings of another researcher (semantic spanning). He gradates the contribution of such research, *numerical modeling*, in terms of amount with *some*. The adjective implies imprecise reckoning showing semantic synchrony with the gesture that co-occurs with the utterance *some numerical*, where the presenter rotates hands alternatively to opposite sides. The temporal adverb *recently* could be interpreted as judging positively other researchers who are already working on the topic and have been able to provide not long ago numerical modeling. However, the adverb also somehow shows the novelty of the topic, since it is only *recently* that numerical modeling is available to the research community. If it is interpreted in this respect the adverb would be considered as appreciating rather than judging. The presenter uses dialogic expansion to describe the results of numerical modeling of the kinetics of the cholinesterases with *it appears*. The verb is intensified paralinguistically and kinesically with phonetic stress, long syllabic duration, and a gesture of fist up moving forward. In addition, the cholinesterases are quantified, instead of using just the pronoun *they*, he employs the adjective *all* to intensify in *they are all rate-limited*. The presenter gradates the description intensifying it with a comparative utterance *rather than acylation*, which is co-expressed with moving one hand to one side. This gesture gets meaning with the analysis of the gesture made in the first part of the comparison, where the presenter moves up the other hand. The two gestures are structuring the discourse performing the pragmatic function of parsing. Then, the presenter interprets the results. Because of the newness of the modeling, he is cautious in accepting them blindfold. This attitude is

expressed with the conditional sentence *if that's the case*. He maintains this tone to introduce his interpretation, mitigating the authorial voice with dialogic expansion in a self-repair strategy, first with the adverb *probably* and then with the conditional verb *would*. The presenter evaluates positively how the reaction appears to work since there would be *a greater selection of pressure for maximizing deacylation*. The attitude is shown with the intensified adjective *greater selection*. This positive attitude is then justified in *because it's a slow step in the reaction*, with the negative evaluation of the step as *slow*.

In Exchange CH-E6 (Examples 111 and 112), the presenter takes move 3 too. He has also rejected the suggestion implied in the discussant's forward question (Example 97). In Example 111, the presenter self-protects positive face showing a plea of ignorance and formulating a question.

- (111) [...] what I **don't understand yet** is why? are they truly centered because there **doesn't seem to be any special** stabilization associated with it [...] (CH-E6)

He expresses negative self-judgement of capacity but mitigates it with the adverb in *I don't understand yet*. The verb is intensified with a head movement of tilting head to one side. It appears the presenter does not have an explanation for what has been the core of the rejection in the straightforward response, the presence of *truly centered hydrogen deuterium* rather than a disorder structure as suggested by the discussant. However, the repetition of *truly centered* in the question does not imply evaluative meaning as it has done in the answer. Then, he explains why he does not understand it with dialogic expansion *doesn't seem to be*, that co-occurs with head shaking. He gradates the source of the reason with *any special stabilization*, where the adjective is sharpening the noun. Finally, the presenter attempts to answer his question in Example 112.

- (112) [...] and I'm **afraid** I got a re- **ya know** the **default** is uh that it's **something like** crystal packing forces (CH-E6)

He expresses his position showing negative affect towards what he thinks is causing hydrogen deuterium to be truly centred. He uses negative politeness strategy to express with *I'm afraid* that the answer disappoints him. The adjective is intensified with loudness up. This negative attitude is also co-expressed with head shaking during the utterance *I'm afraid I got*. Then, he uses dialogic expansion, *ya know* (the presenter is still nodding), and maintains the negative attitude towards the answer with *the default is*. This noun shows inscribed evaluative meaning and is co-expressed with moving head forward. A self-repair strategy is used to state the answer, where the presenter changes from making an unmitigated assertion with *the default is* to mitigate the authorial voice with *that it's something like*. The evaluative utterance *something like* also co-expresses with head shaking.

The last move that the discussant can take in this exchange is *Closing the turn*. This move is taken in Example 113 where the presenter shows his positive reaction to the question. The presenter in move 1 has already shown his positive appreciation of the question with *uh that so this is a good question [...]* (Example 93). This constitutes positive politeness towards the face wants of the discussant.

(113) [...] **good** question. (CH-E8)

The analysis has shown interesting results about how evaluative meaning is used to articulate the dialogic exchanges Question – Response in small specialised corpus analyses.

Table 20 summaries the moves taken in the exchanges discussed above. Regarding the types of moves, those that convey textual meaning *Opening the turn* and *Closing the turn* are very uncommon. In addition, evaluation is only used to express presenters' attitude towards the question when *reacting to the question*.

	Discussant			Presenter			
	Move 1 Opening the turn	Move 2 Formulating the question	Move 3 Reformulating the question	Move 1 Opening the turn	Move 2 Responding	Move 3 Expanding the topic of the question	Move 4 Closing the turn
L-E5	-	Asking a backward question	-	-	Making a straightforward response	-	-
L-E6	-	Asking a backward question	-	-	Making a straightforward response Expanding the response Reintroducing the response	-	-
L-E7	Announcing the question	Asking a forward question	-	-	Roundabout response	-	-
L-E8	-	Asking a forward question	Assuring the question is clear	Repeating the question	Roundabout response Reintroducing the response	-	-
CH-E5	-	Asking a forward question	-	-	Making a straightforward response	Raising a question Showing a plea of ignorance Answering his/ her own question	-
CH-E6	-	Asking a forward question	-	-	Making a straightforward response	Showing a plea of ignorance Raising a question Answering his/ her own question	-
CH-E7	-	Asking a forward question	-	-	Roundabout response	-	-
CH-E8	-	Asking a forward question	-	Reacting to the question	Making a straightforward response Expanding the response Reintroducing the response	-	Reacting to the question

Table 20. Moves in the Question – Response exchange

In *Formulating the question* discussants ideational meaning pushes evaluation to the background. As discussants tend to be concise, there is no much room for evaluation but in those exchanges where a politeness strategy is used to

formulate the question. It is when presenters are *Responding* and *Expanding the topic of the question* that evaluation is more common in the exchange, because these are moves where presenters show their position, although they are also burdened with ideational meaning.

Regarding disciplines, the topic of the question is only expanded in Chemistry exchanges. This might be interpreted as a politeness strategy at the rhetorical level since they follow straightforward responses that reject suggestions made in the questions.

5.3.3 Comment + Question – Response exchanges

The analysis of the moves in the exchange Comment + Question – Response shows the discussant can take up to four moves and the presenter two. Figure 18 represents the generic structure of these exchanges.

This type of exchange is a variation of the exchange Question – Response. The difference between them is that now discussants rather than formulating the question in move 2 they do it in move 4. Like in the exchange Comment – Comment where the discussant contextualises the comment before making it, in this exchange the discussant also contextualises the question before formulating it. I have called this part of the exchange Comment following the description of the *discoursal turns* made in Section 5.1.2.

Discussant's turn: comment + question

- | | |
|--------|--|
| Move 1 | Opening the turn
<i>Announcing the question</i> or
<i>Reacting to the presentation</i> |
| Move 2 | Contextualising the question (obligatory)
<i>Referring to previous experience</i> or
<i>Checking understanding of the research</i> |
| Move 3 | Making a comment
<i>Criticising the research</i> |

- (114) **we think** we got question [...] (CH-E9)
 (115) I have a question about your experimentation [...] (CH-E10)
 (116) [...] I **wanted to** ask [...] (L-E9)

In Example 116 the discussant uses a verb that conveys positive affect of desire, *I wanted*. Nonetheless, the past tense somehow mitigates the expression of desire. This exchange does not follow the common order of the moves expressed in the generic structure suggested, move 1 is in actual fact move 2 and vice versa. However, it is worth noting the existence of this possibility.

Finally, discussants can also show their reaction to the presentation. They express their attitude with affect like in Example 117. The interpretation of the discussant's move is complex since it could be interpreted that the discussant shows positive and negative affect.

- (117) well there's one one aspect that **surprises** me and one that **doesn't** uh [...] (CH-E12)

On the one hand, the verb *surprises* could be interpreted as expressing positive affect constituting positive politeness towards the face wants of the presenter, and the negative auxiliary *doesn't* as showing negative politeness. On the other hand, it could also be understood that *surprises* expresses negative affect because the discussant finds something unexpected and possibly contrary to his beliefs. Thus, it could be a negative surprise and the discussant could be positioning as odd with the presenter. The presenter responds kinesically to this reaction moving his head down and forward to one side. The head movement might be interpreted as acknowledgement of the dual reaction. This movement also implies aversion of eyes which might be showing the presenter's embarrassment because of the lack of the alignment expressed by the discussant in the second part, and in this way the presenter's kinesic expression might be a strategy of self-protection of positive face. The presenter has to be ready to be praised but also to be criticised.

The next move *Contextualising the question* is one of the two obligatory moves of the discussant in the exchange. Like in Comment – Comment exchanges, discussants can choose two ways of contextualising the question, either refer to previous experience like in L-E10, L-E11, L-E12, CH-E9, and CH-E12 (Examples 118 – 123); or check their understanding of the research presented to formulate the question on the correct grounds in CH-E11 (Example 124). In addition, discussants can also first refer to previous experience and then check their understanding of the research, like in L-E9 and CH-E10 (Examples 125 - 128).

When discussants refer to previous experience they can refer to the presenter's contribution in the previous exchange, like in L-E12. Here discussion was opened about whether the selection of papers to be published in a well known international journal in Linguistics is done after they have written the editorial or not (Example 38). The presenter has not taken a central role in the discussion but he makes a final reflection that the discussant takes up to ask about the job of special issue editors. In Example 118 she refers to the presenter's contribution to state her belief.

(118) when you say so there **might** be **some interesting differences** [...] (L-E12)

She uses dialogic expansion to mitigate the authorial voice and self-protect her positive face with *might be*. Then, the discussant makes an assumption on the grounds of the presenter's words. She expresses her attitude with the utterance of appreciation *some interesting differences*. The core of the utterance is *differences*, an inscribed evaluative noun with positive polarity given by *interesting*. The adjective *some* quantifies the utterance with imprecise reckoning. The presenter's kinesic response to this assumption is expressed by changing face expression, from smiling to putting on a serious face. Face expression might show the presenter's interest and it might also possibly be conveying worry or surprise for the discussant's statement that seems to be

inspired by him. The reaction could be interpreted as an act of self-protection of positive face since the presenter seems to position as odd with the discussant showing distance with the serious face expression.

Discussants can also refer to the research presented in the talk, like in the following examples from Chemistry. In Example 119 from CH-E9, there is no expression of evaluative meaning.

- (119) [...] eh when you have side-on bind- er head-on binding <Presenter: OVERLAP> end-on </OVERLAP> [...] (CH-E9)

The other two examples, Examples 120 and 121, belong to the same Exchange CH-E12. As the discussant has announced in the opening move (Example 117) he has found something surprising and something that has not surprised him in the talk. He structures his turn around these two poles.

- (120) [...] the one that's **easy** is this uh business with the su- post-sensitive ranges from, dialectic <Presenter: OVERLAP> yeah </OVERLAP> constant one to five or ten uh [...] (CH-E12)
- (121) [...] the other that **surprises** me is that I remember the interpretation going from S-P-three to S-P-two is that **yes indeed** the stretching force constant increases **but** the **big** effect is on the outplaying bending mode that decreases **even more** [...] (CH-E12)

First, the discussant refers to the part that has not surprised him, appreciating it positively with the adjective *easy*. After that, the discussant takes move 3 to make a comment on this (Example 130). In Example 121 the discussant introduces the part that has surprised him. It seems that eventually surprise means disagreement in the context. Thus, the verb is conveying negative affect. This attitude is reinforced when he explains why he has been surprised. The discussant shows alignment with the presenter when describing the interpretation of a process with dialogic contraction *yes indeed*. However, he uses also unmitigated voice to show disclaim, to reject part of the discussant's position with the concessive *but*. Then, the discussant states his position with positive appreciation in *the big effect*. And he uses two instances of graduation

to intensify the effect decrease with *even more*, where the quantifier *more* is intensified with the adverb.

To contextualise the question, discussants can also refer to their own teaching activity, like in Example 122 from Linguistics. The discussant tells about particular teaching sessions she has to give next week to secondary teachers. She opens the move making a joke expressing negative affect towards herself, with the adjective *schizophrenic*, but at the same time mitigating the authorial voice with dialogic expansion, *perhaps*. This strategy might be used to describe the distress she seems to feel because of the topic she has to talk about.

- (122) this is **perhaps** (xx) (I'm feeling **schizophrenic**) <Presenter: LAUGH> because (next week I've to work) with secondary teachers and talk to them about ways what **they call** deep learning, that is, **beyond** the vocabulary of ESP into what it means to be a geologist. [...] (L-E10)

The discussant seems to feel uncomfortable with the topic, because possibly it is a difficult one. This negative attitude is also expressed using dialogic expansion to introduce the topic with *they call deep learning*. And, after that, she explains it making a connection with the topic of the presentation. The explanation also shows negative appreciation with the preposition *beyond* implying the complexity of the issue.

Finally, they can also refer to a more personal academic experience like in Example 123. The discussant tells about a dinner she had with a scholar from the University of California, who told her about the use in her university of undergraduate personal statement; an aspect closely connected with the topic of the talk that has dealt with graduate statements. The presenter is not in focus until the utterance *she said*.

- (123) it's me again, <Discussant: LAUGH> we had dinner the other night with someone from the University of California where **in fact**, undergraduate personal statements are used for admissions so that they **can** look at other kinds of issues and one of the things she **complained** about is that one obligatory move one obligatory section of the text **must** be about how this student has suffered, <LAUGH> alcoholic father, the

mother who deserted them, **she said** ev// she's **so tired** of reading these and sh//, </U>
anyway [...] II <Presenter: OVERLAP> **yeah** </OVERLAP> (L-E11)

Regarding engagement, the discussant attributes the propositions to the external voice of the scholar invoking dialogic alternative. However, the authorial voice is unmitigated to introduce the topic of the conversation that is relevant for the discussion with *in fact*. Expansion is used to express, with the modal verb *can*, the possibility that the use of those statements for admissions opens to *look at other kinds of issues*. The discussant also employs dialogic expansion to portray the negative attitude of the scholar towards this examination, with *she complained about* and *she said ev// she's so tired*. In both instances the verbal expression of judgement *complained* and the adjective *tired* express negative inscribed evaluative meaning. In addition, the negative affect of the adjective is intensified with the adverb *so*. On the other hand, another example of dialogic contraction that is used in the move is with the modal verb *must be*, when the discussant describes the topic of one obligatory section in the statement. The external imposition implied in the verb reinforces the idea rejecting some contrary position. The discussant finishes the move with the adverb *anyway* to change to the next move. She might have evaluated that no more details about her conversation with the scholar are needed to say but it is time for asking the question. It could be interpreted as a negative appreciation of the amount of information already conveyed.

Apart from referring to previous experience, discussants can choose to contextualise the question checking their understanding of the research. In the next exchange from Chemistry, Example 124, the discussant refers to the *essential reactive step*. The adjective *essential* is intensifying the reactive step. Then, an utterance of dialogic expansion introduces the confirmation seeking, *I guess*. He is checking his understanding of the methodology followed in the experiments, as that they have been performed in *completely apolar medium*, where the adverb intensifies the description of the medium. The presenter overlaps to confirm the discussant's suppositions.

- (124) uh in the case the (**essential**) reactive step is the hydrogen transfer from from carbon to carbon <Presenter: OVERLAP> mhm </OVERLAP></U> and **I guess** that the the experiments are performed in, **completely** apolar medium <Presenter: OVERLAP> yes </OVERLAP> oil or so. <Presenter: OVERLAP> yah </OVERLAP></U> (that's it) [...] (CH-E11)

Furthermore, as noted above, discussants can also perform the two rhetorical functions to contextualise the question, refer to the previous experience and check their understanding of the research. Two exchanges in the corpus do it in this way. In L-E9 the discussant refers to the presentation, in Example 125, where no evaluative meaning is expressed, and then checks his understanding of the talk, in Example 126.

- (125) uh going back to the first part of the presentation [...] (L-E9)
- (126) [...] you **seem** to make a distinction between uh **good** formed consciousness and the **bad** ones, like **you know** consciousness as awareness and consciousness as self consciousness when you do things **too deliberately** in <Presenter: OVERLAP> **yes** </OVERLAP> [...] (L-E9)

The discussant mitigates the authorial voice, with the expression of dialogic expansion *you seem*, to introduce what he considers is the main idea of the talk. Then, he develops his uptake noting a distinction between *good* and *bad formed consciousness* when learning a second language. The adjectives show inscribed positive and negative appreciation and the distinction is intensified with phonetic stress. Nonetheless, these are not showing the discussant's attitude but reporting the presenter's one. The presenter responds kinesically expressing acknowledgement with a slow head nod. Next, the discussant employs dialogic expansion, with *you know*, to introduce examples of the two types of consciousness, and therefore his interpretation. Bad formed consciousness is described with negative attitude of judgement, *deliberately*, intensified with the adverb *too*. The presenter shows verbal acknowledgement with *yes*, but also kinesic one expressed with slow head nods. She also smiles. The face expression might be interpreted as showing self-protection of positive face showing embarrassment of the negative judgement that she agrees with.

The other exchange that also expresses two functions is CH-E10, Example 127. In this move the discussant first checks his understanding of the research and then he refers to the talk.

- (127) **if I understood correctly** you are watching disappearance of C-L-O. <Presenter: OVERLAP> yes </OVERLAP> and this is a substrate that you have to go to **highest** convergence <Presenter: OVERLAP> uh, </OVERLAP> for the reaction <Presenter: OVERLAP> yeah </OVERLAP> [...] (CH-E10)

He opens the move with *if I understood correctly*, an utterance that expresses positive judgement with the verb, intensified with the adverb that conveys inscribed positive evaluation. Then, the discussant expresses negative appreciation to note on the methodology that for the reaction the presenter has to go to *highest convergence*. The presenter overlaps to confirm the discussant's checking statements.

- (128) [...] from the slide you showed, you have the the composition of C-L-O and the C-L, <Presenter: OVERLAP> uh that </OVERLAP> so you have **side** reaction [...] (CH-E10)

In Example 128, the discussant refers to one slide shown during the talk to come to the conclusion that there is *side reaction*, where the adjective expresses negative appreciation of the results.

The third move the discussant can take in this type of exchange is *Making a comment*. This comment is of the type of those the discussant makes in the Comment – Comment exchanges. The difference is that whereas in those exchanges discussants' comment elicits presenters reply with another comment, here the comment is followed by a question which elicits presenters' response. Nonetheless, the pragmatic function it can accomplish is the same. In Comment – Comment exchanges the discussant's move *Making the comment* can fulfil two different functions Criticising the research or Showing alignment with the presenter. In the corpus of Comment + Question – Response

exchanges it appears that this move is only used to criticise, like in the exchanges from Chemistry CH-E11 and CH-E12, Examples 129 and 130.

In Example 129 the discussant has taken a previous move to check he is going to make the comment on the correct grounds (Example 124), and it seems he is doing so, since he has received the presenter's confirmation. Now, the discussant positions as odd with the presenter, showing negative attitude towards the research.

- (129) [...] I **would expect** in such case, **quite large**, kinetic isotope effects since we say let's say that the enzymes **you know** the proton transfer is controlled by fluctuations of the (polar) environment and, here one **would expect**, one **would expect** that intrinsic, intrinsic uh uh hydrogen transfer is the rate limiting step. [...] (CH-E11)

He mitigates the authorial voice with dialogic expansion and expresses positive judgement with the verb in the utterance *I would expect* and *one would expect*. The change of pronoun from *I* to the inclusive *one* is also worth commenting as it also mitigates the authorial voice, but as repeated in several occasions during the dissertation, this can only be the matter of further research. Mitigating the authorial voice the discussant is self-protecting his positive face; this has even more sense at the core of a critical comment like this. The discussant states his position about the kinetic isotope effects, what he expected to find in the results, describing it with positive mitigated appreciation *quite large*. Then, he gives a brief reasoning of his position introduced also with dialogic expansion, *you know*.

In Example 130, the discussant has shown his reaction to the talk, showing surprise for one aspect and lack of it for another (Example 117). He contextualises the issue of the research that has not surprised him, that is the post-sensitive ranges from dialectic constant (Example 120). Now, he makes a suggestion about the methodology. This suggestion can be interpreted as a criticism since the discussant describes a "better" procedure, on the basis that the presenter has followed a different one.

- (130) [...] because energetics **always** goes as one open dialectic constant so if you plot against one (xx) dialectic constant <Presenter: OVERLAP> **yeah** </OVERLAP> you **oughta** get a **much better** (decay) uh uh of plot <Presenter: OVERLAP> that's what I did. **yeah. yeah** </OVERLAP> I'd be **curious** what it looks like. **but I think** it **may may** shed **some** light on <Presenter: OVERLAP> **yeah** </OVERLAP> this. [...] (CH-E12)

First, the discussant sets up the basis for the suggestion intensifying the verb with the temporal adverb *always*. He makes the suggestion in the form of a conditional sentence and uses dialogic expansion mitigating the authorial voice to say that he thinks it will probably happen with the modal verb *oughta*. The discussant expresses positive attitude towards his suggestion. He appreciates positively the results with the comparative superlative *much better*. He also shows interest to see what will happen, which is expressed with positive affect but mitigating the authorial voice in *I'd be curious*. The discussant closes the move stating his belief in the suggestion, which is introduced with an expression of dialogic contraction, the concessive *but*. Then, he mitigates again the authorial voice with *I think*, as well as the contribution of the procedure with the modal verb *may* that expresses possibility and the graduation of quantity *some* in *it may may shed some light on [...]*. The presenter's reaction to this suggestion that can be interpreted as a criticism is expressed verbally in several overlappings. He shows acknowledgement with the utterance *yeah* at the beginning when the discussant states the suggestion and at the end when describing the contribution. The presenter also overlaps to introduce important information that the discussant seems not to hear. It appears that the procedure suggested is the one followed in the analysis, *that's what I did. yeah. yeah*. That could be the reason why the presenter is showing acknowledgement all move long. The discussant's move can be interpreted as an FTA, since it seems to impose upon the presenter's beliefs.

The last move for the discussant in this type of exchange is *Formulating the question*. As move 2, *Contextualising the question*, this move is obligatory. Here I have followed the criteria adopted to analyse the type of questions in the exchanges Question – Response, that is, whether they are backward or forward

questions. Findings reveal three discussants in exchanges L-E9, CH-E9, and CH-E10, Examples 131 – 133, ask questions on some aspect in the scope of the talk that should not pose any problem to be answered, that is backward questions. In Example 131, the discussant has contextualised the question checking his understanding of the research (Example 126). Although the presenter overlaps to show acknowledgement with the discussant's interpretation of the research (verbally and kinesically) the discussant formulates a question seeking the presenter's confirmation. Evaluative meaning does not appear in the question, neither in Example 132 where the discussant asks about how certain calculations have been done in the analysis.

(131) [...] is that so? (L-E9)

(132) [...] how do you calculate the combination of whether the heavy isotope is by the metal or <P: 04> (CH-E9)

(133) [...] how do you **correct** for this. (CH-E10)

In Example 133 the discussant has checked his understanding of the research (Example 127) and has referred to talk (Example 128) to contextualise the question. He closes move 2 detecting the presence of a *side reaction*, showing negative appreciation of the results. This attitude is even more explicit in the direct question with the use of the verb *correct* with inscribed negative evaluative meaning.

In addition, the discussant can also ask a forward question. This is a more challenging type of questions, since presenters are asked to reflect on an aspect related to the talk, they possibly have not thought about before. Results show these questions appear in five exchanges. In two exchanges from Chemistry, Examples 134 and 135, the discussants elicit the presenters' reflection on their comments. In Example 134 the discussant has made a critical comment and now he uses an indirect question, with the modal verb *can*, to mitigate the authorial voice that is demanding the presenter's response. On the other hand, in Example 135 a direct question is used, thus evaluative meaning is not expressed.

(134) [...] so **can** you comment on how this (CH-E11)

(135) [...] so what what do you say about (CH-E12)

Regarding the three exchanges from Linguistics whose discussants make forward questions, L-E10, L-E11, and L-E12 (Examples 136 – 138), all three in the previous move have contextualised the question referring to previous experience. It is worth noting that the discussants choose to follow a strategy of mitigating the authorial voice. In Example 136, the discussant has referred to a training session she has to give about the difficult topic of deep learning. Now, it seems she is getting advantage of the situation to learn about the presenter's opinion about the topic.

(136) [...] now, uh.. what are two forms that you **would** use with a- beginning major in terms of what are the **essential** understandings of deep learning of the value system the repertoire (of genres) in geology? what **would** you say? (L-E10)

The discussant employs dialogic expansion, with the modal verb *would*, and she intensifies the key issue of the question, *the essential understandings of deep learning*, with the adjective *essential*.

In Examples 137 and 138, the discussants open the question with the same utterance that expresses dialogic expansion mitigating the authorial voice, *I wonder if*. In Example 137 the presenter is not in focus. In Example 138 more evaluative meaning is conveyed in the move. The discussant states the question about the job of special issues editors of Linguistic journals. She gradates the number of editors (with *some*) and makes dialogic space for other possibilities (with *might*), in *some of them might you know, there might be*. Finally, the discussant seems to express positive appreciation towards the variety of contributions editors can make, with *different*.

(137) [...] **I wonder if** they are trained <Presenter: OVERLAP> I I </OVERLAP> for them or what (xx) (L-E11)

(138) [...] **I wonder if** the special uh issue editors are the ones who go piece by pie- through the contributions to the special issue and **some** of them **might you know**, there **might** be these **different** types... (L-E12)

Presenter's turn

Findings reveal that presenters can articulate their response in two rhetoric moves: opening the turn and responding the question. But only the second move appears in all the exchanges. In addition, these moves deploy the same pragmatic functions as those described in the exchange Question – Response. In this respect, the first move, *Opening the turn*, shows the presenter's reaction to the question. Presenters can appreciate the question positively, like in Example 139, or negatively, like in Example 140 below.

(139) oh that's a **great** question that's a **great** question, [...] (L-E9)

In Example 139, the presenter opens the move with the discourse marker *oh*, that does not convey evaluative meaning. She shows positive attitude towards the topic of the question, appreciating it with the adjective *great* in *that's a great question*, an utterance that is repeated. The verbal expression of positive attitude co-occurs with the kinesic expression head nodding.

(140) well, I'll have a **week to think about it won't I** <Discussant: OVERLAP> yeah, **I think** it's **very unfair** (xx) </OVERLAP> <Presenter: LAUGH> but I **can_ I actually** have thought about it because I've **tried** using this <Discussant: OVERLAP> uh </OVERLAP> before with **totally unrelated** subject, um, [...] (L-E10)

In Example 140, as it has been inferred from the attitude expressed by the discussant when contextualising the question, *I'm feeling schizophrenic* (Example 122), the topic of the question is a difficult one, deep learning. The presenter opens the move making a joke and indirectly showing negative attitude towards it with *I'll have a week to think about it won't I*, since the discussant has noted she has to work on that next week with secondary teachers. The presenter expresses the need of time to give a response, at least the same as the discussant has to prepare her talk. The utterance *a week* could be considered an expression of negative appreciation. This attitude seems to seek the discussant's confirmation with the question tag, an expression of dialogic expansion. Then, the presenter appears to show self-protection of

positive face laughing, since her reaction to the question could be interpreted as an FTA towards the desires of the discussant. In fact, the discussant overlaps with the presenter's laugh to also show negative appreciation of her own question with *very unfair*, which is introduced with the utterance of dialogic expansion *I think*. After that, the presenter changes his attitude showing positive self-judgement of her capacity to answer the question, *but I can*. Even more dialogic contraction, unmitigated authorial voice is raised to express she has already thought about it with *actually* that co-occurs with phonetic stress. Nonetheless, to describe the use of deep learning, the presenter shows positive attitude with self-judgement, *I've tried*, and intensified appreciation, *totally unrelated subject*. The adjective co-occurs with long syllabic pronunciation and head moving up that intensifies it, and the adverb is co-expressed with closing eyes.

The obligatory move of the presenter in this type of dialogic exchange is *Responding the question*. As in the exchanges Question – Response, presenters can chose to give a straightforward response or a roundabout response. Straightforward responses in these exchanges are followed by an explanatory comment where presenters expand the response, and after that they can also reintroduce the response (L-E9, L-E12, and CH-E9; Examples 141 – 150). On the other hand, in roundabout responses presenters somehow sidetrack from the subject of the question to eventually give an answer (L-E10, CH-E11, and CH-E12; Examples 151 – 156), or not (L-E11 and CH-E10, Examples 157 and 158). Roundabout responses can also reintroduce the response at the end of the move.

The examination of the data shows two discussants in Linguistics make a straightforward response and then expand it. In Exchange L-E9 the discussant has formulated a backward question (Example 131) to elicit the presenter's opinion about his interpretation of the talk. He has distinguished between *positive and negative consciousness [...] consciousness as awareness and consciousness as self consciousness* (Example 126). The presenter has already

expressed acknowledgement with the discussant verbally and kinesically during the discussant's turn. In addition in move 1, she praises the question (Example 139). However, in Example 141, the presenter makes a straightforward response to show negative attitude towards the terminology used by the discussant. It seems she does not find an equivalence between the two pairs suggested (positive consciousness as awareness and negative consciousness as self-consciousness).

(141) um yeah, awareness and self consciousness **might** be **better** descriptions cuz they are **very different in my understanding** of them and [...] (L-E9)

She mitigates the authorial voice with *might*, showing negative politeness towards the face wants of the discussant. The modal verb is intensified with the co-expression of moving head forward. The presenter does not want to impose upon the discussant's beliefs, but she appreciates positively the descriptions she proposes with the comparative *better* and negatively those suggested by the discussant with *very different*. She employs again dialogic expansion to express the negative attitude with *in my understanding*. The presenter nods all the time possibly to intensify her position. Then, in Example 142, she considers necessary to expand the response.

(142) [...] I I **should** say that I **don't think** unconscious competence is a **problem** if you're not a teacher <Presenter: LAUGH> it's it's when you're **trying** to help people come along the pathway that you **need to be able** to dip down and articulate and **be able to** describe the procedure um [...] (L-E9)

The presenter opens this part with two utterances of engagement. First, dialogic contraction introduced by the modal verb *should* unmitigates the authorial voice, and then dialogic expansion with *I don't think* reduces the authorial responsibility. The first co-occurs with aversion of eyes looking at one side of the room and tilting head to one side. This could be interpreted as self-protection of positive face as she is going to position as odd with the discussant. In the second utterance, the presenter seeks the discussant's eye-contact possibly to be sure the discussant is taking account of her position

(Kendon 1967). She also head shakes quickly, a head movement that co-occurs with the verbal negation. The presenter uses dialogic expansion in other two occasions to introduce her position at difference stages of the argumentation. She uses a noun of negative inscribed evaluative meaning *problem* to refer to unconscious competence. She notes there is only one situation where it is a problem, remember the discussant has generalised to consider this type of consciousness “the negative one” (Example 126). The noun is intensified with long pronunciation of syllable. She also shows aversion of eyes looking at one side; this could again be interpreted as self-protection of positive face. The presenter only sees unconscious competence is a problem is for teachers. She reacts to this statement laughing as a show of positive affect, since the major part of the people in the room including her are teachers. Then, she explains it. In the description she expresses negative attitude towards the teacher’s behaviour (in line with the negative evaluative meaning of *problem*). Thus, she shows positive judgement of capacity with, *you’re trying to help, you need to be able to [...] and be able to*. In *you’re trying to help* the verb *trying* conveys the meaning of attempting to do something that is difficult to do. On the other hand, *need to be able to* introduces the idea of requirement of a skill you must have. The first *to be able* co-occurs with titling head to one side, a head movement that intensifies the utterance in the discourse.

(143) [...] but **I think** that self consciousness *it’s_it’s_ not unrelated* to this movement because *students_ sense they’re not, meeting expectations but they don’t know why* [...] (L-E9)

In Example 143, the presenter states her position toward the other type of consciousness. Here, the authorial voice is again mitigated with dialogic expansion, *I think*. She uses double negation to show negative appreciation in *it’s_ not unrelated*. Although double negation means affirmation if it is related to the former description and the former description expresses negative attitude, thus this utterance seems to convey also negative attitude. This is proven with the reasoning that follows it. The utterance *not unrelated* is co-expressed with a gesture that is repeated until *to this movement*. The gesture is

a metaphoric one that anticipates with the adjective; the abstract idea evokes the *movement of help people come along the pathway* in the process of learning. The presenter moves forward one palm onto the other, like one palm down sliding along the opposite palm up without touching each other.

- (144) [...] so **I think** there **can** be **anxiety** caused from the **wrong** kind of unconsciousness
uh the **wrong** kind of unconsciousness **can** lead to the **wrong** kind of consciousness
<Presenter: LAUGH> [...] (L-E9)

For the third time, in Example 144, the presenter states her position. She does it with dialogic expansion twice, first with *I think*, and then with the modal verb *can* mitigating the authorial voice and conveying the meaning that something is possible or likely, in *there can be* and *can lead*. The first example of graduation co-occurs with rotating hands alternatively; this could be interpreted as also expressing the idea of possibility that one can infer from the modal verb. The gesture is co-expressed not only with the modal verb but with the entire utterance *can be anxiety*. Instances of negative inscribed evaluative meaning are used with *anxiety* and *wrong*. The adjective *wrong* as appreciating the two aspects under discussion, *the wrong kind of unconsciousness* and *the wrong kind of consciousness*. The first *wrong*, that introduces the cause of anxiety, co-occurs with palms moving to one side, raising eyebrows, and with a quick head nod. The gesture can be interpreted as a metaphorical one that expresses the abstract idea of choosing between two sides, here between “the right type” and “the wrong type”. The face expression could be intensifying the negative appreciation, as quick head nod does. I wonder whether face expression would have changed with positive appreciation. In addition, *wrong kind* is also intensified with long syllabic pronunciation. The second *wrong* co-occurs with moving head up and changing gaze direction, also up. Kinesics might have a parsing function here marking the discourse structure, since the presenter is introducing a new idea. Furthermore, the third *wrong* is also intensified with raising eyebrows. This face expression seems to show surprise and it could be paraphrased as “can you believe it?” The presenter laughs with this connexion where the wrong kind of unconsciousness can lead to the wrong kind of

consciousness. Laugh might show positive attitude towards the fact that this relation is governed by the wrong types.

- (145) [...] so what we're aiming for is is a sense of power of having students feel they know what the task at hand is and they know how to attain their **own** goals because their competence will **always** be situated they **can** get **as good as** they **want** at presenting or writing here but it's **not going to** mean, they **can** take that back and have that competence at home so they **need** to be to become <Presenter: **LAUGH**> multi competent (L-E9)

Finally, in Example 145, the presenter illustrates this reflection with how all that relates to students. She gradates their goals sharpening them with the adjective *own*, in *their own goals*. She also gradates their competences with *always* intensifying them, in *will always be situated*. The temporal adverb co-occurs with palms down moving from one side to the other anticipating the abstract meaning of the verb of being in a particular position. Lateral sweep of the head is also observed with the highest value for the modal assessment of usuality. After Kendon (2002), head shakes used in this way function as intensifiers because of their reference to an implied negative 'more than you can know'. The presenter expresses positive attitudes towards students' capacity with *they can get as good as they want*. The modal verb shows positive judgement, as well as the adjective *good* in the comparative structure that intensifies it. In addition, the verb *want* expresses positive desire. The entire utterance *as good as they want* co-expresses with a gesture of palms down describing circles and moving forward, co-occurring the stroke of the gesture with the verb. The gesture might be interpreted as representing the abstract idea of improving, of moving forward. However, the presenter also shows the negative side of the situation, conveying negative attitude with *it's not going to mean*. Here the negative appreciation of the situation is intensified with the verbal tense, where the presenter uses *going to* rather than saying *it doesn't mean*. Finally, she expresses negative judgement with the verbs *can* and *need*. The modal verb gains the negative polarity from the negative utterance that precedes it. As for *need*, it is a verb of inscribed evaluative meaning that expresses the idea of a must, of something that students must be,

according to the presenter, *multicompetent*. She laughs with this final evaluation as she knows it is something difficult to attain and possibly she does not want to be judged by the audience who also knows it.

In L-E12, Example 146, the presenter responds a forward question, where the discussant seeks confirmation of what she thinks is the job of the special issue editors, with a negative answer *not necessarily*. The complex meaning of this utterance going beyond a negation, “it is possible but not certain”, is co-expressed with a gesture of rotating one hand and head moving down and forward. The gesture seems to find semantic synchrony with the meaning inferred from the adverbial utterance, while the movement of the head might intensify it. This utterance could be interpreted as the presenter uses a negative politeness strategy because he does not want to impose upon the discussant’s beliefs. In fact, the discussant reacts to it showing surprise to the negative of the presenter to her suppositions with *no?* After that, the presenter expands the answer.

(146) **not necessarily**, <Discussant: OVERLAP> **no?** </OVERLAP> [...] (L-E12)

(147) [...] they **tend to** have a **sort of** literature review uh uh section in and and write **longer** editorials. uh, they **expect_** they’re **expected** to do so. <Discussant: OVERLAP> **yeah** </OVERLAP> um and <Discussant: OVERLAP> it’s **interesting** </OVERLAP> as as a **special** contribution. **of course**, editorials, like reviews are not uh not counted in uh, **you know** tenure or uh promotion, <Presenter: LAUGH> procedures so they **don’t** give **any** credit, but they **can** give **discredit** to the people they they talk about (L-E12)

In Example 147, the presenter mitigates his voice to describe how things work. This is a strategy of self-protection of positive face, of being judged by the audience. He introduces the description with *they tend to have* rather than *they have*, a verb that introduces dialogic expansion and co-occurs with head moving forward. The section whose authorship is attributed to the editors is softened with *sort of*, in *a sort of literature review uh uh section*. When softening the specification given characterises the literature review section as having only marginal membership in the category (Martin & White 2005). This idea is also conveyed with the co-expressed gesture of rotating one hand. The

presenter describes the editorials with negative appreciation *longer* intensified paralinguistically and kinesically with loudness up (following register of the waveforms), raising eyebrows, and moving head forward. In addition, negative attitude is also expressed when judging the editors activity as *they're expected to so do*. I consider the verb, *are expected*, conveys negative meaning here because it seems the editors do not have any other choice but what they are expected to do. This interpretation gains force when considering the analysis of kinesics. The utterance co-occurs with palm up moving to one side, shrugging shoulders, and smiling. The discussant overlaps to first express acknowledgement with *yeah*, as the explanation satisfies her. And then she expresses positive appreciation with *it's interesting*. That calls the presenter's attention, who changes gaze direction from the audience to the discussant. He finishes the description with the graduation of this type of contribution, sharpening it with the adjective in *it's a special contribution*. Then, he evaluates these contributions. He opens the description of his position with dialogic contraction, *of course*, ruling out alternative positions. The utterance co-occurs with palm up moving to one side, shrugging shoulders, raising eyebrows, and tilting head to one side. The evaluative meaning implied in the kinesic expression anticipates the negative attitude that the presenter has towards these contributions. They seem not to be considered for promotion, an important issue mainly for junior lecturers. Thus, kinesic expression could be paraphrased as showing disagreement and resignation "what can we do?" Possibly conveying the same value, the presenter laughs after describing this idea. The authorial voice is also mitigated with dialogic expansion, *you know*. The negative attitude is finally expressed in the concessive sentence *they don't give any credit, but they can give discredit*, where we find instances of negative appreciation expressed by the verb *don't give [...] credit*, intensified with the adjective *any* that co-occurs with a change of gaze direction from the discussant to the audience; and negative inscribed appreciation with *discredit*, mitigated with the modal verb *can* expressing a possibility and co-expressed with raising eyebrows and head moving down. This face expression could be interpreted as intensifying the second idea which is the more critical one.

Finally, the expanded straightforward response can also be followed by a third movement of taking up again the answer, like in Exchange CH-E9. In Example 148, the presenter has chosen to give a straightforward response to the discussant's backward question about the calculation of the combination of the heavy isotope and the metal (Example 132). He introduces it with dialogic expansion conveyed with the utterance *we assumed*. The meaning of the verb implies to think that something is true, although you have no proof of it. The rough calculation implied in the verb is anticipated with a gesture that expresses estimation, rotating one hand.

- (148) we **assumed** it was statistical (CH-E9)
 (149) so there is a **very small** isotope effect on whether sixteen binds to the metal or eighteen binds to the metal and that **really** has no impact in the isotope effect (CH-E9)
 (150) so we **assume fifty-fifty**. (CH-E9)

Then, in Example 149, the presenter explains why they have assumed the data rather than calculated it. She does it by showing negative appreciation in the description, *a very small isotope effect*, where the evaluative meaning of the adjective is intensified with the adverb; and also the intensification with *really* of impact of the isotope effect in *that really has no impact*. The adverb is co-expressed with a gesture of separating palms up from the centre to the sides. This metaphorical gesture might be interpreted also as an intensifier expressing the same semantic idea of completeness conveyed by *really*. In Example 150, the presenter closes the move reintroducing the response with an utterance of dialogic expansion *assumed*, where calculation is given an estimated value *fifty-fifty*. The utterance is preceded by a gesture of opening palms up and moving them to the sides. This iconic gesture might be interpreted to have the same semantic value as the utterance of graduation since the presenter shows the five fingers of the hands. It is worth noting that although in the move it seems the verb *assumed* has a positive polarity for the presenter, since the binding has no impact in the isotope effect, in a scientific context to take things for granted without proving them could be evaluated by the audience with negative judgement.

The other type of response presenters can make is roundabout responses. In roundabout responses, presenters develop the subject of the question providing an implicit response in the discourse. In CH-E11, Example 151, the discussant, after checking his interpretation of the research is correct, makes a critical comment. Then, he asks the presenter to comment on that.

- (151) well **many** of those enzymes eh hydrogen transfer is intermolecular which is **so different**. uh for intra- intramolecular (xx) of hydrogen transfer, uh well **you see**, the (tunneling) effect is **quite important actually** is a factor of two over eh eh one three over eh the the classical one so **I I don't think** it's **small**. eh...well it's not like **something like** (over) fifty **or something** in in **some** enzymes but uh this is not room temperature of this is (what's) three hundred thirty-three you go to the room temperature uh it will be **something like probably** twenty which is, well we calculated is **quite a bit**. <Presenter: LAUGH> (CH-E11)

The presenter opens the response noting that the type of hydrogen transfer the presenter is referring to is not the frequent one in the enzymes and distinguishes between intermolecular and intramolecular. Negative attitude is expressed towards the discussant's interpretation which might be understood as the announcement of a rejection. In the description, he gradates the enzymes with intermolecular transfer with imprecise quantification *many of those enzymes*; nonetheless, the graduation also expresses intensification. Then, he evaluates hydrogen intermolecular transfer as *so different* from the type of transfer referred to by the discussant (hydrogen intramolecular transfer). The negative appreciation shown in the comparison is expressed with the adjective, *different*, that has inscribed evaluative meaning and is intensified by the adverb *so*. Then, the presenter refers to the hydrogen transfer, whose kinetic isotope effect is criticised in the question for being small, with *I would expect in such case, quite large, kinetic isotope effects* (Example 129). He states his position rejecting the discussant's interpretation. The presenter introduces the bases of his rejection with dialogic expansion *you see*. He describes the tunnelling effect with positive appreciation and dialogic contraction suppressing alternative positions rather than directly rejecting, with *quite important* and *actually*. The adjective *important* is mitigated by the adverb *quite* as well as with phonetic stress. On the other hand, the presenter gives numerical data to support it. After

that, he states his position with dialogic contraction and positive appreciation *I don't think it's small*. The presenter nods during the entire utterance and the adjective is intensified with long syllabic pronunciation. Then, he compares numerical data with no room temperature and with room temperature (the conditions of the experiment). He gradates data with expressions of imprecise quantification, *something like*, *or something*, *some*, and *something like probably*. In the last utterance, *something like probably*, the presenter also uses dialogic expansion to mitigate his voice with *probably*. He closes the move evaluating positively the numerical results of the calculation with *is quite a bit* and laughing. The verbal utterance is expressed with a double graduation that mitigates the presenter's positive attitude towards the results. Laugh might be intensifying the presenter's attitude who, like in the utterance, positions as odd with the discussants critical comment.

In CH-E12 the discussant's turn is a bit more complex. First, he makes a critical comment. The presenter replies to it in an overlapping (Example 130) but he does not consider it relevant enough to go back to it. Then, the discussant refers to one aspect of the research that has surprised him because he did not expect such findings (Example 121), and elicits the presenter's opinion on that. Example 152 shows the presenter's response.

- (152) yeah well we've heard **a little bit** about that **already** this morning. um **my understanding** on that way way back is that if you're looking at (xx) transfer reactions, the_ you see inverse effects because that's dominated by C-H stretching. **but** when you look at uh variation as we **agreed** this morning variation with nucleophile leading group, or **indeed** variation with (xx) substitution. the variation is determined by changes in the bending frequencies. so it's a combination of the two (CH-E12)

The presenter opens the move with a reference to previous discussion sessions where the subject of the question has already been discussed. Then, he states his position and rationalises it. He refers to previous DSs and gradates the contributions made on the topic with *we've heard a little bit*, where *a bit* is mitigated with *little*. The use of the temporal adverb *already* might be

expressing positive appreciation of the contributions. The presenter states his position mitigating the authorial voice and thus, self-protecting threatening of positive face wants with the utterance *my understanding*. Then, he rationalises the findings. First, he explains the discussant's position. He appears to show negative attitude towards it when he introduces his position with dialogic contraction, the concessive *but*, and supports it on previous discussions, *as we agreed this morning*. Here the verb *agreed* expresses positive evaluative meaning of judgement. In addition, the entire utterance co-occurs with a changing of gaze direction from the discussant to the audience. The kinesic feature might be interpreted also as a sign of interpersonal meaning, since the participants in the DSs he has agreed with are now part of the audience. In the description of his position, the presenter employs again dialogic contraction to re-express an idea in *or indeed variation*, which is co-expressed with a gesture of palm down moving down and seems to intensify the utterance.

Roundabout responses can also be followed by the reintroduction of the response like in L-E10. In this exchange the presenter has opened the turn showing his reaction to a forward question (Example 140) about deep learning. This is the longest response found in the corpus articulated with semiotic spanning, moving from one previous experience to another. The presenter refers to her teaching methodology, recounts a personal academic experience, and refers to the research presented in the talk.

- (153) [...] in France ESP is taught **very strangely** and, **certainly very few** people teach it the way I do and so I've **actually** used, um, **trying** to get my students who do business communication understand that language for specific purposes **actually** is attached to cultural values in the disciplines and, so I show them a geologist's text and I **try** to make them geologists **in thirty seconds or less**, so that they can understand this, so I've **actually** thought about it. and what I, um, showed them what I gave them a **little** story about what is like to go out in into the field [...] (L-E10)

In Example 153, the presenter opens the last move in the exchange telling about her teaching experience. First, she shows negative attitude towards how ESP is taught in France, where she works. Negative appreciation is expressed

with the utterance *very strangely*, where *strangely* is intensified with the adverb. The negative attitude conveyed by the utterance is anticipated kinesically with face expression and head movement, the presenter wrinkles nose and head shakes. She positions as odd with this methodology, an attitude also expressed when noting the methodology she uses is not commonly employed in that country with *certainly very few*. Dialogic contraction opens evaluative utterance; thus, the authorial voice presents the proposition as highly warrantable, *certainly*. The number of people that teach as she does is gradated with *very few*, an expression of imprecise quantification, *few* intensified with the adverb *very*. Then, the presenter describes the way she teaches ESP. In the first move (Example 140), she complains about the difficulty of the question but she has confessed she has already thought about it. Now this idea is repeated and presented as highly warrantable with the adverb *actually*, in *I've actually used* and *I've actually thought*. The last utterance co-occurs with a gesture of moving forefinger forward. She uses *actually* also to intensify the connection of ESP with cultural values. Evaluative meaning also appears when describing the methodology to express positive self-judgement of tenacity with the verb *try*, in *trying to get my students* and *I try to make them geologists*. The last utterance *I try to make them* co-occurs with palm down moving forward. The metaphoric gesture might be interpreted as having a semantic synchrony with *try*, also conveying the involvement of the presenter in the task. The presenter attempts to make her students in business communication geologists *in thirty seconds or less*, this utterance intensifies the methodology she is describing. It seems she tells them a story to recreate a geologist context. She goes on showing positive attitude with the appreciation of the story in *a little story*, where the adjective co-occurs with the palm down moving to the centre. Then, in Example 154, the presenter retells the story to exemplify the way she teaches.

- (154) [...] and so I describe **you know**, uh, walking around with thirty kilos of rocks on your back, it's fifty degrees_ uh **I'm sorry**, fifty degrees Celsius, **sorry**, thinking in Celsius these days, um, it's, you have it you you you got up at six o'clock you haven't had anything to eat cause it wasn't anything to eat, you **just** had some tea **maybe** and you you trudge back and you're going up and down these hills and then you fall, you

get cut, alright and you get home you found this rock, you put it in your bag you get home [...] (L-E10)

Not much evaluative meaning is expressed in the story. However, dialogic expansion is used to introduce it with *you know*, and the presenter shows negative self-affect when she states she is giving temperature in Celsius rather than in Fahrenheit, with *I'm sorry* and *sorry*. She might feel ashamed and she is being sensitive to the audience since they are an international audience, and the conference is held in the US. The first utterance, *I'm sorry*, co-occurs with closing eyes and moving head up, and is followed by a gesture of palm down covering the mouth. That also appears to express the negative attitude. With the second *sorry* she smiles and looks at the audience. She keeps smiling during the explanation that follows the utterance, *thinking in Celsius these days*. The smile might express also somehow embarrassment. In the core of the narration, evaluation only appears in *you just had some tea maybe*, where *just* mitigates the verb and *maybe* mitigates the authorial voice. Then, the next step is to refer to the data presented in the talk to illustrate deep learning, in Example 155. Here, the presenter attributes the proposition to some external source since she is reading from a slide one of her students' pieces of writing which is introduced with *he says*. Evaluative language is used in the fragment although it is not the presenter who is evaluating but the student, so this is out of the scope of the analysis.

- (155) [...] and then, um, what the end_ what _ends up_ what ends up appearing in the way that they talk about it is how they were there? so, if you look, for example, here, Philippe, what he's mastered then is talking about how he is there because this provides the, the basis for his credibility. **he says** <READING> in the low strain zones, um, near Brieville, structures related to the D1 deformation can be more can be observed more easily </SEG> and he gives, uh, he uses markers of discernment, **he says** <READING> uh, this strain is moderate it's got, the (xx) is regular, it's perpendicular, there's a pitch around ninety degrees and a variable planting </SEG>, okay. [...] (L-E10)

Finally the presenter, after such a long roundabout response, takes up again the answer, in Example 156. She uses two instances of evaluative meaning in this part. She gradates what you can get from the text *all of the unsaid*, where the

pronoun *all* quantifies intensifying *the unsaid*. Then, she expresses dialogic expansion to mitigate the authorial voice with the modal verb *can*, to introduce the idea of possibility in *you can get them*.

- (156) [...] and so he_ this_ you ge- get **all** of the unsaid the unspoken implicits that come out and the_ you **can** get them to understand the value that's attached to them (L-E10)

Up to here, discussion on roundabout responses that end up answering the question has been presented. Now, those responses that turn to be evasive are brought to the fore. In two exchanges presenters choose to leave the question unanswered for different reasons. In Exchange L-E11, Example 157, the presenter does not answer the question but comments on one key aspect introduced by the discussant to position as odd with her. The discussant has referred to a previous personal academic experience to retell the use of undergraduate statements in admission at university (Example 123). The forward question elicits information to know if scholars are trained to work with this kind of statements. The presenter does not give an answer about whether they are trained or not, but focuses the response on the difference between those statements and graduate statements, the ones she has explored. The reason for this evasive response might be the presenter is not interested in the question but she considers more relevant to make clear the difference between the types of statements, and to take up again the issue of personal information in the statements stressed when contextualising the question.

- (157) **I think** what your uh statements are **very different I think** from what grad statements <Discussant: OVERLAP> yeah </OVERLAP> um **just** from what I've read about uh admissions **ya know** what people have said <Discussant: OVERLAP> right </OVERLAP> as they yeah **I think** they're **very different**. um **I think** undergraduate statements we **might** call them **more** a personal statement <Discussant: OVERLAP> yes, yes </OVERLAP> these statements **you know** they get called and they're labeled as a personal statement, um, but, how much of **real** personal stuff is good? **I think** it's **quite different**. (L-E11)

The presenter introduces five times her position with an utterance of dialogic expansion *I think*. The first time she is not in focus and she has not been video

recorded, but the rest of the instances the utterance co-occurs with kinesic expression. The presenter shows negative appreciation, with *very different*, towards the fact that the discussant considers the two types of statements for admission, graduate and undergraduate, the same thing. The adjective *different* is intensified with the adverb, and the utterance co-occurs with palms up moving to the sides. The gesture seems to find semantic synchrony with the verbal expression. It might be interpreted as also conveying the abstract idea of difference making the movement of one hand to one side consecutive to the movement of the other hand to the other side. The presenter introduces the second *I think* shaking head, a head movement that is maintained the entire utterance *I think from what grad statements*. The movement intensifies the negative attitude introduced with the appreciation. Then, she seems to self-protect face from threatening stating that she comes to that conclusion after what other people have said. The adverb *just* mitigates this idea. She uses dialogic expansion *you know* in the explanation, which is co-expressed with palms up moving up and head moving down and to one side. Kinesics might also be intensifying the idea of being more precise in the explanation. The presenter repeats the utterance *I think they're very different*, co-expressed again with head shakes and this time palms up moving from side to side. Although the gesture has changed, the meaning might be the same. Then, *I think* introduces another position toward the subject. The presenter raises eyebrows, looks up, and tilts head to one side. Nonetheless, the kinesic expression is maintained until the position is stated, *I think undergraduate statements we might call them more a personal statement*. Kinesics might be used to mark this new idea that shows the key difference with graduate statements. She mitigates the authorial voice with the modal verb *might* and the comparative *more* intensifies the difference between the statements. She explains this position and again uses dialogic expansion *you know* to introduce it. Finally, she makes a final reflection on personal statements with the rhetoric strategy of a question *how much of real personal stuff is good? I think it's quite different*. She gradates *personal stuff* with the adjective *real* sharpening it. Graduation co-occurs with palms down moving up and down intensifying it. The presenter

mitigates the authorial voice with *I think* to introduce negative appreciation towards this issue in *quite different*. The utterance of dialogic expansion is co-expressed with palms up moving from side to side anticipating the abstract idea of difference conveyed with the expression of attitude. In addition, verbal appreciation co-occurs with head shakes intensifying the negative position.

Finally, in CH-E10, Example 158, the discussant has detected a side reaction that appears not to be desired since in the backward question he asked about its correction. The presenter does not describe or refer to the procedure he has followed to correct this deviation, but he rationalises the side reaction going back to the research. The reason for an evasive response could be that either the presenter has not corrected the side reaction or, as proposed in the previous exchange, he does not find the question interesting and moves to other concerns more relevant for him.

(158) um **actually** the uh C-L-O minus association with C-L-O minus is **a lot of** in a high **highly** exothermic and up the uh three-hundred uh three-hundred Kelvin experimental uh i- in temperature, uh it is **almost impossible** to observe direct (association) of C-L-O minus. so we **pretty much assumed** that there's no uh_ okay **actually** if you uh inject C-L-O minus i- anion into the (xx) tube and then **just just** don't add neutral reagent and look at what happens nothing happens. uh there's no direct association with C-L-O minus. that's uh (xx) (CH-E10)

In the move the presenter shows dialogic contraction, *actually*, to describe the reaction of the association of C-L-O minus and to introduce a test that proves their assumption that there is no direct association. The second *actually*, in *actually if you*, co-occurs with separating palms down and loudness up that intensifies the adverb. The reaction is described with negative attitude conveyed by the quantification of *exothermic* with *highly* (after the self-repair of *a lot of*), that intensifies the adjective. This attitude is also expressed to describe the observation of direct association as *almost impossible*, where the negative inscribed evaluative meaning of the adjective is mitigated with the adverb. Following these observations, they *pretty much assumed* there is no direct association. The verb *assume*, as commented in the discussion of

Example 148 (CH-E9), can pose problems here and the presenter seems to be conscious of it. He cannot say they have calculated it because they have not done it but assuming something in a scientific context like this could be the source of critical judgement. Thus, he chooses to self-protect positive face from being threaten. On the one hand, he intensifies the verb with *pretty much*; on the other, he introduces, with *actually*, a test that anyone can do to support there is no direct association. The adverb *just* mitigates the difficulty of the test he is suggesting to do to prove their assumptions.

In the foregoing, findings on the analysis of the dialogic exchanges Comment + Question – Response have been discussed. Table 21 summaries all the moves identified in the eight exchanges. Results reveal that *Opening the turn* moves seems to be more common in this type of exchange. In addition, evaluative meaning is expressed with the inherent textual meaning of the moves both *announcing the question* and *reacting to the presentation or question*.

Contextualising the question and *Formulating the question* are moves that inherently express ideational meaning. Interpersonal meaning, however, although not guiding the rhetorical function of the moves mingle with the ideational meaning. There is only one exchange from Chemistry (CH-E9) where the discussant chooses not to evaluate linguistically. Alternatively, evaluation is central when *criticising the research* to state discussants' position and to express their attitude towards the research.

Evaluation plays a relevant role in the move *Responding the question*. Presenters use evaluative meaning in the *straightforward response* and other steps that follow it, and in the *roundabout response*. In addition, this move seems to be the longest in the exchange, a feature that is favourable to expresses evaluation.

	Discussant				Presenter	
	Move 1 Opening the turn	Move 2 Contextualising the question	Move 3 Making the comment	Move 4 Formulating the question	Move 1 Opening the turn	Move 2 Responding
L-E9	Announcing the question	Referring to previous experience Checking understanding of the research	-	Asking a backward question	Reacting to the question	Making a straightforward response Expanding the response
L-E10	-	Referring to previous experience	-	Asking a forward question	Reacting to the question	Making a roundabout response Reintroducing the response
L-E11	-	Referring to previous experience	-	Asking a forward question	-	Making a roundabout response
L-E12	-	Referring to previous experience	-	Asking a forward question	-	Making a straightforward response Expanding the response
CH-E9	Announcing the question	Referring to previous experience	-	Asking a backward question	-	Making a straightforward response Expanding the response Reintroducing the response
CH-E10	Announcing the question	Checking understanding of the research Referring to previous experience	-	Asking a backward question	-	Making a roundabout response
CH-E11	-	Checking understanding of the research	Criticising the research	Asking a forward question	-	Making a roundabout response
CH-E12	Reacting to the presentation	Referring to previous experience	Criticising the research	Asking a forward question	-	Making a roundabout response

Table 21. Moves in the Comment + Question – Response exchange

Previous sections have revealed interesting results about speakers' strategies for alignment and criticism as well as acknowledgement and rejection of their interlocutors' views. Evaluation has been proven to play an important role in those strategies that take into account protection of positive and negative face wants of the listeners. Findings have shown that evaluative meaning, that helps to project these politeness strategies, can be expressed not only linguistically but utterances can co-occur with non-linguistic aspects.

The next chapter concludes the study with a summary of the most relevant results, pedagogical applications of the findings in English for Academic Purposes teaching and learning contexts, the limitations I have detected in the analysis, and some suggestions for further research of possible topics that have emerged throughout the thesis.

CHAPTER 6

Conclusions

Conclusions

6.1 Concluding remarks

The objective of the present thesis was to develop a new methodology to analyse evaluation in the discussion sessions of two conference paper presentations from two disciplines, Linguistics and Chemistry. To my understanding, the study has made three major contributions. First, it has shed some light on a genre that to date has not received much attention and which, from my own experience as a junior researcher, can entail serious difficulties for presenters. Secondly, the analysis has disclosed some disciplinary tendencies of this genre in hard- and soft-sciences. Finally, I consider the most outstanding contribution of the present thesis to the studies of academic spoken research genres and to the exploration of evaluation has been the multimodal approach adopted in the study. The study has taken into account the multimodal nature of spoken discourse to explore evaluation, considering linguistic evaluation and the non-linguistic features that co-express with it. This approach has made possible the description and the interpretation of this interpersonal meaning, providing a comprehensive picture of the expression of evaluation in discussion sessions (DSs) of specialised conference paper presentations.

To meet the objective of the thesis, the theoretical framework was embedded in techniques of genre analysis (Bhatia 1993, Swales 1990) and discourse analysis, including the theoretical orientations of systemic functional linguistics (Halliday 1978, 1985a), conversation analysis (Schegloff & Sack 1973), pragmatics (Brown & Levinson 1978, 1987), and multimodal discourse analysis (Kress & van Leeuwen 2001). This framework allowed me to identify the structure of the interaction, the rhetorical moves in which the interaction is

organised to express specific communicative purposes, and finally the linguistic and multimodal expression of evaluation that articulates the rhetoric of the interaction.

Systemic functional linguistics (Sinclair et al. 1972) and conversation analysis (Sacks et al. 1974) approaches enabled me to describe the structure of the DSs. Because of the interactive nature of DSs, 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 I used to examine linguistic evaluation. This theoretical approach allowed me to identify the forms of semantic evaluation, and also the function of these utterances in the discourse. This approach was the starting point for the multimodal discourse analysis that entailed the exploration of paralanguage (Poyatos 2002) and kinesics (Bavelas et al. 1989; Kendon 1967, 2004; McNeill 1992) that co-express with linguistic evaluation. Previous works on non-linguistic features (which are based on conversation analysis techniques) were essential in order to interpret their function and relationship with speech. The interpretation of the global expression of evaluation was made from a pragmatic perspective (Brown & Levinson 1978, 1987).

Findings have proven that the great demands, of time and effort, that multimodal analysis entails was worth while. This type of research enabled me to interpret evaluation from a broader perspective, and possibly closer to reality, showing the significant role that paralinguistic and kinesic features play in the expression of evaluation in DSs, an information that to date has virtually been underestimated by academic spoken discourse studies, to my knowledge the only work that considers the co-expression of gestures with semantic evaluation is Hood and Forey's (2005) study.

Regarding the experimental framework, corpus linguistic techniques allowed me to make feasible the application of this methodology. On the one hand, I used computer techniques for automated analytical procedures; on the other hand, qualitative techniques ruled the interpretation of the corpora (Biber et al. 1998). More precisely, I collected the video corpus, and took part in the process of transcription; then, I annotated it. Because of the multimodal approach of the analysis, I used a multilayer annotation tool which allowed me to time synchronise transcriptions (orthographic (verbatim transcription), paralinguistic, and kinesic) and annotations (generic moves and semantic evaluation). Without this tool, it would not have been possible to analyse evaluation at the comprehensive multimodal level as was done in this study. Nonetheless, a qualitative interpretation of the data was necessary to foreground the salient features that define evaluation in DSs of hard- and soft-sciences conference paper presentations (CPs).

To summarise the most important findings of the analysis, I step back now to the three research questions postulated in Chapter 4 which have guided the study undertaken in the present thesis.

The first research question focused on the organisation of interaction in the DSs, and the similarities and differences in Linguistics and Chemistry CPs. This analysis involved the examination of the flow of the DSs, the types of turns and the participants, the sequence of the dialogue, and the structure of the exchanges; that is, the macrostructure. Findings have shown that, contrary to the synoptic view of Ventola (2002), the flow of DSs is a complex social construct where participants accomplish two primary functions, the so called metadiscoursal turns and discoursal turns. In addition, although the main roles of speakers are clearly defined, they can take other responsibilities. These digressions seem to find a reason in the relationship that exists among the participants. This influential factor has not been considered in the analysis, however, it could be predicted that the closer the relation the higher are the probabilities of finding digressions, commonly by discussants and presenters

that take chairs' metadiscoursal turns. Moreover, episodes of overlapping have also been considered in the flow of DSs because of the discoursal function they play in the dialogue.

As expected, in both disciplines, discoursal turns are more frequent than metadiscoursal ones. Additionally, discussants are only a bit more participative than presenters. However, participation has been measured as number of turns taken. Thus, the explanation for this dissimilarity, that is recurrent in both disciplines, can be that not all the comments made by discussants receive a verbal response. These non-verbal responses were not in the scope of the study; yet, they prove the meaningful role of kinesics, since in these instances they substitute a whole response. There seems to be also similarities in the types of turns taken by discussants. They commonly make comments in both disciplines; nonetheless, in Linguistics they ask more questions. Additionally, results have also shown the complexity of the dialogic exchange, which rather than following an adjacency-pair sequence (comment/ question – response) (Schegloff & Sacks 1973), occurs in two turns or in more than two turns, where participants take follow-up turns. However, the preference in both disciplines is for two-turn exchanges. As for their structure, only three recurrent patterns have been identified in the corpus (comment – comment, question – response, and comment plus question – response). Participants appear to follow the maxim of relation (Grice 1975) and be relevant avoiding taking a new turn when it is not necessary. Conversely, more-than-two-turn exchanges appear to be more frequently chosen in Linguistics. We can conclude that, although similar in the flow of the discussion, there seems Linguistics discussants are more inquiring and they tend to make longer dialogues. This could be explained on the more interpretative nature of soft-sciences knowledge that would lead to “work harder” to establish an understanding with the interlocutor (Hyland 2000, 2004).

The second research question sought to give answer to the core issue of the thesis, the expression of evaluation in discussion sessions. The interpersonal

meaning has been examined at two levels, the semantic evaluative meaning and its multimodal expression. Regarding linguistic evaluation, the exploration followed an abridged version of the appraisal model postulated by Martin and White (2005), with the identification of the three categories that articulates it and their subcategories. However, the model needed to be adapted to the analysis of evaluation in DSs. Because the original model was designed for the analysis of written texts, I found necessary to create a new attitudinal subcategory to consider acknowledgment (an inherent feature of interactive communication), together with affect, judgement, and appreciation. Another amend to the model was the distinction between intensification and mitigation, apart from quantification, as types of force in the category of graduation (after Crawford 2009). This theoretical framework allowed me to describe not only the linguistic evaluation of DSs, but also to shed some light on disciplinary similarities and differences of this interpersonal meaning.

Findings revealed certain disciplinary tendencies that can be explained on the basis of Hyland's interpretation of evaluation in soft- and hard-sciences in written texts (2000, 2004). He observes that hard-science knowledge emerges in a more linear way, and therefore the community of use is more familiar with previous research. Consequently, this reduces the need of explicit evaluation, that is, of the use of attitudinal stance as results in the present study have revealed. The high use of graduation detected in Chemistry could be a strategy to express evaluation, since there seems to be disciplinary constrains that prevent participants from showing their attitudes openly. Conversely, the familiarity with previous investigation could also explain the lowest use of questions, the critical attitude of discussants, and the tendency to express presenters' position toward discussants' comments and questions. On the other hand, the interpretative knowledge of soft-sciences could explain the differences found in Linguistics, where more questions are asked, discussants avoid criticism, and presenters tend to avoid positioning. Nonetheless, similarities in both disciplines have been found in presenters' behaviour since, in general, when positioning they reject discussants' observations. This

reaction shows presenters are not willing to back down but they reassert their positions and their research. As noted in the description of the corpora in Chapter 4, most of the participants in both conferences were senior researchers. I wonder about the influence of this personal feature in the reaction described above, and thus, whether junior presenters' reaction would be the same or not. The comparison of DSs for these two types of researchers could be a topic for further research.

The second part of the exploration has confirmed the hypothesis that the expression of evaluation in discussion sessions is multimodal in nature in 61% of the instances. This revealing finding is based on the analysis of the paralinguistic and kinesic features that co-occur with semantic evaluation. Linguistic evaluation generally co-expresses with kinesics and particularly with gestures and head movements. Presenters in Chemistry seem to prefer gestures, and movements of head are more common in Linguistics. In addition, although combinations of two and more than two kinesic features appear in the corpus, co-occurrence with semantics is commonly done with one single feature. It seems that kinesics also seek for simplicity to be relevant. Another interesting issue brought to the fore in the analysis is that multimodality generally appears with the expression of attitude, namely at the core of the evaluation. This proves the significant role that non-linguistic features have in the expression of evaluative meaning. The most significant aspect considered in the exploration of multimodality is the function that non-linguistic features has in the expression of evaluation. In this respect, results have shown that both paralinguistic and kinesic features in general attain a pragmatic function not only to intensify but also to express the speakers' attitude.

Finally, in the third research question multimodal expression of evaluation was examined in relation to the generic structure of the dialogic exchanges. The hypothesis that interpersonal evaluative meaning governs the microstructure of these exchanges was confirmed. In addition the analysis has brought to the fore the rhetoric moves that underlie the three exchange patterns identified in the

corpus, showing obligatory moves and non-obligatory moves the speaker might accomplish. Thus, in the generic structure of the exchange pattern comment – comment, discussants have to contextualise and make the comment, and presenters have to reply to the comment (there are three optional moves). In the exchange question – response, obviously discussants have to formulate the question and presenters have to respond to it (there are five optional moves). And in the exchange pattern comment + question – response, discussants contextualise the comment and formulate the question, and presenters respond to the question (there are three optional moves). A recurrent optional move in the three patterns is opening the move, which clearly has a primary textual metafunction. Finally, no significant disciplinary differences have been detected in the generic structure of the dialogic exchanges.

In addition, the pragmatic approach enabled me to give an interpretation of findings from the most interpersonal side. Accordingly, certain aspects of participants' behaviour find an explanation in politeness (Brown & Levinson 1978, 1987). Presenters and discussants use positive politeness strategies to show alignment with their dyads and to praise their work; in a nutshell, to make their listeners feel good and that their values are shared. They use positive attitudinal meaning to express positive politeness, which is co-expressed with the phonetic stress of the utterance and kinesic features like eye contact, head nods, smile, and some metaphoric gestures. Conversely, participants use negative politeness strategies towards the face wants of their interlocutors to position as odd with them. Furthermore, there is a close connection between negative politeness strategies and participants' protection of positive face from an FTA. Presenters generally self-protect positive face to reply to discussants' criticism in an attempt to have their values approved. Additionally, presenters and discussants protect their dyads' positive face when they express negative attitude towards what their interlocutors have said. The linguistic evaluative meaning generally used is mitigation of the authorial voice, that is, the use of utterances of dialogic expansion. Semantic evaluation commonly co-occurs with aversion of eyes, laugh and smile and serious face,

head nods and tilt to one side, and different gestures in pragmatic synchrony with the utterance to express the politeness strategy. Although mitigation of the authorial voice is the most frequent way to project speakers' position, in Chemistry participants are consistent with their tendency to show critical attitude (discussants) and to express their positions towards their interlocutors' interventions (presenters), and also take full responsibility of their propositions. This interpretation, however, would be biased if considering exclusively findings on linguistic evaluation.

Other pragmatic aspects that helped me to understand this interpersonal meaning are presuppositions (Green 1989) and indirectness (Austin 1962; Searle 1969, 1971). These could be considered two of the most difficult aspects of the interaction in DSs. Discussants can make comments and ask questions and presuppose certain information that is taken for granted. Although this has not posed any problem in the exchanges analysed in this study, I consider that for novice presenters presuppositions could be a problem, because if they do not know about the essentials of the backgrounds that comments and questions are drawn from, it would be difficult for them to give an immediate and appropriate response. Additionally, presenters and discussants can express their intentions in an indirect way. For example, there are instances in the corpus of questions, comments, and suggestions that can be interpreted as indirect criticisms. The response to these criticisms would differ depending on whether presenters get their hidden meaning or not. Yet, according to findings, the most common responses would be: presenters can ignore criticism (consciously or not), as it has not been an open attack to their values no reaction in this respect is expected; or they can choose to use a negative politeness strategy to position them as odd with their interlocutors. Nonetheless, indirectness, as presuppositions, can pose problems for inexperienced presenters who might not understand discussants' intentions.

In conclusion, the present study has revealed interesting findings in the cross-disciplinary study of the interpersonal meaning of evaluation in DSs.

Nonetheless, the most significant contribution of this thesis has been the multimodal approach adopted. I consider it might have a repercussion on academic spoken discourse analysis, where traditionally the focus of the study has been limited to verbatim transcriptions; on corpus linguistics with the use of multilayer annotation tools to time synchronise audio and video with transcriptions and annotations; on pragmatics, which only lately has considered the exploration of real texts; and finally on multimodal analysis research, where I have opened the narrow study of conversation analysis to the study to research academic genres.

6.2 Pedagogical applications

Everyday researchers face the academic truth that to be accepted in the European and international scientific community, they need to interact in English. This language has a crucial role in the dissemination of the scientific knowledge. In addition, the means most widely used to spread breakthroughs in any field of research are books and journals (as written genres) and conference paper presentations (as spoken genres). In this context, many inexperienced researchers, doctoral students and junior researchers, have to face up the difficulties that the dialogic communicative situation of DSs can entail for them, as described in the introduction to the thesis. These are native and non-native speakers of English that aspire to defend their modest contributions in a bizarre forum; in front of an audience about whom they know neither their academic status nor their expertise in the field of research, or what their reaction is going to be (whether they are going to find it interesting or not, or whether they are going to criticise their work or not). The situation can cause a degree of anxiety, or at least it may increase the insecurity in these novice presenters, is not convenient to face the discussion properly.

The results of this study, therefore, can find application in English for Academic Purposes courses that focus on communicative skills. The thesis has confirmed the outstanding role of evaluation in DSs, where semantic and non-linguistic resources articulate the interaction between the participants. In addition, the study has also described the macrostructure of the discussion and the generic structure of the dialogic exchanges. These findings can be useful to train novice practitioners, to give them insights about an unrehearsed communicative situation to be able to, somehow, make it more predictable. In addition, the multimodal transcription and annotation of the corpus, can also be used in the classroom to show the students real instances of the communicative situation. Thanks to the software used, it is now possible to provide multimodal examples at the structural level (moves) and of the expression of evaluation.

Another application of the findings could be the design of teaching materials. The lack of pedagogical materials available based on research has been one of the motivations to conduct the study. To date, there are only one work that devotes a few activities to discussion sessions and that is multimodal corpus-based, Ruiz-Madrid and Querol-Julián's (2008) online activities. My position in the design of pedagogical materials for teaching and learning academic spoken English is consistent with the multimodal approach adopted in the study (Querol-Julián & Ruiz-Madrid 2010), which has given evidence of the role of multimodality in the expression of evaluation.

6.3 Limitations of the study and suggestion for further research

The study was based on two small specialised corpora. The size of the corpus was determined by the approach adopted in the analysis, the multi-layered exploration of the utterances of evaluation and the co-expression with kinesics and paralanguage. The aim was to describe full expression of evaluation which demands exhaustive and global interpretation of the multimodal data no viable

in large corpora. Accordingly, the findings of this study cannot be broadly generalised; they can, however, be a reference source for similar studies.

Additionally, some problems in the collection of the corpus have also been determining in the limitations of the study. The collection of corpus entails some difficulties that should be taken into account when compiling video data for multimodal exploration. First, negotiation with organisers of the event is particularly important not only to get general permission to record the event and individual consent of the participants, but also to have the best conditions, light and camera/s location, to get the highest quality of the data. On the other hand, it is essential to have the subject of the recording all the time in focus. In the case of video recording a dialogic event, it would be advisable to use more than one camera to tape speakers and listeners at the same time. Only in this way, we will be able to register the entire communicative event, which would allow us to expand the scope of the analysis and what is more important to better understand it.

Given the findings of this study, efforts for further research could be addressed in several directions. A major step could be taken on the quantitative confirmation of the disciplinary differences revealed in this study. This would put the research in the position of making generalisations. Thus, a greater variety of disciplines of soft- and hard-sciences than Linguistics and Chemistry would be necessary to examine. My humble contribution is just a preliminary study that introduces a new approach to shed some light, and open a new line of research, on the exploration of evaluation of spoken academic discourse from a multimodal perspective. Furthermore, I consider that one of the most relevant suggestions that can be made is to expand the use of the multimodal studies for the analysis of discourse from different perspectives, including pragmatics where it is highly valuable.

Other suggestions for further research that could be considered more feasible in the short run on a smaller scale, and that have been directly or indirectly

mentioned in the study, are the full exploration of the non-linguistic aspects that emerge in the discourse that would make up a more complete picture of how evaluation is performed in DSs with the three modes, that is, semantic evaluation, paralinguistic evaluation, kinesic evaluation, and multimodal evaluation. Secondly, it would be enlightening to expand the scope of the study to consider both participants in the interaction, to see how the discussants react to the presenters' evaluation and reactions. This type of research could shed some light on the interactive nature of the communicative situation of the DSs to bring to the fore the influence of evaluation on the interlocutors' discourse. Thirdly, in this study a prosodic approach has been taken to interpret evaluative meaning in the dialogic exchange, rather than examining discrete utterances. However, it would be interesting to go beyond the exchange and consider the prosodic of the whole discussion held with each presenter. Since I have observed that there seem to be connections between exchanges, I do not refer only to related content but to the evaluative influence that one dialogue may have on the other. This makes the picture more complex, but it is my impression that in a high interactive communicative situation like this one, things do not occur in isolation but they have consequences on the immediate context. This reflection brings me to the last suggestion. Another type of research that could be done on these grounds would be an ethnographic study to foreground other factors that might influence the evaluative choices taken by the participants, rather than the others' interventions and the discipline, as explored in the thesis. I would consider cultural and personal features and the relationship between the participants.

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Appendices

APPENDIX C

Observation Guide Sheet

ID CODE:		
REEL REF.:		
OBSERVATION DATE:		
GENRE:		
<input type="checkbox"/> Lecture	<input type="checkbox"/> Paper presentation	<input type="checkbox"/> Plenary lecture
<input type="checkbox"/> Seminar	<input type="checkbox"/> Other:	
OBSERVER:		
RECORDING:	<input type="checkbox"/> Audio	<input type="checkbox"/> Audio & video

1. THE ACADEMIC EVENT

Type of event:

2. THE COMMUNICATIVE ACT

Title:

Type of subject (only for lectures):

Degree and year (only for lectures):

Field of knowledge:

- Humanity and Social Sciences
 Law and Economics Sciences
 Technology and Experimental Sciences

Language: English Spanish Other:

Start (h:min): Total (min):

Order in the program:

3. THE SPEAKER

Academic status: Doctoral student Teacher Other:

Nationality:

Mother tongue: English Spanish Other:

Age: 25-30 31-35 36-40 41-45 46-50 51-55 56-60 > 60

Sex: Male Female

4. THE ROOM

Place:

- Lecture room Laboratory Main lecture hall/theatre Seminar room
 Other:

Sketch on the table the distribution of participants, recording devices, furniture and props	<u>Participants</u> Speaker/s Audience (identify Male or Female) Chair	<u>Recording devices</u> Video recorder Sound recorder Microphone
	<u>Furniture & props</u> Speaker's chair and table Window/s Door/s	White/black board Computer OHP Screen etc

APPENDIX D

Transcription conventions

Meaning/description	Symbol
Speaker ID	
Speaker IDs, assigned in the order they first speak.	S1: at the beginning of each turn or interruption/backchannel.
Unknown speaker, without and with gender identified	SU: SU-f, SU-m
Probable but not definite identity of speaker	SU-1:
Two or more speakers, in unison (used mostly for laughter)	SS:
Pauses	
Pauses of 4 seconds or longer are timed to the nearest second.	<P: 05>
Comma indicates a brief (1-2 second) mid-utterance pause with non-phrase-final intonation contour.	,
Period indicates a brief pause accompanied by an utterance final (falling) intonation contour; not used in a syntactic sense to indicate complete sentences.	.
Ellipses indicate a pause of 2-3 seconds	...
Overlaps	
This tag encloses speech that is spoken simultaneously, either at the ends and beginnings of turns, or as interruptions or backchannel cues in the middle of one speaker's turn. All overlaps are approximate and shown to the nearest word; a word is generally not split by an overlap tag.	<OVERLAP>...</OVERLAP>
Laughter	
All laughter is marked. Speaker ID not marked if current speaker laughs.	<LAUGH>, <S8 LAUGH> <SS LAUGH>, etc.
Reading passages	
Used when part of an utterance is read verbatim.	<READING>....</READING>
Uncertain or unintelligible speech	
Two x's in parentheses indicate one or more words that are completely unintelligible.	e.g. i don't (xx) whole (xx) analysis it just struck me...
Words surrounded by parentheses indicate the transcription is uncertain.	e.g. lemme not write it that way (lest it be confused) with C syntax...
False starts	
False starts indicated by a trailing underscore character.	so there will be_ watch this okay
Unfinished words	
A syllable followed by double slash indicates the word is not fully pronounced	e.g. <i>sh//</i> rather than <i>she</i>

APPENDIX E

Linguistic evaluation

Utterances of attitudinal meaning¹

Appreciation

	Linguistics	Chemistry
Discussant	Positive appreciation you can say the same thing (L-E1, Ex. 58) but there's still that local element too (L-E4, Ex. 54) good formed consciousness (L-E9, Ex. 126) <i>they call</i> deep learning, that is, beyond the vocabulary of ESP (L-E10, Ex. 122) these different types (L-E12, Ex. 138) <Discussant: OVERLAP> it's interesting </OVERLAP> (L-E12, Ex. 147)	and that's all (CH-E2, Ex. 63) the one that's easy (CH-E12, Ex. 120) the big effect (CH-E12, Ex. 121)
	Intensification + positive appreciation you can say <i>the same</i> thing in a (xx) paper very well , (L-E1, Ex. 58) what you're doing is very nice , examination (L-E4, Ex. 54) you've got a very good book (L-E4, Ex. 62)	we we studied the (xx) uh stability and extremely independent of the model (CH-E1, Ex. 51)
	Mitigation + positive appreciation -	<i>I would</i> expect in such case, quite large , kinetic isotope effects (CH-E11, Ex. 129)
	Intensification + positive appreciation + intensification -	a much better (decay) (CH-E12, Ex. 130)
	Intensification + positive appreciation + quantification <i>essentially original little</i> heartland of product (L-E4, Ex. 54)	-
	Quantification + positive appreciation + intensification -	-
	Negative appreciation <i>good</i> formed consciousness and the bad ones (L-E9, Ex. 126) and sh//, </U> anyway II (L-E11, Ex. 123)	they <i>certainly</i> are dissolute about wasting time (CH-E3, Ex. 61) how do you correct for this (CH-E10, Ex. 133)
	Intensification + negative appreciation <Discussant: OVERLAP> yeah, <i>I think</i> it's very unfair (xx) </OVERLAP> (L-E10, Ex. 140) this is a big controversy , (L-E8, Ex. 88) the more uptake, the less likely they were to be accepted (L-E3, Ex. 59)	they have to wait 'till I can get in, (CH-E3, Ex. 61)

¹ The evaluative utterance has been marked in bold letters. When other evaluative meaning is expressed in the example italics are used.

	Mitigation + negative appreciation it's just one failing , (L-E1, Ex. 58)	the apparent discrepancy with crystal structures (CH-E6, Ex. 91)
	Negative appreciation + intensification -	the <i>overall</i> reaction go slower than uh <Presenter: OVERLAP> so </OVERLAP> it <i>might</i> have (CH-E10, Ex. 61) you have to go to highest convergence (CH-E10, Ex. 127)
	Intensification + negative appreciation + intensification -	three kcal or even higher (CH-E1, Ex. 55)
	Quantification + negative appreciation + intensification -	there is something hidden inside (CH-E1, Ex. 60)
Presenter	Positive appreciation it's interesting <i>though</i> (L-E1, Ex. 73) you raise a good issue (L-E1, Ex. 74) good ideas (L-E1, Ex. 79) <i>oh</i> you are okay (L-E4, Ex. 66) what was interesting (L-E6, Ex. 99) a normally obligatory move (L-E7, Ex. 105) Cornell website is rich with this <i>sort of</i> thing (L-E8, Ex. 108) a new term (L-E8, Ex. 106) it's <i>it's</i> not unrelated to this movement (L-E9, Ex. 143) that's a great question (L-E9, Ex. 139) a little story (L-E10, Ex. 153)	that's that's good (CH-E2, Ex. 72, p) semantics are important (CH-E2, Ex. 72) a high eh convergence criteria (CH-E4, Ex. 82) the same number (CH-E8, Ex. 102) a centered hydrogen (CH-E6, Ex. 97) that's an interesting issue (CH-E7, Ex. 104) there's no uh, no drastic charge disposal (CH-E7, Ex. 104) the charge distributions <i>does look</i> uh typical (CH-E7, Ex. 104) this is a good question (CH-E8, Ex. 93) good question (CH-E8, Ex. 113) that turns out to be (CH-E8, Ex. 102) <i>I I don't think</i> it's small (CH-E11, Ex. 151)
	Positive appreciation + positive appreciation it's inspirational gimmicky lines (L-E1, Ex. 78)	-
	Intensification + positive appreciation handout, <i>_is</i> very informative (L-E2, Ex. 75) it's very serious (L-E2, Ex. 75) more broad uh statements (L-E1, Ex. 78)	it's very interesting to see (CH-8, Ex. 103) there is a very small isotope effect (CH-E9, Ex. 149) that raises a very good question (CH-E5, Ex. 108) essentially it's the same (CH-E4, Ex. 82) the bound ligands that, uh <i>seems to be</i> more favorable for (CH-E5, Ex. 109)
	Mitigation + positive appreciation -	the charges_ distributions is just normal (CH-E7, Ex. 104) that's uh quite interesting (CH-E9, Ex. 104) the (tunneling) effect is quite important (CH-E11, Ex. 151) <i>actually</i> i it it's quite large , (CH-E4, Ex. 82)
	Positive appreciation + intensification the individual responsibility being greater (L-E1, Ex. 74)	there therefore would've been a greater selection of pressure (CH-E5, Ex. 110)

self consciousness might be better descriptions (L-E9, Ex. 144)	
Sharpening + positive appreciation -	is a truly c-centered hydrogen deuterium (CH-E6, Ex. 97) they are truly centered (CH-E6, Ex. 97)
Positive appreciation + intensification + intensification -	is not too greatly different than (CH-E3, Ex. 81)
Intensification + positive appreciation + intensification -	much stronger interaction (CH-E8, Ex. 103) it fits much better (CH-E6, Ex. 97)
Quantification (mitigation) + positive appreciation + intensification -	about ten fold slower (CH-E3, Ex. 81)
Mitigation + mitigation + positive appreciation + intensification -	a little bit slower than (CH-E3, Ex. 69)
Negative appreciation business is in trouble (L-E1, Ex. 79) busy weeks (L-E4, Ex. 80) a bad experience (L-E6, Ex. 100) the multimodality requires (L-E8, Ex. 106) this brief footage (L-E8, Ex. 106) it's gonna be different (L-E8, Ex. 106) controversies in ornithology (L-E8, Ex. 107) <i>I don't think</i> unconscious competence is a problem (L-E9, Ex. 142) there <i>can</i> be anxiety (L-E9, Ex. 104) the wrong kind of unconsciousness (L-E9, Ex. 144) I'll have a week to think about it won't I (L-E10, Ex. 140)	a slow step (CH-E5, Ex. 110) the default is (CH-E8, Ex. 112)
Intensification + negative appreciation ESP is taught very strangely (L-E10, Ex. 153) your uh statements are very different (L-E11, Ex. 157) they are very different <i>in my understanding</i> of them (L-E9, Ex. 141) <i>I think</i> they're very different . (L-E11, Ex. 157) I've <i>tried</i> using this <Discussant: OVERLAP> uh </OVERLAP> before with totally unrelated subject, (L-E10, Ex. 140) it's too soon to tell (L-E8, Ex. 107)	which is so different . uh for intra-intramolecular (xx) (CH-E11, Ex. 151) method that <i>clearly</i> has significant problems (CH-E1, Ex. 76)
Mitigation + negative appreciation they can give discredit (L-E12, Ex. 147) it's quite different (L-E11, Ex. 157) it's_ quite interpretive (L-E8, Ex. 106)	it is almost impossible to observe (CH-E10, Ex. 158)
Negative appreciation + intensification and write longer editorials. (L-E12, Ex. 147) they don't give any credit, (L-E12, Ex. 147) it's not just uptake from the program description (L-E3, Ex. 77)	-
Negative appreciation + mitigation it's not going to mean , (L-E9, Ex. 145)	-
Sharpening + negative appreciation	

a global competitive environment, (L-E1, Ex. 79) the source of this particular controversy , (L-E8, Ex. 106)	-
Mitigation + mitigation + negative appreciation -	is just barely less stable (CH-E3, Ex. 81)
Softening + negative appreciation + intensification which kinda gives the game away immediately (L-E3, Ex. 77)	-

Judgement

	Linguistics	Chemistry
Discussant	Positive judgement + positive judgement -	I can support that we we studied (CH-E1, Ex.51)
	Positive judgement + intensification -	if I understood correctly you are watching (CH-E10, Ex. 127)
	Mitigation + positive judgement can can you confirm that (L-E5, Ex. 84)	-
	Softening + positive judgement you've sort of, managed to capture (L-E4, Ex. 54)	-
	Expansion + positive judgement -	I would expect in such case, (CH-E11, Ex. 129) here one would expect , one would expect that (CH-E11, Ex. 129)
	Negative judgement one of the things she complained about (L-E11, Ex. 123)	since we are criticizing P-C-M model (CH-E1, Ex. 51)
	Intensification + negative judgement when you do things too deliberately (L-E9, Ex. 126)	-
	Negative judgement + intensification + intensification -	is not really well understood (CH-E2, Ex. 60)
Presenter	Positive judgement they can get <i>as good as they want</i> (L-E9, Ex. 145) but I can (L-E10, Ex. 140) it's when you're trying to help people (L-E9, Ex. 142) I've tried using this (L-E10, Ex. 140) I've <i>actually</i> used, um, trying to get my students (L-E10, Ex. 153) I try to make them geologists (L-E10, Ex. 153)	we can get these kinds of inhibitors (CH-E8, Ex. 102) you can compare with what when you expect (CH-E6, Ex. 97) it's a reasonable thing to do (CH-E1, Ex. 76) there's been <i>some</i> numerical modeling of the kinetics of the cholinesterases recently (CH-E5, Ex. 110) as we agreed this morning (CH-E12, Ex. 52)
	Intensification + positive judgement they <i>can</i> get as good as they want (L-E9, Ex. 145)	we <i>just</i> redoing those experiments. (L-E8, Ex. 102)
	Positive judgement + intensification -	we can also do the experiment (CH-E8, Ex. 102)

Negative judgement	
it's <i>not going to</i> mean, they can take that back (L-E9, Ex. 145)	we've been trying to do that (CH-E8, Ex. 101)
you won't believe this but (L-E4, Ex. 80)	I forgot to mention (CH-E4, Ex. 82)
you got to get more out of your people (L-E1, Ex. 79)	it wasn't a reasonable thing to do (CH-E1, Ex. 76)
they expect they're expected to do so. (L-E12, Ex. 147)	
you need to be able to dip down and articulate and be able to describe the procedure (L-E9, Ex. 142)	
they need to be to become (L-E9, Ex. 145)	
Negative judgement + negative judgement	
-	I don't understand yet (CH E6, Ex. 111)
Intensification + negative judgement	
you still don't see quantification (L-E1, Ex. 73)	-
Negative judgement + mitigation	
-	I <i>don't think</i> we can say yet . (CH E5, Ex. 109)
Mitigation + negative judgement	
he just can't make it up, (L-E6, Ex. 99)	-
Negative judgement + quantification (intensification)	
he didn't understand a thing (L-E6, Ex. 99)	-
Contraction + negative judgement	
he certainly did not know (L-E6, Ex. 99)	

Affect

	Linguistics	Chemistry
Discussant	Positive affect	
	it strikes me that (L-E4, Ex. 49) I wanted to ask (L-E9, Ex. 116)	there's one one aspect that <i>surprises</i> me and one that doesn't (CH-E12, Ex. 117) I'd be curious what it looks like. (CH-E12, Ex. 130)
	Positive affect + mitigation	
	I want I'm tempted to call it a genre chain, (L-E8, Ex. 106)	-
Presenter	Negative affect	
	I'm feeling schizophrenic (L-E10, Ex. 122) no? (L-E12, Ex. 146)	there's one one aspect that surprises me (CH-E12, Ex. 117)
	Positive affect	
	oh you are <i>okay</i> (L-E4, Ex. 66) the <i>original</i> four step model which I <i>still</i> have a fondness for (L-E7, Ex. 105) I want I'm <i>tempted</i> to call it a genre chain (L-E8, Ex. 106) they <i>can</i> get <i>as good as</i> they want at presenting (L-E9, Ex. 145) is any one taping this please? (L-E4, Ex. 66)	if you want to do calculations of this type (CH-E1, Ex. 72)
Negative affect		
	it's fifty degrees_ uh I'm sorry , fifty degrees	and I'm afraid I got a re_ (CH-E7, Ex. 112)

Celsius, sorry , thinking in Celsius these days (L-E10, Ex. 154)	
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Acknowledgement

	Linguistics	Chemistry
Discussant	Acknowledgement <Discussant: OVERLAP> yeah </OVERLAP> (L-E12, Ex. 147)	-
	Acknowledgement + intensification <Discussant: OVERLAP> yeah exactly </OVERLAP> (L-E3, Ex. 77)	-
	Softening + acknowledgement for example yes (L-E7, Ex. 105)	-
Presenter	Acknowledgement <Presenter: OVERLAP> yeah </OVERLAP> (L-E1, Ex. 58), (L-E3, Ex. 59) <OVERLAP> I yeah and <i>I think that I mean</i> </OVERLAP> (L-E3, Ex. 67) yes handout, <i>_is very_ informative but</i> (L-E2, Ex. 75) <Presenter: OVERLAP> yes </OVERLAP> (L-E9, Ex. 126)	<Presenter: OVERLAP> yeah </OVERLAP> (CH-E12, Ex. 130) <Presenter: OVERLAP> that's what I did. yeah. yeah </OVERLAP> (CH-E12, Ex. 130) <Presenter: OVERLAP> yes </OVERLAP> (CH-E3, Ex. 61) <OVERLAP> yes sir </OVERLAP> (CH-E3, Ex. 61) <Presenter: OVERLAP> right. </OVERLAP> (CH-E2, Ex. 63)
	Acknowledgement + quantification (mitigation) <i>I think I I I think you are</i> right to a certain degree. (L-E3, Ex. 67)	-

Utterances of engagement values

Contraction

	Linguistics	Chemistry
Discussant	Contraction that <i>seems not so much like</i> an education of the company's <i>failing</i> but <i>just</i> , what organizations are looking for (L-E1, Ex. 58) this relates to the fact that <i>certain</i> steps (L-E7, Ex. 87) who had actually <i>more or less</i> copied from the the statements (L-E3, Ex. 59) where in fact , undergraduate personal statements (L-E11, Ex. 123)	there are six parameters that are <i>explicitly</i> and <i>totally</i> defined the the solvent but when you put (CH-E1, Ex. 55) but they <i>certainly</i> are dissolute (CH-E3, Ex. 61) <i>I'd be curious</i> what it looks like. but <i>I think</i> it <i>may</i> (CH-E12, Ex. 130) yes indeed the stretching force constant increases but the <i>big</i> effect is (CH-E12, Ex. 121)

		a reflection of the fact that the crystal structure (CH-E6, Ex. 91) they certainly are dissolute (CH-E3, Ex. 61) that, binds certainly a species (CH-E8, Ex. 90) no these are from complexes (CH-E4, Ex. 70)
	Contraction + intensification no never I have heard, (L-E5, Ex. 97)	-
Presenter	Contraction it's <i>not just</i> it depends it's <i>not just</i> uptake from the program description, but how sophisticated you are (L-E3, Ex. 77) which <i>kinda gives the game away immediately</i> but then you have others (L-E3, Ex. 77) but you raise a <i>good</i> issue about (L-E1, Ex. 74) handout, <i>_is very_ informative</i> but it's <i>very serious</i> (for everyday) (L-E2, Ex. 75) and, certainly <i>very few</i> people teach it the way I do (L-E10, Ex. 153) it's <i>interesting</i> though , <i>_by_</i> and large you <i>still don't see</i> (L-E1, Ex. 53) no (L-E4, Ex. 71) no (L-E6, Ex. 85) and then of course get up at four in the morning, (L-E4, Ex. 80) of course , editorials, like reviews are not uh not counted (L-E12, Ex. 147) one obligatory section of the text must be about (L-E11, Ex. 123) it raises the question should raise the question (L-E7, Ex. 105) I I should say that <i>I don't think</i> unconscious competence (L-E9, Ex. 142) but actually show that they have (L-E6, Ex. 77) I actually have thought about it (L-E10, Ex. 140) so I've actually used, (L-E10, Ex. 153) so I've actually thought about it. (L-E10, Ex. 153) that language for specific purposes actually is attached to cultural values (L-E10, Ex. 153)	we calculated binding well not binding but calculated (CH-E4, Ex. 82) variation with nucleophile leading group, or indeed variation with (CH-E12, Ex. 152) in fact we've been we've been <i>trying</i> to do that (CH-E8, Ex. 101) what's in Gaussian is <i>one thing</i> but I I've uh been (CH-E1, Ex. 68) you see inverse effects because that's dominated by C-H stretching. but when you look at (CH-E12, Ex. 152) when things bind <i>very</i> tightly of course they pull on and don't come off (CH-E8, Ex. 101) a <i>very widely</i> used method that clearly has <i>significant problems</i> (CH-E1, Ex. 76) there must be, <i>some kind of</i> allosteric information (CH-E3, Ex. 81) but well actually i it it's <i>quite large</i> , (CH-E4, Ex. 82) what this this <i>brief</i> footage actually means (CH-E8, Ex. 106) and then actually the tran- after transition state the charge has been transferred (CH-E7, Ex. 104) there are actually are ways to do that. (CH-E8, Ex. 101) okay actually if you uh in- inject C-L-O minus (CH-E10, Ex. 158)
	Contraction + intensification it's not just (L-E3, Ex. 77) it's not just uptake (L-E3, Ex. 77)	-

Expansion

	Linguistics	Chemistry
Discussant	Expansion I think you can say <i>the same</i> thing in (L-E1, Ex. 58) so I think you've got a <i>very good</i> book (L-E4, Ex. 62)	I think it was said to (CH-E2, Ex. 49) I think there are three different senses (CH-E2, Ex. 63) <i>but I think</i> it <i>may may</i> shed <i>some</i> light (CH-E12, Ex. 130)

<p><Discussant: OVERLAP> yeah, I think it's <i>very unfair</i> (xx) </OVERLAP> (L-E10, Ex. 140)</p> <p>to me, that <i>seems not so much like</i> (L-E1, Ex. 58)</p> <p>some of them <i>might you know</i>, there <i>might</i> be (L-E12, Ex. 138)</p> <p>they base everything (has to) ya know (you quantify this) (L-E1, Ex. 58)</p> <p>that people would remember you ya know on the bus going home (L-E2, Ex. 64)</p> <p>I wonder if they are trained (L-E11, Ex. 137)</p> <p>I wonder if the special uh issue editors (L-E12, Ex. 138)</p> <p>she said ev// she's <i>so tired</i> (L-E11, Ex. 123)</p> <p>I was told that (L-E2, Ex. 64)</p> <p>what they call deep learning, (L-E9, Ex. 122)</p> <p>this is perhaps (xx) (I'm feeling <i>schizophrenic</i>) (L-E10, Ex. 122)</p> <p><i>to me</i>, that seems not so much like (L-E1, Ex. 58)</p> <p>you seem to make a distinction between (L-E9, Ex. 126)</p> <p>what are two forms that you would use with (L-E10, Ex. 135)</p> <p>what would you say? (L-E10, Ex. 136)</p> <p>there might be (L-E12, Ex. 118)</p> <p>some of them might you know, there might be (L-E12, Ex. 138)</p> <p>they can look at other kinds of issues (L-E11, Ex. 123)</p>	<p>we think we got question (CH-E9, Ex. 114) and I suppose the serine cholerest-cholinesterase haven't been subject to (CH-E3, Ex. 53)</p> <p>and I guess that the the experiments are performed (CH-E11, Ex. 123)</p> <p>let's say that the enzymes you know the proton transfer is controlled by (CH-E11, Ex. 129)</p> <p>we assumed it was statistical (CH-E9, Ex. 148) we assume <i>fifty-fifty</i>. (CH-E9, Ex. 150)</p> <p>do you mind I said (CH-E4, Ex. 53)</p> <p>the crystal structure is an average perhaps of (CH-E1, Ex. 91)</p> <p>if so would it be <i>possible</i> (CH-E8, Ex. 90)</p> <p>I'd be <i>curious</i> what it looks like. (CH-E12, Ex. 130)</p> <p>it might have (CH-E3, Ex. 61)</p> <p>can you comment on how this (CH-E11, Ex. 134)</p> <p>you oughta get a <i>much better</i> (decay) (CH-E12, Ex. 130)</p> <p>it may may shed <i>some</i> light on <Presenter: OVERLAP> <i>yeah</i> </OVERLAP> this. (CH-E12, Ex. 130)</p>
<p>Intensification + expansion</p> <p>-</p>	<p>greatly I I think (CH-E2, Ex. 49)</p>
<p>Expansion</p> <p>I think I I I think you are <i>right to a certain degree</i>. (L-E3, Ex. 67)</p> <p>I think it's <i>not just</i> it depends (L-E3, Ex. 77)</p> <p>I think the multimodality <i>requires</i> a <i>new</i> term (L-E8, Ex. 106)</p> <p>I think that self consciousness (L-E3, Ex. 103)</p> <p>but I think that self consciousness (L-E9, Ex. 143)</p> <p><OVERLAP> I <i>yeah</i> and I <i>think</i> that I mean </OVERLAP> I <i>think</i> I I I <i>think</i> (L-E3, Ex. 67)</p> <p>so I think there can be (L-E9, Ex. 144)</p> <p>I think what your uh statements are <i>very different</i> I think from (L-E11, Ex. 157)</p> <p>I think they're <i>very different</i>. (L-E11, Ex. 157)</p> <p>I think undergraduate statements (L-E11, Ex. 157)</p> <p>I think it's <i>quite different</i>. (L-E11, Ex. 157)</p> <p>I <i>should</i> say that I don't think unconscious competence (L-E9, Ex. 142)</p> <p>my point is that (L-E7, Ex. 105)</p>	<p>but I think we got the observations (CH-E5, Ex. 109)</p> <p>and I don't think we <i>can</i> say <i>yet</i>. (CH-E5, Ex. 109)</p> <p>I don't think we <i>can</i> make a <i>definitive</i> answer, (CH-E5, Ex. 109)</p> <p>so I I don't think it's <i>small</i>. (CH-E11, Ex. 151)</p> <p>I mean what's in Gaussian is <i>one thing but</i> (CH-E1, Ex. 68)</p> <p><i>that's that's good</i> I mean it is <i>partly</i> semantic but (CH-E2, Ex. 72)</p> <p>my understanding on that way way way back is that (CH-E12, Ex. 152)</p> <p>that <i>clearly</i> has <i>significant problems</i> uh for, you know if you <i>want to</i> (CH-E1, Ex. 76)</p> <p>I'm <i>afraid</i> I got a re_ ya know the <i>default</i> is (CH-E6, Ex. 112)</p> <p>for intra- intramolecular (xx) of hydrogen transfer, uh well you see, the (tunneling) effect is (CH-E11, Ex. 151)</p> <p>at the catalytic site as you proposed from this conversion (CH-E8, Ex. 103)</p>

<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Presenter</p> <p>they are <i>very different in my understanding</i> of them (L-E9, Ex. 141) you have people listing course numbers, <LAUGH> I </U> you know I'm interested in linguistics six twenty two, (L-E3, Ex. 77) because you know it's um _it_ it is <i>a lot of</i> work (L-E4, Ex. 80) the <i>bad</i> ones, like you know consciousness as awareness (L-E9, Ex. 126) so I describe you know, uh, walking around with thirty kilos of rocks on your back (L-E10, Ex. 154) these statements you know they get called and they're labeled as (L-E11, Ex. 157) editorials, like reviews are not uh not counted in uh, you know tenure or uh promotion, (L-E12, Ex. 147) that's because ya know business is <i>in trouble</i> (L-E1, Ex. 79) you have others who ya know <Discussant: OVERLAP> <i>yeah exactly</i> </OVERLAP> like electrical engineering (L-E3, Ex. 77) they have um ya know they have _research_ experience (L-E3, Ex. 77) they ya know they have research interests as well (L-E3, Ex. 77) <i>they'll</i> call up and <i>say</i> oh ya know Gina we're having something special (L-E4, Ex. 80) get up at four in the morning, <Presenter: LAUGH> ya know the mountains go back to Milan(L-E4, Ex. 80) <i>just</i> from what I've read about uh admissions ya know what people have said (L-E11, Ex. 157) they'll call up and say oh <i>ya know</i> Gina (L-E4, Ex. 80) he says <READING> (L-E10, Ex. 155) the the instruction says within the confines of (L-E3, Ex. 67) I'll have <i>a week to think about it won't I</i> (L-E10, Ex. 140) <i>controversies</i> in ornithology tend to be less about (L-E8, Ex. 107) they tend to have a <i>sort of</i> literature review (L-E12, Ex. 147) it might've been that it would've been that if it's the ivory-billed it would've been that (L-E8, Ex. 104) self consciousness might be <i>better</i> descriptions (L-E9, Ex. 141) we might call them (L-E11, Ex. 157) you can get them to understand (L-E10, Ex. 156) there can be <i>anxiety</i> (L-E9, Ex. 144) the <i>wrong</i> kind of unconsciousness can lead to (L-E9, Ex. 144) not necessarily, (L-E12, Ex. 146) you <i>just</i> had some tea maybe (L-E10, Ex. 154)</p>	<p>it's a <i>reasonable</i> thing to do or perhaps it <i>wasn't</i> (CH-E1, Ex. 76) which is probably rate limited by (CH-E5, Ex. 96) if that's the case there's probably_ there therefore <i>would</i>'ve been (CH-E5, Ex. 111) the bound ligands that, uh seems to be more favorable for (CH-E5, Ex. 109) there doesn't seem to be any special stabilization (CH-E5, Ex. 111) it appears that (CH-E5, Ex. 110) there therefore would've been a <i>greater</i> selection (CH-E5, Ex. 110)</p>
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Intensification + expansion	
-	the charge distributions does look (CH-E7, Ex. 104) one thing I might say is that (CH-E5, Ex. 111)
Quantification + expansion	
-	it will be something like probably twenty (CH-E11, Ex. 151)
Intensification + intensification + expansion	
-	so we pretty much assumed (CH-E10, Ex. 158)

Utterances of graduation

Force

	Linguistics	Chemistry
Discussant	Intensification	
	it's an embryonic community (L-E4, Ex. 55) <i>would</i> you also refer to (L-E8, Ex. 92) their competence will always be situated (L-E9, Ex. 145) what are the essential understandings of deep learning (L-E10, Ex. 156)	the experiments are performed in, completely apolar medium (CH-E11, Ex. 124) energetics always goes as one open dialectic constant (CH-E12, Ex. 130) the (essential) reactive step (CH-E11, Ex. 124)
	Intensification + intensification	
	-	there are six parameters that are explicitly and totally defined (CH-E1, Ex. 55)
	Mitigation	
you blacked out generally the situating (xx) (L-E1, Ex. 52) just , what organizations are looking for (L-E1, Ex. 58) is that_ is just the trial and the error (L-E6, Ex. 100)	relate a bit to the to the distinction that (CH-E2, Ex. 63) to what extent is the <i>apparent discrepancy</i> (CH-E6, Ex. 91) I'm just gonna that comment on that (CH-E1, Ex. 67) or just just you don't see that (CH-E5, Ex. 89) if so <i>would</i> it be possible (CH-E8, Ex. 90)	
Quantification		
there <i>might</i> be some interesting differences (L-E12, Ex. 118) the contributions to the special issue and some of them (L-E12, Ex. 138)	some of the comments (CH-E2, Ex. 49) the distinction that some people make (CH-E2, Ex. 63) it <i>may may</i> shed some light on (CH-E12, Ex. 130) sometimes it relates to energy, sometimes it relates to structure, (geometry) sometimes it relates to stiffness. (CH-E2, Ex. 63) something like crystal packing forces (CH-E2, Ex. 112)	
Quantification (intensification)		
that all that (L-E1, Ex. 52) I've found a lot of uptake from the program description (L-E3, Ex. 59)	the overall reaction (CH-E3, Ex. 61)	

	<p>the majority of the students (L-E3, Ex. 59)</p>	
	<p>Intensification + quantification (intensification)</p> <p>-</p>	<p>the <i>big</i> effect is on the outplaying bending mode that decreases even more (CH-E12, Ex. 121)</p> <p>binds <i>certainly</i> a species a million times more by using (CH-E8, Ex. 90)</p>
	<p>Quantification (mitigation)</p> <p><i>the fact that</i> certain steps sometimes moves (L-E7, Ex. 87)</p> <p>who had <i>actually</i> more or less copied from the the statements (L-E3, Ex. 59)</p>	<p>it <i>may</i> shed some light on (CH-E12, Ex. 130)</p>
Presenter	<p>Intensification</p> <p><i>tend to be less</i> about what's happening in the lab and more on (L-E8, Ex. 107)</p> <p>we <i>might</i> call them more a personal statement (L-E11, Ex. 157)</p> <p>but there's still that local element too (L-E4, Ex. 54)</p> <p>the <i>original</i> four step model which I still have a <i>fondness for</i> (L-E7, Ex. 105)</p> <p>their competence will always be situated (L-E9, Ex. 145)</p> <p><i>no never</i> I have heard, I've never heard (L-E5, Ex. 97)</p>	<p>I'm <i>just</i> gonna that comment on that as well (CH-E1, Ex. 65)</p> <p>let alone for isotope effects. (CH-E1, Ex. 78)</p> <p>a complex that didn't work to converge even you don't see accumulation of the intermediate you <i>only</i> see it really when (CH-E3, Ex. 81)</p> <p>with a high eh convergence criteria (CH-E4, Ex. 82)</p> <p>they are <i>all</i> rate-limited by deacylation. rather than acylation. (CH-E5, Ex. 110)</p> <p>we've heard <i>a little bit</i> about that already this morning. (CH-E12, Ex. 52)</p> <p>we're still working on that (CH-E8, Ex. 103)</p>
	<p>Mitigation</p> <p>you just had some tea <i>maybe</i> (L-E10, Ex. 154)</p> <p>just from what I've read about uh admissions (L-E11, Ex. 157)</p> <p>this is how it's often taught, (L-E7, Ex. 100)</p> <p><i>tend to be less</i> about what's happening in the lab and <i>more</i> on (L-E8, Ex. 107)</p> <p>they can give <i>discredit</i> (L-E12, Ex. 147)</p>	<p>then just just don't add neutral reagent (CH-E10, Ex. 158)</p> <p>you only see it <i>really</i> when (CH-E3, Ex. 81)</p>
	<p>Mitigation + mitigation</p> <p>-</p>	<p>we've heard a little bit about that (CH-E12, Ex. 152)</p> <p>which is, well we calculated is quite a bit. (CH-E11, Ex. 151)</p>
	<p>Quantification</p> <p>-</p>	<p>some numerical modeling of the kinetics (CH-E5, Ex. 110)</p> <p>(over) fifty or something in in some enzymes (CH-E11, Ex. 151)</p> <p>we <i>assume</i> fifty-fifty. (CH-E9, Ex. 150)</p>
	<p>Quantification (intensification)</p> <p>with all my contacts (L-E4, Ex. 80)</p> <p>all of the unsaid (L-E10, Ex. 156)</p> <p>they refer mostly to the SOM website (L-E8, Ex. 106)</p> <p>it is a lot of work (L-E4, Ex. 80)</p>	<p>we get all all this once (CH-E4, Ex. 82)</p> <p>the charge has been transferred mostly into the leading group. (CH-E7, Ex. 104)</p> <p>in a high highly exothermic (CH-E10, Ex. 158)</p> <p>many of those enzymes (CH-E11, Ex. 151)</p> <p>they give enough data (CH-E6, Ex. 97)</p> <p>there's a huge distortion of that carbon (CH-E8, Ex. 102)</p>

Quantification (intensification) + intensification	I <i>try</i> to make them geologists in thirty seconds or less , (L-E10, Ex. 153)	it is a very widely used method (CH-E1, Ex. 72)
Intensification + quantification (intensification)	-	I I've uh been just recently corresponding with (CH-E1, Ex. 68)
Quantification (mitigation)	-	catalytic acceleration of about ten to the fourteenth fold (CH-E3, Ex. 81) it is partly semantic (CH-E2, Ex. 72) something like (over) fifty or something (CH-E11, Ex. 151)
Intensification + quantification (mitigation)	very few people teach it the way I do (L-E10, Ex. 153)	-

Focus

	Linguistics	Chemistry
Discussant	Sharpening let's say you gave a scientific paper (L-E8, Ex. 92)	our own solvent (CH-E1, Ex. 51) particularly in the case of the iodide (CH-E7, Ex. 86)
	Sharpening their own goals (L-E9, Ex. 154) we all have <i>busy</i> weeks (L-E4, Ex. 80) the four step the original four step model (L-E4, Ex. 105) the only way I can answer your question (L-E8, Ex. 79) how much of real personal stuff (L-E11, Ex. 157) ornithology particularly the Cornell website (L-E8, Ex. 107) as a special contribution. (L-E12, Ex. 147)	they are all rate-limited by deacylation. (CH-E5, Ex. 110) we <i>can</i> make a definitive answer, (CH-E5, Ex. 109) calculated equilibrium isotope effect for this particular case (CH-E4, Ex. 82)
Presenter	Quantification + sharpening -	there <i>doesn't seem to be</i> any special stabilization (CH-E6, Ex. 111)
	Softening they <i>tend to</i> have a sort of literature review (L-E12, Ex. 147) Cornell website is <i>rich</i> with this sort of thing (L-E8, Ex. 108) where you see this kind of mock up, (L-E8, Ex. 106)	-
	Quantification + softening -	I'm awaiting for any sort of comment (CH-E1, Ex. 68) there <i>must</i> be, some kind of allosteric information (CH-E3, Ex. 81)

APPENDIX F

Patterns of the dialogic exchanges: moves and verbal evaluation

Comment – Comment Exchanges

Linguistic exchanges

L-E1

Discussant

Move 1. Opening the turn

Announcing the comment yeah I have, a comment on on the people

Move 2. Contextualising the comment

Referring to previous experience when you're showing the um, well the part that you blacked out **generally** the situating (xx) <BACKGROUND NOISE> <Presenter: OVERLAP> yes mhm mhm </OVERLAP> that **all** that

Move 3. Making the comment

Criticising the research **to me, that seems not so much like** an education of the company's **failing but just**, what organizations are looking for this data cuz it's **just one failing**, <Presenter: OVERLAP> **yeah** </OVERLAP> **I think** you can say **the same** thing in a (xx) paper **very well**, they base everything (has to) **ya know** (you quantify this)

Presenter

Move 2. Replying to the comment

Rejecting the discussant's comment yeah it's **interesting though**, **_by_** and large you **still don't see** quantification in a mission statement,

Move 3. Rationalising position

Referring to previous experience mission statement **tends to be more broad** uh statements, um it's **inspirational, gimmicky**, lines which have meaning to them,

Move 2. Replying to the comment

Acknowledging the discussant's comment **but** you raise a **good** issue about what corporate like changing and the individual responsibility being **greater**, okay,

Move 3. Rationalising position

Referring to previous experience and that's because **ya know** business is **in trouble** we have a **global competitive** environment, you got to **get more out of** your people and that includes **good** ideas, so that points to (all takers)

L-E2

Discussant

Move 2. Contextualising the comment

Referring to previous experience when I studied um presenting

Move 3. Making the comment

Criticising the research **I was told that the most important** information on the handout was your name <LAUGH> and that um you had to give a handout so that people would remember you **ya know** on the bus going home <LAUGH>

Presenter

Move 2. Replying to the comment

Acknowledging - Rejecting the discussant's comment **yes** handout, **_is very_ informative but** it's **very serious** (for everyday)

L-E3

Discussant

Move 2. Contextualising the comment

Referring to previous experience I I'm in the process of looking at uh these purpose statements in technical design

Move 3. Making the comment

Criticising the research and I've found **a lot of** uptake from the program description <Presenter: OVERLAP> **yeah** </OVERLAP> and also **the more** uptake, **the less** likely they were to be accepted <two or more speakers: OVERLAP> mm </OVERLAP> so so **the majority** of the students that were refuted were students who had **actually more or less** copied from the the statements the uh program descriptions

Presenter

Move 2. Replying to the comment

Rejecting the discussant's comment <OVERLAP> **I yeah** and **I think** that **I mean** </OVERLAP> **I think I I I think** you are **right to a certain degree**,

Move 3. Rationalising position

Referring to previous experience **I think** it's **not just** it depends it's **not just** uptake from the program description, **but** how sophisticated you are so there are people like in linguistics who because this **the the instruction says** within the confines of our research expertise, you have people listing course numbers, <LAUGH> I </U> **you know** I'm interested in linguistics six twenty two, <LAUGH> six fifty one, six **whatever** </U> which is which al// which **kinda gives the game away immediately but** then you have others who **ya know** <Discussant: OVERLAP> **yeah exactly** </OVERLAP> like electrical engineering but **actually** show that they

have um **ya know** they have *_research_* experience and they **ya know** they have research interests as well so both in the background move and why I wanna do this program

L-E4

Discussant

Move 1. Opening the turn

Reacting to the presentation it **strikes** me that

Move 2. Contextualising the comment

Referring to previous experience what you're doing is **very nice**, examination of processes of glocalization where you got this, **essentially original little** heartland of product and then you got the world and then you got the world and then, they're coming together but there's **still** that local element too so and it's an embri- it's an **embryonic** community that you've **sort of, managed** to capture at its beginning and you can trace and see

Move 3. Making the comment

Showing alignment with the presenter so **I think** you've got a **very good** book coming out of this

Presenter

Move 1. Opening the turn

Reacting to the discussant's comment oh, is any one taping this **please?** <LAUGH> ... **oh** you are **okay**, <LAUGH>

Move 2. Replying to the comment

Rejecting the discussant's comment **no**

Move 3. Rationalising position

Referring to previous experience because **you know** it's um *_it_* it is a **lot of** work you **won't believe** this but I had we **all** have **busy** weeks and with **all** my contacts now **they'll** call up and **say** oh **ya know** Gina we're having something special and we've invited local restaurant owners we want to show them a new way to invite people leaving if they don't want our wine can you come, <Unknown speaker: LAUGH> and then **of course** get up at four in the morning, <Presenter: LAUGH> **ya know** the mountains go back to Milan where I work uh,

Chemistry exchanges

CH-E1

Discussant

Move 1. Opening the turn

Announcing the comment one one comment

Move 2. Contextualising the comment

Referring to previous experience uh I **can support** that we we studied the (xx) uh stability and **extremely independent** of the model of the solvent K. since we are **criticizing** P-C-M model. <Discussant: **LAUGH**> uh we were designing in Gaussian our **own** solvent

and in the manual which you referred to there are three parameters when you talked to calcium there are six parameters that are **explicitly** and **totally** defined the the solvent **but** when you put the O-six numbers in and then change the solvent that your default solvent that you are modifying you have changes of three kcals **or even higher**

Move 3. Making the comment

Criticising the research so there is **something hidden inside** wh- which is **not really well understood** by Gaussian people

Presenter

Move 1. Opening the turn

Announcing the comment well I'm **just** gonna that comment on that **as well**

Move 2. Replying to the comment

Rejecting the discussant's comment **I mean** what's in Gaussian is **one thing but** I I've uh been **just recently** corresponding with the PCM group in uh Pisa and I'm awaiting for **any sort of** comment back from them and in in this regard

Move 3. Rationalising position

Referring to previous experience and it's uh <Presenter: **LAUGH**> I said it's a **reasonable** thing to do or **perhaps** it wasn't a **reasonable** thing to do to use PCM but it is a **very widely** used method that **clearly** has **significant problems** uh for, **you know** if you **want to** do calculations of this type for vibration frequencies **let alone** for isotope effects.

CH-E2

Discussant

Move 2. Contextualising the comment

Referring to previous experience **greatly I I I think it was said** to (xx) **some** of the comments that have come out here (**in red and blue**)

Move 3. Making the comment

Showing alignment with the presenter relate a **bit** to the to the distinction that **some** people make between transition structure, as opposed to transition state. that's one point. <Presenter: OVERLAP> **right** </OVERLAP> the second point regards the word tightness, which **I think** there are three different senses in which it gets used. **sometimes** it relates to energy, **sometimes** it relates to structure, (geometry) **sometimes** it relates to stiffness. <Presenter: OVERLAP> **right**. </OVERLAP> **and that's all**

Presenter

Move 2. Replying to the comment

Acknowledging the discussant's comment **that's that's good I mean** it is **partly** semantic but semantics are **important**.

CH-E3

Discussant

Move 2. Contextualising the comment

Checking understanding of the research and **I suppose** the serine cholerest- cholinesterase haven't been subject to the same, uh evolutionary pressure as the synaptic o- <COUGH> ones that you mentioned, <Presenter: OVERLAP> **right** </OVERLAP>

Move 3. Making the comment

Criticising the research **but** they **certainly** are dissolute about **wasting time**, uh <Presenter: <OVERLAP> **yes sir** </OVERLAP> they've got this alternative binding site where they **have to wait** 'till I can get in, <Presenter: OVERLAP> **yes** </OVERLAP> uh and then they accumulate the tetrahedryl intermediate which makes the **overall** reaction go **slower than** uh <Presenter: OVERLAP> so </OVERLAP> it **might** have

Presenter

Move 2. Replying to the comment

Rejecting the discussant's comment so serum cholinesterases those are butyrocholinesterase. they're a **little bit slower than** acetyl cholinesterase

Move 3. Rationalising position

Introducing further information one thing I didn't mention about acetyl cholinesterase is the, catalytic acceleration of **about** ten to the fourteenth fold which is **not too greatly different than** the dollar value of the federal debt in the United States <LAUGH> uh </U> butyrocholinesterase are **about** ten fold **slower** and so in the concentration region where you do not see substrate activation you don't see accumulation of the intermediate you **only** see it **really** when the, second molecule substrate binds to the peripheral site there **must** be, **some kind of** allosteric information relay to the active site that's leading to the accumulation site of the intermediate. so we get a picture where the intermediate is **just barely less stable**, before substrate activation. then is the acyl enzyme intermediate

CH-E4

Discussant

Move 2. Contextualising the comment

Referring to previous experience okay. **do you mind I said** the isotope effects you show after a separated reactions to

Presenter

Move 2. Replying to the comment

Rejecting the discussant's comment **no** these are from complexes

Move 3. Rationalising position

Introducing further information I I **forgot** to mention these are from proximity complexes. but well **actually** i it it it's **quite large**, <Presenter: LAUGH> <COUGH> in one case we've had a complex that didn't work to converge **even** with a **high** eh convergence criteria we get **all all** this once previous imaginary frequency but in that case eh the calculations are done on separate substrate but we calculated binding well **not** binding **but** calculated equilibrium isotope effect for this **particular** case and there was no change in in isotope effects so so **essentially** it's **the same**.

Question – Response Exchanges

Linguistics exchanges

L-E5

Discussant

Move 2. Formulating the question

Asking a backward question **can can you confirm** that the author of the thirty page handout was Jim Martin? <LAUGH>

Presenter

Move 2. Responding

Straightforward response **no never** I have heard, I've **never** heard or seen Jim Martin

L-E6

Discussant

Move 2. Formulating the question

Asking a backward question are field notes taught in geology, <Presenter: OVERLAP> **no** </OVERLAP> or are they examined? <Presenter: OVERLAP> **no** </OVERLAP> so, how does... what does the student do?

Presenter

Move 2. Responding

Straightforward response they make it up as they go...

Expanding the response what was **interesting** when I showed_ when I talked to Philippe, about this, is, he recollected an- wa- a **bad** experience he'd had on his_ on that first third year undergraduate field outing he **didn't understand a thing** of what he was supposed to be seeing and he **certainly did not know** how to write about it and so he **just can't** make it up,

Reintroducing the response and so this is how geology, well, this is how it's **often** taught, is that_ is **just** the trial and the error and by ... well field, writing field notes aren't taught, what to put in them is taught. so you learn what to look for, <Discussant: OVERLAP> uh </OVERLAP> you learn what to see and what not to see

L-E7

Discussant

Move 1. Opening the turn

Announcing the question (thought) question

Move 2. Formulating the question

Asking a forward question **I'd I'd like to** know how this relates to **the fact that certain** steps **sometimes** moves are **optional** in the macrostructure of the genres

Presenter

Move 2. Responding

Roundabout response the_the_ first part the three step you're talking about_ the cars like the cars model <Discussant: OVERLAP> **for example yes** </OVERLAP> the four step the **original** four step model which I **still** have a **fondness for**, uh what **my point is** that if they're missing if they're part of the schema they're part of the prototype of what's expected to be there if they're not there, then you_ it it it raises the question **should** raise the question for as to why they've been omitted why they're not there what's the rhetorical strategy behind omitting a **normally** obligatory move

L-E8

Discussant

Move 2. Formulating the question

Asking a forward question Carol are you finding that this is happening in a// this is a **big**

question **controversy**, right? but i// are we is this going to cross science that they're using these multiple, approaches and if so how do they cite them?

Move 3. Reformulate the question

Assuring the question is clear in other words let's say you gave a **scientific** paper would you **also** refer to a website you know what I'm saying? In other words how are these used intertextually?

Presenter

Move 1. Opening the turn

Repeating the question well how they are used intertextually

Move 2. Responding

Roundabout response it it it, <Presenter: LAUGH> it, <Presenter: LAUGH> I **want** I'm **tempted** to call it a genre chain, <Discussant: OVERLAP> okay </OVERLAP> okay but **I think** the multimodality **requires** a **new** term for talking about about this because of the salience of the SOM and the uh background of of of the original. they refer **mostly** to the SOM website <Discussant: OVERLAP> mhm </OVERLAP> be broken down into scales so it's a it's a it's a it's a visual argument that they're having an argument for a visual representation that is indexical as it were and the source of this **particular controversy**, uh, is these, is the video footage (where it can) <Discussant: OVERLAP> right </OVERLAP> right? uh and what what this this **brief** footage **actually** means and **_it's_ quite interpretive** and then they have to use these affordances they have to use these drawings where you see this **kind of** mock up, of was the bird from behind, like that or was it like that, because what you saw on the back of the wing if it was like that it's gonna be **different**, then what you saw, if it was like that. it was the piliated woodpecker it **might've** been that it **would've** been that if it's the ivory-billed it **would've** been that captured video captured, okay so, alright

Reintroducing the response **the only** way I can answer your question is can I generalize from this N of one it's **too soon** to tell <xx> ornithology **particularly** the Cornell website is **rich** with this **sort of** thing and **controversies** in ornithology **tend to be less** about what's happening in the lab and **more** on the <Discussant: OVERLAP> mhm </OVERLAP> original original sightings

Chemistry exchanges

CH-E5

Discussant

Move 2. Formulating the question

Asking a forward question what about stabilizing the tetrahedryl intermediate in the first step or or **just just** you don't see that cause you're following this uh ih- uh release.

Presenter

Move 2. Responding

Straightforward response we don't see it either in thyo acetyl thyo choline turnover, kcat over K-M is the explanation state of catalysis, or in acetil choline turnover which is **probably** rate limited by acylation.

Move 3. Expanding the topic of the question

Raising a question and that raises a **very good** question Charlie why is it <Discussant: OVERLAP> well </OVERLAP>

Showing a plea of ignorance and **I don't think** we **can** say **yet**. **I think** we got the observations **I don't think** we **can** make a **definitive** answer, on what is it and in the interaction between the enzyme and, the bound ligands that, uh **seems to be more favorable** for accumulation and the deacylation

Answering his/ her own question **one thing I might** say is that uh, there's been **some** numerical modeling of the kinetics of the cholinesterases **recently** and it **appears** that for normal kcat they are **all** rate-limited by deacylation. **rather than** acylation. and if that's the case there's **probably** there therefore **would've** been a **greater** selection of pressure for maximizing deacylation because it's a **slow** step in the reaction. and here's a, mechanism by which that's occurring.

CH-E6

Discussant

Move 2. Formulating the question

Asking a forward question **to what extent** is the **apparent discrepancy** with crystal structures a reflection of **the fact that** the crystal structure is an average **perhaps** of the two different tauvamer

Presenter

Move 2. Responding

Straightforward response the the cases where the proton is centered according to neutron fracture, is a **truly c-centered** hydrogen deuterium uh uh uh they give **enough** data that you can compare with what when you **expect** if it were a disordered structure either static or dynamic and it fits **much better** with a **centered** hydrogen. so they are **truly centered**.

Move 3. Extending the topic of the question

Showing a plea of ignorance what **I don't understand yet** is why? are they truly centered because there **doesn't seem to be any special** stabilization associated with it

Answering his/ her own question and I'm **afraid** I got a re_ **ya know** the **default** is uh that it's **something like** crystal packing forces

CH-E7

Discussant

Move 2. Formulating the question

Asking a forward question uh is there any role uh for electron transfer processes **articularly** in the case of the iodide

Presenter

Move 2. Responding

Roundabout response

hm, um we do uh we do uh loo- we did did look at the uh charge distributions from the reactants in going to the transition state and uh well, the dis- uh the charge distributions **does look** uh **typical** of of uh, uh E- uh **typical** of E-two transformations. but um, but, not not not for these reactions but for E-two animes like weakly bound anions like O-two-minus which has zero-point-four-five (xx) of combined energies and then **actually** the tran- after transition state the charge has been transferred **mostly** into the leading group. so that's a different system and that's uh **quite interesting** but for these uh halite anion uh anion reactions we have been looking at, the charges_ distributions is **just normal** that there's **no** uh, **no drastic** charge disposal into the uh leading group. that's an **interesting** issue.

CH-E8

Discussant

Move 2. Formulating the question

Asking a forward question

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.

Presenter

Move 1. Opening the turn

Reacting to the question

uh that so this is a **good** question

Move 2. Responding

Straightforward response

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.

Expanding the response

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 (imucile) 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

Reintroducing the response

so we're **still** working on that but 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.

Move 4. Closing the turn

Reacting to the question **good** question.

Commen + Question – Response Exchanges

Linguistics exchanges

L-E9

Discussant

Move 2. Contextualising the question

Referring to previous experience uh going back to the first part of the presentation

Move 1. Opening the turn

Announcing the question I **wanted to** ask

Move 2. Contextualising the question

Checking understanding of the research you **seem** to make a distinction between uh **good** formed consciousness and the **bad** ones, like **you know** consciousness as awareness and consciousness as self consciousness when you do things **too deliberately** in <Presenter: OVERLAP> **yes** </OVERLAP>

Move 4. Formulating the question

Asking a backward question is that so?

Presenter

Move 1. Opening the turn

Reacting to the question oh that's a **great** question that's a **great** question,

Move 2. Responding

Straightforward response um yeah, awareness and self consciousness **might** be **better** descriptions cuz they are **very different in my understanding** of them and

Expanding the response I I **should** say that I **don't think** unconscious competence is a **problem** if you're not a teacher <Presenter: LAUGH> it's it's when you're **trying** to help people come along the pathway that you **need to be able** to dip down and articulate and **be able to** describe the procedure um

but I **think** that self consciousness **_it's_it's_ not unrelated** to this movement because **_students_** sense they're not, meeting expectations but they don't know why

so I **think** there **can** be **anxiety** caused from the **wrong** kind of

unconsciousness uh the **wrong** kind of unconsciousness **can** lead to the **wrong** kind of consciousness <Presenter: LAUGH>

so what we're aiming for is a sense of power of having students feel they know what the task at hand is and they know how to attain their **own** goals because their competence will **always** be situated they **can** get **as good as** they **want** at presenting or writing here but it's **not going to mean**, they **can** take that back and have that competence at home so they **need** to be to become <Presenter: LAUGH> multi competent

L-E10

Discussant

Move 2. Contextualising the question

Referring to previous experience this is **perhaps** (xx) (I'm feeling **schizophrenic**) <Presenter: LAUGH> because (next week I've to work) with secondary teachers and talk to them about ways what **they call** deep learning, that is, **beyond** the vocabulary of ESP into what it means to be a geologist.

Move 4. Formulating the question

Asking a forward question now, uh.. what are two forms that you **would** use with a- beginning major in terms of what are the **essential** understandings of deep learning of the value system the repertoire (of genres) in geology? what **would** you say?

Presenter

Move 1. Opening the turn

Reacting to the question well, I'll have **a week to think about it won't I** <Discussant: OVERLAP> yeah, **I think** it's **very unfair** (xx) </OVERLAP> <Presenter: LAUGH> but I **can_ I actually** have thought about it because I've **tried** using this <Discussant: OVERLAP> uh </OVERLAP> before with **totally unrelated** subject, um,

Move 2. Responding

Roundabout response in France ESP is taught **very strangely** and, **certainly very few** people teach it the way I do and so I've **actually** used, um, **trying** to get my students who do business communication understand that language for specific purposes **actually** is attached to cultural values in the disciplines and, so I show them a geologist's text and I **try** to make them geologists **in thirty seconds or less**, so that they can understand this, so I've **actually** thought about it. and what I, um, showed them what I gave them a **little** story about what is like to go out in into the field

and so I describe **you know**, uh, walking around with thirty kilos of rocks on your back, it's fifty degrees_ uh **I'm sorry**, fifty degrees Celsius, **sorry**, thinking in Celsius these days, um, it's, you have it you you got up at six o'clock you haven't had anything to eat cause it wasn't anything to eat, you **just** had some tea **maybe** and you you trudge back and you're going up and down these hills and then you fall, you get cut, alright and you get home you found this rock, you put it in your bag you get home

and then, um, what the end_ what _ends up_ what ends up appearing in the way that they talk about it is how they were there? so, if you look, for example, herehilippe, what he's mastered then is talking about how he is there because this provides the, the basis for his credibility. **he says** <READING> in the low strain zones, um, near Brieville, structures related to the D1 deformation can be more can be observed more easily </SEG> and he gives, uh, he uses markers of discernment, **he says** <READING> uh, this strain is moderate it's got, the (xx) is regular, it's perpendicular, there's a pitch around ninety degrees and a variable planting </SEG>, okay.

Reintroducing the response

and so he_ this_ you ge- get **all** of the unsaid the unspoken implicits that come out and the_ you **can** get them to understand the value that's attached to them

L-E11

Discussant

Move 2. Contextualising the question

Referring to previous experience

it's me again, <Discussant: LAUGH> we had dinner the other night with someone from the University of California where **in fact**, undergraduate personal statements are used for admissions so that they **can** look at other kinds of issues and one of the things she **complained** about is that one obligatory move one obligatory section of the text **must** be about how this student has suffered, <LAUGH> alcoholic father, the mother who deserted them, **she said** ev// she's **so tired** of reading these and sh//, </U> **anyway** I I <Presenter: OVERLAP> **yeah** </OVERLAP>

Move 4. Formulating the question

Asking a forward question

I wonder if they are trained <Presenter: OVERLAP> I I </OVERLAP> for them or what (xx)

Presenter

Move 2. Responding

Roundabout response

I think what your uh statements are **very different I think** from what grad statements <Discussant: OVERLAP> yeah </OVERLAP> um **just** from what I've read about uh admissions **ya know** what people have said <Discussant: OVERLAP> right </OVERLAP> as they yeah **I think** they're **very different**. um **I think** undergraduate statements we **might** call them **more** a personal statement <Discussant: OVERLAP> yes, yes </OVERLAP> these statements **you know** they get called and they're labeled as a personal statement, um, but, how much of **real** personal stuff is good? **I think** it's **quite different**.

L-E12

Discussant

Move 2. Contextualising the question

Referring to previous experience when you say so there **might** be **some interesting differences**

Move 4. Formulating the question

Asking a forward question **I wonder if** the special uh issue editors are the ones who go piece by piece- through the contributions to the special issue and **some** of them **might you know**, there **might** be these **different** types...

Presenter

Move 2. Responding

Straightforward response **not necessarily**, <Discussant: OVERLAP> **no?** </OVERLAP>

Expanding the response they **tend to** have a **sort of** literature review uh uh section in and and write **longer** editorials. uh, they **expect_** they're **expected** to do so. <Discussant: OVERLAP> **yeah** </OVERLAP> um and <Discussant: OVERLAP> it's **interesting** </OVERLAP> as as a **special** contribution. **of course**, editorials, like reviews are not uh not counted in uh, **you know** tenure or uh promotion, <Presenter: LAUGH> procedures so they **don't give any** credit, but they **can give discredit** to the people they they talk about

Chemistry exchanges

CH-E9

Discussant

Move 1. Opening the turn

Announcing the question **we think** we got question

Move 2. Contextualising the question

Referring to previous experience eh when you have side-on bind- er head-on binding <Presenter: OVERLAP> end-on </OVERLAP>

Move 4. Formulating the question

Asking a backward question how do you calculate the combination of whether the heavy isotope is by the metal or <P: 04>

Presenter

Move 2. Responding

Straightforward response we **assumed** it was statistical

Expanding the response so there is a **very small** isotope effect on whether sixteen binds to the metal or eighteen binds to the metal and that **really** has no impact in the isotope effect

Reintroducing the response so we **assume fifty-fifty**.

CH-E10

Discussant

Move 1. Opening the turn

Announcing the question I have a question about your experimentation

Move 2. Contextualising the question

Checking understanding of the research **if I understood correctly** you are watching disappearance of C-L-O. <Presenter: OVERLAP> yes </OVERLAP> and this is a substrate that you have to go to **highest** convergence <Presenter: OVERLAP> uh, </OVERLAP> for the reaction <Presenter: OVERLAP> yeah </OVERLAP>

Referring to previous experience from the slide you showed, you have the the composition of C-L-O and the C-L, <Presenter: OVERLAP> uh that </OVERLAP> so you have **side** reaction

Move 4. Formulating the question

Asking a backward question how do you **correct** for this.

Presenter

Move 2. Responding

Roundabout response um **actually** the uh C-L-O minus association with C-L-O minus is a lot of_ in a high **highly** exothermic and up the uh three-hundred uh three-hundred Kelvin experimental uh i- in temperature, uh it is **almost impossible** to observe direct (association) of C-L-O minus. so we **pretty much assumed** that there's no uh, _ okay **actually** if you uh inject C-L-O minus i- anion into the (xx) tube and then **just just** don't add neutral reagent and look at what happens nothing happens. uh there's no direct association with C-L-O minus. that's uh

CH-E11

Discussant

Move 2. Contextualising the question

Checking understanding of the research uh in the case the (**essential**) reactive step is the hydrogen transfer from from from carbon to carbon <Presenter: OVERLAP> mhm </OVERLAP></U> and **I guess** that the the experiments are performed in, **completely** apolar medium <Presenter: OVERLAP> yes </OVERLAP> oil or so. <Presenter: OVERLAP> yah </OVERLAP></U>) (that's it)

Move 3. Making a comment

Criticising the research **I would** expect in such case, **quite large**, kinetic isotope effects since we say let's say that the enzymes **you know** the proton transfer is controlled by fluctuations of the (polar) environment and, here one **would** expect, one **would** expect that intrinsic, intrinsic uh uh

hydrogen transfer is the rate limiting step.

Move 4. Formulating the question

Asking a forward question so **can** you comment on how this

Presenter

Move 2. Responding

Roundabout response well **many** of those enzymes eh hydrogen transfer is intermolecular which is **so different**. uh for intra- intramolecular (xx) of hydrogen transfer, uh well **you see**, the (tunneling) effect is **quite important actually** is a factor of two over eh eh one three over eh the the classical one s so **I I don't think** it's **small**. eh...well it's not like **something like** (over) fifty **or something** in in **some** enzymes but uh this is not room temperature of this is (what's) three hundred thirty-three you go to the room temperature uh it will be **something** like **probably** twenty which is, well we calculated is **quite a bit**. <Presenter: LAUGH>

CH-E12

Discussant

Move 1. Opening the turn

Reacting to the presentation well there's one one aspect that **surprises** me and one that **doesn't** uh

Move 2. Contextualising the question

Referring to previous experience the one that's **easy** is this uh business with the su- post-sensitive ranges from, dialectic <Presenter: OVERLAP> yeah </OVERLAP> constant one to five or ten uh

Move 3. Making a comment

Criticising the research because energetics **always** goes as one open dialectic constant so if you plot against one (xx) dialectic constant <Presenter: OVERLAP> **yeah** </OVERLAP> you **oughta** get a **much better** (decay) uh uh of plot <Presenter: OVERLAP> that's what I did. **yeah. yeah** </OVERLAP> I'd be **curious** what it looks like. **but I think it may may** shed **some** light on <Presenter: OVERLAP> **yeah** </OVERLAP> this.

Move 2. Contextualising the question

Referring to previous experience the other that **surprises** me is that I remember the interpretation going from S-P-three to S-P-two is that **yes indeed** the stretching force constant increases **but** the **big** effect is on the outplaying bending mode that decreases **even more**

Move 4. Formulating the question

Asking a forward question so what what do you say about

Presenter

Move 2. Responding

Roundabout yeah well we've heard **a little bit** about that **already** this morning. um

response

my understanding on that way way way back is that if you're looking at (xx) transfer reactions, the_ you see inverse effects because that's dominated by C-H stretching. **but** when you look at uh variation as we **agreed** this morning variation with nucleophile leading group, or **indeed** variation with (xx) substitution. the variation is determined by changes in the bending frequencies. so it's a combination of the two

