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Metadiscourse: Diverse and Divided Perspectives

Annelie Ädel, University of Stockholm, Sweden

Anna Mauranen, University of Helsinki, Finland

1. Introduction

Metadiscourse made its first appearance in Applied Linguistics about twenty years ago, and has maintained a steady interest among scholars ever since. Despite its established status and enduring attraction, it is not easy to characterise it in a way that would make everybody happy. Its core conceptualisation, and what connects it to deeper roots in scholarship, centres around 'discourse about discourse'. This is perhaps also the core area in the sense that all researchers include it in their definitions and interpretations of the object of study. Beyond this, there is little agreement—different views abound concerning where to draw the boundaries around the core. Is all interactive discourse part of metadiscourse? Is all intersentential connectivity marking part of metadiscourse? Does it involve discourse in the sense of ways of speaking, and thereby things like argumentation? Should it be primarily 'language about language'?

These issues are addressed in the papers in this volume, each of which approaches metadiscourse from a different angle. In addition to a basic interest in metadiscourse, there is one common thread running through all the contributions: academic language. An interest in the varied manifestations and uses of metadiscourse in academic texts of different kinds has been a central feature of metadiscourse studies in Applied Linguistics from the start. Speaking has entered the scene much more recently, as in other approaches to academic discourse.

In this brief introduction, we make an attempt at outlining the central dividing lines in this field of research today, with a view to how these reflect on the papers at hand. The fundamental issues concern the delimitation of the conceptual underpinnings of the field, and the methodological options for teasing out a rich description of metadiscourse in all its guises. These questions inevitably go together.

Both have a bearing on answering questions about why we use metadiscourse and what is it exactly that we do when we do so.

2. Two definitions of and two approaches to metadiscourse

One of the major issues in the study of metadiscourse is a truly basic one, having to do with the definition itself. Two different traditions have formed in the study of metadiscourse (described, for example, in Mauranen 1993:145-155 and Ädel 2006:167-179): one which uses a broad definition and sees *textual interaction* as fundamental to the category, and one which uses a narrow definition and sees *reflexivity* as fundamental to the category. The former tradition has been labelled 'integrative' (Mauranen 1993) or the 'interactive model' (Ädel, this volume), while the latter has been labelled 'non-integrative' (Mauranen 1993) or the 'reflexive model' (Ädel, this volume).

That this division is a real one is evident from the fact that most of the papers included here refer to it. It is also interesting to note that between some of the studies in this special issue there is no overlap regarding the linguistic phenomenon of study. For example, while connectives and hedges are labelled as metadiscourse in the interactive model, neither category is considered metadiscursive in the reflexive model. This reveals a situation which cannot simply be reduced to 'terminological confusion', but which shows two different research traditions that have evolved since the term was originally coined and used.

In addition to the overall issue of broad versus narrow definitions, the approach itself is different across studies of metadiscourse. It is possible to discern two main types of approach, which generally correspond to the two definitional traditions. These differences in approach have implications not only for the method of identifying metadiscourse, but arguably also for how the category is understood. We will refer to these as the 'thin' approach and the 'thick' approach.

With respect to method, the thin approach can be placed at the purely quantitative end, while the thick approach is considerably more qualitatively oriented. The thin approach operates by retrieving (usually on a large scale) all occurrences of a pre-defined list of members of specific subsets (see e.g. Table 1 in Hyland, this volume). As the words and lemmas on the list are seen as inherently metadiscursive, the captured occurrences are typically not examined further. The great advantage of this method is that the retrieval can be highly automatised, which makes it possible to compare frequency and distribution patterns across relatively large bodies of data. The analyst is able to obtain a good overview of the occurrence and distribution of metadiscourse in a given database, which then allows for quick comparisons across genres, registers and contexts of use. The result, however, is undeniably superficial, and the view of metadiscourse itself can be static, unless the retrieved examples are examined.

The thick approach operates by first retrieving possible candidates, then excluding irrelevant ones, and finally analysing extended units of metadiscursive meaning. (For an example of the initial step, see Ädel's discussion in the volume of the different types of first person *I*, not all of which are seen as metadiscursive.) In this approach, by contrast to the thin approach, the interesting part begins once the basic examples have been retrieved and established as relevant. The final analytical step typically involves an examination of lexicogrammatical co-occurrence patterns (see e.g. Bondi, this volume), or of the immediate discourse functions served by the larger unit in the discourse (see e.g. Ädel, this volume, Mauranen, this volume, and Pérez-Llantada, this volume).

The thin approach reflects the primacy of the linguist's intuition, while the thick type is essentially a data-oriented approach. With respect to the analytical concept, the thin type generally considers decontextualised units, while the thick type considers contextualised units.

In the thin approach, the unit of analysis is pre-determined in that the model consists of a list of subcategories, varying from 'connectives' such as *therefore* to 'self-mentions' such as *I*. This shows a heavy reliance on linguistic form coupled with the assumption that the overall function of each form searched for will not vary. The recall of the search/identification of metadiscourse is unknown, since potential items not on the list would not be captured.

The thick approach is a discourse-analytical one, where occurrences are examined in context. Typically, the starting point is a small unit, such as a personal pronoun (cf. Ädel) or a potentially reflexive form, such as PUT or SAY (cf. Mauranen). The metadiscursive unit itself is, however, larger than the search term, and it is the formal realisation and/or discourse function of the larger unit that is the object of analysis. This implies a highly context-dependent and dynamic view of metadiscourse. Taking this approach allows us to gain a fuller understanding of the workings of metadiscourse, albeit—by contrast to the thin approach—covering a smaller number of items at a time.

Not all studies adopt a pure line in applying one of the approaches outlined in broad brushstrokes here; in fact, some studies combine the two. Historically, however, the study of metadiscourse began with the thin approach (Vande Kopple 1985; Crismore & Farnsworth 1990; Crismore, Markkanen & Steffensen 1993; see also Hyland who represents a more recent and prominent representative of this tradition). The thick approach represents a later development (for early examples, see Ädel 2006; Mauranen 2001, 2003; Vassileva 1998).

Despite the major differences between the two research traditions, we are happy to be able to include papers from both camps in this special issue. The publication has been organised with this division in mind, and opens with studies by Mauranen, Pérez-Llantada, and Ädel applying the reflexive model and taking a thick approach. These are followed by Bondi, which is an intermediate case in that the thick approach is taken, though reflexivity and explicitness are not taken as definitional criteria. Bondi essentially sees metadiscourse as 'representation of research activity', that is, talking about the research rather than the evolving text. In a way, this can be seen as a third model of metadiscourse, very much tied to discourse from an academic context and seeing argumentation as a central feature. The ultimate goal here is to learn about specific research communities (in studying their use of metadiscourse in argumentation) rather than to learn about metadiscourse as a phenomenon. By contrast, the focus of Hyland and others in the interactive traditions is not on talk about research, but rather on the interactivity between writer and reader. The interactive model is represented by Hyland, Noble and Pisanski Peterlin, as well as many of the studies reviewed in Crismore & Abdollehzadeh.

3. Metadiscourse: A diverse area of study

The eight papers included in this special issue on metadiscourse testify not only to the divisions but also to the diversity of this area of study. One of the ways in which this diversity is evident is in the geographical spread of the contributors: the issue includes work by researchers active in Scandinavia (Finland and Sweden), the rest of Europe (Italy, Slovenia, Spain), Asia (Hong Kong and Iran), Australia and the US.

One of the most exciting instances of diversity with respect to the discourses represented is that not only written registers are covered, but also spoken ones. The analysis of metadiscourse in spoken lectures and seminars spans both relatively monologic data (Ädel) and interactive data (Mauranen). Despite the fact that the research article is such a powerful genre, representing the "key product of the knowledge-manufacturing industry" (Swales 1990:125), it is not exclusively in focus here, even among the written registers. Also represented are undergraduate student essays, master's theses, doctoral theses, textbooks and research articles.

The language covered is predominantly English, but there are comparisons with Slovene and Spanish, as well as reviews of comparisons with Persian. The varieties of English studied are quite diverse, including native-speaker, L2 learner, and mixed English-as-a-lingua-franca settings.

Diversity is also found in the status of the contributors: we are pleased to be able to include both pioneers and newcomers to the study of metadiscourse. One of the contributors, Avon Crismore, deserves special mention as a pioneer, having started publishing on metadiscourse as early as the late 1980s. At the other end of the spectrum, the issue refers to recent research carried out by master's and Ph.D. students, described in the review article by Crismore and Abdollehzadeh.

Both professional and novice academics are also represented in the linguistic material covered in the studies. Several studies look at the writing of novice populations; not only graduate students (Ädel; Hyland) but also undergraduate students (Noble). The discourses of professional academics are also dealt with in several of the contributions (Ädel; Bondi; Mauranen; Pérez-Llantada; Pisanski Peterlin).

3.1 Summary of papers

Mauranen's paper "Discourse Reflexivity - a Discourse Universal? The case of ELF" examines spoken interaction where English is used as a lingua franca in a university setting. The material amounts to 400,000 words and consists of multi-party discussion sections (6-15 speakers) retrieved from seminars from a variety of disciplines. In the first part of the study, phraseological units are analysed as they occur around the typical discourse reflexive verbs PUT and SAY. The second part is a close analysis of ways in which discourse reflexivity is drawn on in a selection of three dialogic events (from medical science, political science, and women's studies), with a special emphasis on social practices. It is found that there is a considerable amount of 'other-oriented' metadiscourse in the material, which shows that "dialogue brings out new facets and different emphases on the functions of self-referential language in communication from written text analysis". Another finding is that the tendency of discourse reflexivity and hedging to co-occur in 'discourse collocation' is confirmed by the data. The analyses suggest that reflexivity is a discourse universal, that is, "such a major element of communication that languages generally possess means for expressing it and that these means are available to speakers as resources which they can draw on as necessary".

Pérez-Llantada's paper "The discourse functions of metadiscourse in published academic writing: Issues of culture and language" presents a large-scale study of two key sections of research articles: introductions and discussions. The material is based on biomedical journals and represents 114 samples each of introductions and discussions, retrieved from different populations: Spanish scholars writing in Spanish, Spanish scholars writing in English, and North-American scholars writing in English. The total word count per population ranges between approximately 65,000 and 70,000. Pérez-Llantada analyses 'text-oriented' and 'participant-oriented' types of metadiscourse (based on Ädel 2006), with a view toward the discourse functions carried out by metadiscourse. These micro-level discourse functions are then related to broader move-patterns found for introductions and discussions (based on Swales 1990, 2004). While showing similar overall frequencies of metadiscourse types cross-culturally, the results bring to the surface "both culture- and language-specific lexicogrammatical realisations of metadiscourse units, different preferences for personal/impersonal metadiscourse as well as preferred textual developments in the construction of dialogism through metadiscourse".

The aim of Ädel's paper "*Just to give you kind of a map of where we are going*: A taxonomy of metadiscourse in spoken and written academic English" is to shed light on the similarities and differences between spoken and written types of metadiscourse, as they appear in an academic context. Personal metadiscourse is analysed in a qualitative and corpus-based study, based on 30 spoken university lectures (255,000 words) and 130 essays by highly proficient graduate students (400,000 words). Ädel presents an empirically-based taxonomy of the discourse functions of spoken and written metadiscourse in academic English. In creating one taxonomy for both modes, both similarities and differences are highlighted in the distribution of discourse functions across speech and writing. The proposed taxonomy consists of 23 discourse functions, divided into four main categories: *Metalinguistic comments*, *Discourse organisation*, *Speech act labels* and *References to the audience*. The findings reveal that most of the discourse functions in the taxonomy occurred in both speech and writing, although spoken metadiscourse performed a greater range of discourse actions than written metadiscourse. Differences in the conditions of speech and writing, such as the lack of time for planning and revision in speech, and the direct presence of an audience in speech, are specifically found to result in variation in the use of metadiscourse. Furthermore, factors related to genre are found to give rise to variation in the use of metadiscourse.

Bondi's paper "Metadiscursive practices in introductions: Phraseology and semantic sequences across genres" provides a close analysis of the use of metadiscourse in introductions to research articles (40 samples, totalling 36,000 words) and textbooks (10 samples, totalling 70,000 words) in economics. In other words, both a research genre and a didactic genre are represented in the corpus. Differences and similarities across the genres are highlighted by studying the types of framework sequences (Hunston 2008) in which forms of 'self-mention' and 'illocution markers' are realised. The author concludes that textbooks "favour personal forms (*we discuss*) [and] tend to adopt combinations highlighting topic-setting (*look at notions*) and the explanatory function of the genre (*provide examples; explain concepts*)", while articles "favour non-personal forms (*Section 1 discusses*), together with combinations highlighting purpose (*present model*) and research structure (*test hypotheses; review literature; provide results*)". This reflects the purposes of the genres and the values of the community.

Hyland's paper "Metadiscourse: Mapping interactions in academic writing" reports on a study of advanced second language writing by predominantly L1 Cantonese speakers, based on a four-million-word corpus of 240 master's and Ph.D. dissertations. The analysis of metadiscourse is used to uncover one aspect of the rhetorical and social distinctiveness of disciplinary communities, as six different disciplines are examined: electronic engineering, computer science, business studies, biology, applied linguistics, and public administration. The analysis employs ten subcategories altogether, which represent a broader distinction, drawn originally from Thompson (2001), between 'interactive' and 'interactional' resources. Categories of the interactive type are concerned mainly with organizing discourse and its interpretation, whereas the interactional elements are concerned with creating a writer personality and involvement with the reader. Not only corpus data, but also interview data are drawn on from the six disciplines in order to further explore differences and similarities across discourse communities. The results show that the use of metadiscourse varies both in the master's versus Ph.D. variable and in the disciplinary variable. Members of these groups "represent themselves and see their readers in quite different ways", as evidenced by the use of metadiscourse.

Noble's paper "Understanding metadiscoursal use: A local study" is an investigation into the use of specific types of metadiscourse in argumentative essays written by first-year undergraduate L2 students, majoring in business studies and computing. 'Connectives', 'frame markers', 'code glosses' and 'self-mentions' are studied. The 80 essays included in the corpus, written in the context of an EAP course and totalling 120,000 words, have been coded by grade (high-scoring and low-scoring). The results reveal that, overall, the learner writers show a heavy reliance on a narrow range of connectives. However, it is also found that high-scoring essays display both a higher frequency and a greater range of connectives. In contrast to connectives, frame markers, code glosses and self-mentions in the form of first person singular are rarely used by the student writers. The lack of self-mentions is hypothesised to be induced by the instructor's input. The paper brings up pedagogical possibilities regarding metadiscourse, concluding that "[a] learner corpus is not only useful to examine the use of rhetorical devices in student essays, but also to create a database appropriate to the local context of the course from which to draw pedagogical materials for current and future class work."

Pisanski Peterlin's paper "Hedging devices in Slovene-English translation: A corpus-based study" explores the question of how hedging devices are translated in research articles. The fact that hedging has been shown to be quite central to academic discourse but also subject to cross-cultural variation raises the question of what happens to hedges in the process of translation. Research articles in geography are selected to answer the research question. The material analysed consists of 30 original articles in Slovene, 30 English translations of these articles, and 30 comparable original English articles—all totalling 500,000 words. Considerable differences are found: not only are half as many hedging devices used in the translated texts as in the originals, but the realisation of hedging devices is considerably less varied in the translations.

The final contribution, by Crismore & Abdollezadeh, is entitled “A review of recent metadiscourse studies: The Iranian context” and is not a research paper, but a review article. The inclusion of a discussion of Iranian research in this special issue will help to disseminate research coming from a context that is rarely considered in the West. The article covers fifteen studies carried out by master’s and Ph.D. students at different universities in Iran. The studies fall into three areas: metadiscourse use in writing in English, cross-linguistic comparison of metadiscourse in English and Persian, and metadiscourse in EFL reading comprehension. The studies have adopted very different approaches and consequently yielded a wealth of results that testify to the complexity of the issues involved as well as to the diversity of roles of metadiscourse in a non-western and variably West-influenced academic environment.

4. Final comments

We have described the division, pertaining both to definition and to approach, in studies of metadiscourse. The *interactive* model uses a broad definition and conceives of metadiscourse as interaction between writer and reader, while the *reflexive* model uses a focused definition and conceives of metadiscourse as a reflexive or metalinguistic function of language. The two approaches outlined here have been labelled *thin* and *thick*. The thin approach is quantitative and decontextualised, while the thick approach is qualitative and context-oriented, typically taking syntagmatic sequences or discourse functions into account. The way these two dimensions generally pan out is that the interactive model tends to go with the thin approach, and the reflexive model with the thick approach.

Disparity can be characterised both negatively as ‘division’ and positively as ‘diversity’—both perspectives are relevant here. We have depicted not only the division present in the study of metadiscourse, but also the diversity as it is represented in the current special issue. We have pointed to diversity in the contributors themselves (researchers from many different countries, both newcomers and veterans) and in the linguistic material analysed (different genres of writing *and* speech, produced by both novice and professional academics, in different Englishes as well as other languages). We hope that by pointing out the divisions in the field and simultaneously maintaining a wide diversity, we may promote awareness of the issues and divergences in the field, and bring them together in a fruitful academic dialogue which takes the field forward. Metadiscourse as an area of study is evidently in a dynamic phase.

We indicated above that this research area has taken a large step forward since the first full-fledged studies of metadiscourse in the late 1980s. That said, there is still plenty of room for further development. For all its diversity, this special issue includes studies solely concerned with academic discourse, whether research genres or didactic genres. What is the status and place of metadiscourse in non-academic language (cf. Ädel, this volume)? The universality discussed by Mauranen (this volume) underlines the fact that metadiscourse is not a concern only for the academic world, but for all contexts of language use.

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Discourse Reflexivity - A Discourse Universal? The Case of ELF

Anna Mauranen, University of Helsinki, Finland

Abstract
This paper is concerned with metadiscourse, or discourse reflexivity, as a fundamental property of human communication. It assumes that lingua franca evidence is useful for discovering essential, possibly universal aspects of discourse, since participants must adapt to highly diverse and unpredictable circumstances while maintaining communicative efficiency. Metadiscourse is clearly not a feature speakers can dispense with, as is seen in the study reported here. Since ELF speakers cannot rely on much shared linguistic or cultural knowledge with their interlocutors, they need to secure mutual understanding by explicitness strategies, such as discourse reflexivity. This study shows that analysing interaction in dialogic speech events reveal important uses of metadiscourse that have not surfaced in earlier studies, which have used written monologues as their principal source of data. A much more prominent 'other-orientedness', or orientation towards intercolutors, is evident in dialogue than in monologic language. The tendency of discourse reflexivity to collocate with hedges is also supported here.

1. Introduction

As evidence accumulates about other species, humans are undergoing the humiliating experience of noticing that they are not so unique after all. Other species construct tools, transmit culture, communicate about things beyond the here and now… Yet some things seem to remain ours only: our working memory capacity is way ahead of other species, we seem to be the only ones with a theory of mind, and our capacity for self-awareness and reflexivity is exceptionally high, perhaps unique. Not surprisingly, then, while other species turn out to have far more complex systems of communication than previously surmised, to the best of our knowledge only our languages can talk about themselves; in other words, the reflexive capacity of human thought is projected onto language. Human languages are reflexive systems.

Reflexivity as the capacity of language to refer to itself was recognised and discussed by many eminent linguists before it became a matter of widespread interest in applied linguistics. But it was only in the late nineteen eighties that it really took off, in the form of metadiscourse research, and has since enjoyed wide and steady interest among scholars. Pioneers in this line of research were William Vande Kopple (1985) and Avon Crismore (1989). From the 1980s onwards the term has often been used in a wider sense than language about language (as is very clear from the papers in the present volume). Metadiscourse research has embraced a broad range of phenomena, covering whatever is separate from the 'primary' discourse (Crismore and Farnsworth 1990), the 'topical' (Lautamatti 1978/1987) text matter, the 'propositional content' (Mauranen 1993), or in terms of Halliday's theory (e.g. 1985), the ideational metafunction of language.

Broadening the scope of metadiscourse beyond metalanguage, or reflexivity, the term suggested by Lyons (1977) for language about language, probably reflected a growing awareness in linguistics of the interactive aspects of language. Since the 1980s linguists have become increasingly aware that interpersonal features are ubiquitous and that even the most objective-looking written text is not without its interactional dimension. And it is indeed the objective kind of written text that has attracted the greatest proportion of metadiscourse studies: the most closely investigated domain is academic writing. The typical data may also have affected conceptual preferences. Thus, research has focused on expressions that indicate writer-reader interaction – which can be seen as incorporating characteristics of speech into writing.

The all-encompassing notion of metadiscourse as the 'non-ideational' text matter, or what lies outside Sinclair's 'autonomous plane'(1982/2004) has by now largely served its purpose of raising awareness about the nature of text as fundamentally interactional. Research into interactive aspects of language has expanded and diversified enormously since the early eighties. Studies of hedging, discourse particles, stance, evaluation, vagueness etc, have seen remarkable development and turned into burgeoning research fields in their own right. Perhaps the time has come to take a closer look at what the specific contribution of metadiscourse might be in this vast array of non-propositional language, and narrow down our own focus to what might in the end yield deeper insights into the workings of metadiscourse per se.

My intention in the present paper is to go back to the basics: to look at metadiscourse as language about language. Less traditionally, I draw my data from spoken interaction where English is used as a lingua franca. What connects the paper to the dominant research tradition is its source of data, which comes from university settings.

This study makes no comparisons to native speakers. We already know that native speakers of English use metadiscourse in academic speech (e.g. Mauranen 2001, 2002, 2003a, 2004; Ädel this volume), and we know lingua franca speakers do. To understand academic speaking it is necessary to rid ourselves of the baggage of native English practices. Clearly, and more so than ever, English is the global language of academia. It is important to keep in mind that this globality means that most of the users are non-native speakers. Academic research is international by nature, not in itself associated with the preferences of a culturally or nationally defined language community. University institutions have been much more local, especially after the expansion of tertiary education in very many countries to include larger and larger proportions of each age cohort. But this has been changing at accelerating speed: universities are on a fast track to becoming globally intertwined, with increasing numbers of students and staff moving around from country to country. If the purpose, then, is to understand present-day academic speaking in English, we should look at the way English is used globally. To this end, English as a lingua franca is a better representative than native English.

2. Reflexive discourse

As far as we know, reflexivity is distinctive to human communication. Since it is generally held that human languages are more versatile and effective than the communicative means of other species, we should expect this capacity for self-reference to confer advantages which go beyond the most basic requirement to get vital information across.

Reflexive language seems to be part of the more general ability to reflect upon our own experiences and actions; with some mental effort, we can distance ourselves from immediate experiences, identities, attitudes, and gut reactions, and subject them to conscious contemplation. Even though the processes we can bring to consciousness are only fragments of our entire mental activity, we are nevertheless able to think about our own thinking, to make it an object of thought itself. Such processes also allow us to talk about our talking: we can be aware of our verbalisations, and we can indicate this by means of verbalising itself.

Languages have a vast array of terms and labels that we can use for language related matters in everyday talk (*he's pretty talkative; the way you write is sort of chatty; I have an uncle who speaks Malay*…), as well as sophisticated terminologies of linguistics, but these are not necessarily reflexive. They are not always ways of speaking about the discourse at hand. Reflexive discourse is distinct from referring generally to language and its uses in that it relates to the ongoing discourse. Even though the borders may occasionally be fuzzy, the principle remains clear: reflexive discourse is discourse about the ongoing discourse.

By indicating our awareness of our talk, we share this with our interlocutors (*One thing I wanted to ask you*…) Reflexive language is therefore highly interactive, whether couched in monologic or dialogic form, and it sharpens conversationalists' mutual understanding of how to relate to the discourse that is being co-constructed. In this way, it contributes to the two fundamental uses that language has: sharing experience and negotiating interaction.

So far I have been talking about reflexive discourse rather than metadiscourse in this section. What is the relationship, then, between reflexivity and metadiscourse? I would like to see them as roughly synonymous, both referring to discourse about discourse. However, this conceptualisation excludes a number of things that have become commonly associated with metadiscourse, such as many non-reflexive interactive elements, as already pointed out. Strictly speaking it also excludes some elements that I have previously included in text reflexivity (Mauranen 1993), notably those I classified as reflexivity of low explicitness, such as connectors, because many of them do not make reference to discourse. In all, metadiscourse as a term has become to be used for a wider range of phenomena than reflexive discourse.

Clearly, the difference between reflexive discourse and other discourse signalling items is a hard distinction to maintain, as can be seen for example in Carter and McCarthy (2006: 221). They talk about discourse markers that "enable speakers to monitor and manage the ongoing discourse by commenting explicitly on the process of talking itself", which is very close to reflexive discourse. As they go on to illustrate these discourse markers, some clearly refer to language, mostly with verbs like *say, speak*, and *put*, whereas others have no such reference (*or rather, as it were*, or *well*). The latter often signal reformulations or alternative expressions, even though they are not about language and not discourse reflexive.

The term metadiscourse has been contested altogether, notably by Sinclair (for instance 2005) on account of a misuse of the prefix *meta-*, which normally refers to something external to a concept or object, or an abstraction from it. In the philosophical sense, if we have a language, an object language, used for talking about the world, then a metalanguage would be a separate system for talking about that language. Basically a metalanguage is a formal language for analysing an object language. This is the way it is also used in mathematics, so that we speak of the 'metalanguage of mathematics'. Analogously, we might talk about formal systems of linguistic analysis as the metalanguage of natural language, or the terminologies of theoretical linguists. This is not of course how the terms metadiscourse or metalanguage are used in linguistics; metadiscourse is not used for referring to a separate system set up to discuss discourse, but a label for certain integral parts of the discourse itself. The criticism for using 'metadiscourse' to refer to ordinary, normal segments in ongoing discourse is justified to this extent. On the other hand, not all science follows the lead of mathematics, either, so for example in biology 'metapopulation' refers to separated but interacting populations of a species taken together, see Hanski (1999).

The now established use of metadiscourse to refer to certain elements in discourse probably owes a good deal to the line of thinking where conveying information or sharing knowledge is the primary function of language, or the main level of language. We might call it the 'primacy of the message'. In this way, anything else would be something extra, less essential, and less important. The early terminology reflects such thinking, with divisions into 'primary discourse' and 'metadiscourse' (see, e.g. Crismore and Farnsworth 1990).

Be that as it may, the term metadiscourse is well established in linguistics for broadly referring to discourse about discourse, or to an even wider range of discourse elements that incorporate interactive and text-organising functions. These two uses have been labelled as 'broad' and 'narrow', or 'integrative' and 'non-integrative' (see, e.g. Ädel 2006; Mauranen 1993). The labels that perhaps best describe the difference are those suggested by Ädel in this volume): 'interactive' and 'reflexive'. Although this use deviates from those of some other disciplines, linguistics has its own terminology. I shall be using the term discourse reflexivity whenever it is necessary to maintain the distinction between this sense of metadiscourse and its wider understanding, but when the difference is not relevant or not confusing, I employ metadiscourse in the same sense: discourse about the ongoing discourse.

Despite this less than felicitous term, the scholarship that it has inspired has captured important facets of natural language use; any conceptualisation of metadiscourse that I am aware of gives language about language a central position in the analysis. I would like to argue that this is indeed the core of metadiscourse. I also want to argue that it is a major element of natural language. Discourse reflexivity is a distinctive characteristic of language, ubiquitous in our speech, and it deserves close attention from linguists.

As noted above, discourse reflexivity contributes to the fundamental uses of language, sharing experience and negotiating interaction. More specifically, reflexivity helps discourse achieve two main purposes: to make discourse more explicit and precise, and to manage discourse strategically. Some examples from the MICASE corpus (Simpson et al. 1999) illustrate these uses in speech.

To add precision to communication, speakers make explicit how they wish their interlocutors to understand their contributions, how they interpret other speakers' talk, and what they expect from others' contributions. Thus, they can indicate in which light they wish their speech to be taken:

> I **mention** that just for those who are interested it is totally irrelevant to **what I'm talking about**,

and how they understand others' speech:

> **are you_ were you saying that** or am I just hearing you, differently

Speakers can also indicate their intentions by prospecting ahead:

> now i just wanna **clarify**, and i don't think this'll take long at all

and retrospectively label preceding stretches of discourse:

> your **complaint** is that this **claim** is not the whole truth about the universe.

The last example, labelling discourse, already shows how reflexivity can be brought to serve the speaker's more strategic interests. Clearly, such labels assign discourse roles to the stretches in a way that reflects the current speaker's interpretation, which thereby gets imposed on the discourse under way.

This leads us to the other major function of reflexivity, which is to help manage discourse strategically, and to manoeuvre the discourse for desired ends. Speakers use reflexivity to this end for example in order to take the floor:

> may I **ask** a quick **question**?

to yield or offer the floor:

> I was wondering if you could **comment** on the differences

or to impose order on the discourse:

> so lemme start what i'm gonna do is i'm gonna **talk** for a while, and then i'm gonna show some slides and then i'm gonna come back and, **talk** a little bit more, just to give you a a road map

They can negotiate the terms of the conversation:

> what exactly should we be **discussing**?

> if you need an **explanation** just **ask** me stop me and we'll **explain,**

avoid or shelve topics:

> I don't have time to **discuss** it today,

insist that they have been consistent in their argumentation:

> **all i'm saying** so far there is…

resume topics from earlier stages of the discourse:

> I was gonna **say**…

> remember when we were **talking** about…

and evaluate their interlocutors' contributions:

> you guys have **brought up** a lot of important points.

In brief, then, discourse reflexivity plays crucial roles in negotiating the flow of discourse between participants. In written discourse the terms of negotiation are necessarily somewhat different, with readers mostly remote to writers. Nevertheless, reflexivity is one of those text features where writing most clearly incorporates features of speaking. It is not surprising therefore that metadiscourse is generally depicted in terms of writer-reader relations, thereby representing the interactive aspects of language in written text.

3. Earlier observations on discourse reflexivity in ELF and native English speech

In view of the hitherto scant empirical research on ELF, not many studies have investigated metadiscourse in ELF yet. Previous comparisons on reflexive discourse in academic speech between native speakers of English and lingua franca users have shown that it is common in both (Mauranen 2005, 2007a, 2007b). In a similar vein, Penz (2008) found that participants in an intercultural European project employed a good deal of metadiscourse. In contrast, some early ELF research with simulated conversational or telephone data (Firth 1996, House 1999) suggest that ELF communication is so content-oriented that when faced with communication problems, speakers do not negotiate meanings or use metalanguage to sort them out but resort to topic changes or a 'let it pass' strategy instead, to keep the conversation going. The discrepancy might be accounted for by situational parameters, by scholars' different conceptualizations of metadiscourse, or by the small amount of data in the very early ELF studies. It is also important to note that the early studies did not involve any data from native speakers, so that it is not known whether natives use metadiscourse in comparable circumstances, and whether the lingua franca users were exceptional in this respect. After all, metadiscourse studies have primarily associated it with academic discourse, which characteristically favours a high degree of explicitness.

Apart from the overall finding that metadiscourse was common in my own earlier studies, the main ELF uses were also similar to L1 English.

Most of the observed differences were concerned with form, which tended to be approximate rather than entirely accurate (*I just like to make a brief comment of this*). Some form-function pairings were also ignored in that certain fairly subtle distinctions were overlooked (e.g. the difference between REFER TO and BE REFERRING TO), which probably testify to some systemic simplification in lingua franca speech. Some senses and uses were also absent from expressions that otherwise were used in the same ways as in comparable native speech.

Even if discourse reflexivity may not be equally salient in all circumstances, it is nevertheless present in English L1 and lingua franca communication alike, and we might assume this is more widely true of other L1s and lingua francas; for example such a typologically distant language from English as Finnish (see Luukka 1992, Mauranen 1993) employs metadiscourse. This suggests that reflexivity may be a 'discourse universal', (for discussion, see Mauranen 2003b) that is, such a major element of communication that languages generally possess means for expressing it and that these means are available to speakers as resources which they can draw on as necessary. Discourse reflexive expressions are thus very likely to be what Hunston and Francis call "necessary features of language" (1999: 270).

4. Data

This paper focuses on dialogic speech events. The aim is to open up research into dialogic use of discourse reflexivity, because what investigation there has been on spoken academic metadiscourse has focused either on lectures or undifferentiated monologic and dialogic data. Comparing speech to writing in itself brings new insights to analysing the functions of metadiscourse, as shown by Ädel (this volume), but taking dialogue under special scrutiny may open other new avenues. I start by briefly looking at a couple of phraseological units around typical discourse reflexive verbs (PUT and SAY). I then change the viewpoint and focus on the particular, by picking three dialogic events from my data and looking at them as social practices which emerge through layers of social formations.

The database I draw on here is the first part of the ELFA corpus (Spoken English as a Lingua Franca in Academic Settings; www.eng.helsinki.fi/elfa), ELFA(i), as I call it. From this corpus, I have included all dialogic files, altogether 400,000 words. ELFA was compiled with a deliberate bias towards dialogic events, and transcripts of events comprising a monologic and a dialogic part, such as presentations followed by discussion, common in conferences, seminars and thesis defences, were split into two along these lines.

For the analyses in Section 5, I use the ELFA(i) corpus as a whole. For the analyses in Section 6, I have selected three seminars for looking at metadiscourse in the context of whole events. The selection followed three simple principles: the events should be identified and labelled as "seminars" by the host academic community, they should come from different faculties, and the range of speakers' first languages should be as broad as possible. The purpose was to take a close look at a few events that were constant along some parameters (mode, genre, event type, language), but independent of each other and spanning a broad range in other respects (disciplinary domain). The events that ended up in the sample in this way were from medical science, political science, and women's studies. In line with the present dialogic orientation, these were all multi-party discussions, with the number of speakers ranging from 6 to 15. In one event, the discussion was preceded by an oral presentation, which is not included in the sample. The duration of the recordings was altogether a little over 2.5 hours, the total number of speakers 28, and the number of first languages 9, with Finnish (10 speakers) and German (7 speakers) as the largest groups.

5. Some corpus findings: PUT *and* SAY

As an illustration of the patterning in discourse reflexivity I chose two verbs that can be used reflexively (PUT and SAY) to focus in on. The choice of the former was based on seeing it listed in reference books and finding a number of occurrences of it (*to put it bluntly*), while the latter was selected because I had noted earlier (e.g. Mauranen 2001, 2004) that it plays an important role in academic argumentation (*what I'm saying*).

To begin with PUT, it was used in dialogic speech largely with reference to verbalisation, specifically a certain way of expressing something (*I thought that was nicely put*), which is the way in which it is also used in Standard English as represented in major dictionaries and other reference works. A clear majority of the instances referred to verbalising (32/50), and well under a half (18/50) to other senses of the verb (*should I just put it on*). Its principal use was reflexive (*let me put this clearly*): about two thirds of the verbalising sense (24/32) were reflexive, and half of the total use (24/50). One third of verbalising uses of PUT were instances where the speaker referred to was not a participant in the speech situation (*propositional surface of moral discourse as Blackburn would put it*).

In the discourse reflexive sense of PUT, two patterns emerged, both meaning 'formulate', or 'verbalise in a certain way'. One pattern (Example 1), to PUT it + adv., was the relatively idiomatic prefacing formula *to* PUT *it bluntly/simply/ briefly/mildly*:

(1)
er erm so er or **to put it positively** the non-naturalist has to claim
sort of, dwells, in women's suffering, **to put it blunt** if you put it
would clear my thinking but er **put it simple** erm our natural language
you plan to do @@ **to put it to ask in a nice way** well sometimes

On the whole, the use is in line with Standard English, but the form is occasionally something of an approximation, for example adjective forms (*blunt*, *simple*) being used instead of adverb forms.

The other pattern of PUT also fitted into a fairly common phraseological pattern *let me/let us* + V_{comm}, as can be seen in Example 2.

(2)
are i after the forum] put it **let me put it this way** if you buy me
about their activities and **let me put it this clearly** NGO's some
analysing a text yeah **let's put it very simply** what ever the text is
by organisational knowledge creation **let's put it that way** and
use i think that well **let's put it as a question** can there be a quality

A third observation from these searches was that discourse reflexive use of PUT co-occurred with mitigating expressions, such as modals (*could, might*) and other hedges (*a bit*) and *if* -clauses:

(3)
yeah i think we cou- **you could put it that way** but that's more like
necessary connection erm, or **you might put it** er use a a metaphor
remember but and **I'm also going to put it a bit more sharply** than
and society or i- **if i, put it more clearly** where can we see this
blunt **if you put it a bit bluntly** so that's what i find problematic
that he, he cannot, well **if you put it blunt** to have sex with bess

This tendency of metadiscourse to collocate with hedges has been noted before (e.g. Mauranen 2001, 2004). I have called it 'discourse collocation', because this is a co-occurrence tendency between two discourse phenomena, not between specifiable lexical items (or grammatical items, as in colligation). As the earlier research was carried out on data from native speakers of American English (the MICASE corpus, http://lw.lsa.umich.edu/eli/micase/index.htm), the present observation suggests that the connection is more general. Although research on written text usually assumes metadiscourse to be an act of consideration towards the reader, its role is more complex in dialogue. Metadiscourse implies an imposition of the speaker's perspective on the discourse, and in so doing reduces the negotiability of the dialogic perspective. Hedging mitigates this, as one of its important uses is to open up for negotiation the meanings made in the discourse, or, in slightly different terms, to indicate epistemic openness (Mauranen 1997). The combination thus serves to restore the balance between expressing speaker perspective and keeping it negotiable. That this combination appears in ELF suggests it is not confined to Anglo-American discourse conventions but is a more fundamental feature of discourse.

It has been customary to associate metadiscourse primarily with first person pronouns. However, in this data put it co-occurred half of the time with impersonal reference (generic *you*) or inclusive *we*, which are typical other-involving expressions (*let's put it /you could put it*). The rest divided equally between speaker (*I*) and hearer (*you*) references. This suggests again that a dialogic situation highlights different aspects of metadiscourse as compared to monologic communication, especially writing.

The other verb form under scrutiny, SAY, shows a similar tendency in person reference: about half of the instances (32/67) refer to the interlocutor, half (35/67) to the speaker. It appears that discourse reflexivity is not so entirely speaker-oriented as we are used to thinking; dialogic interaction brings this out as the role of the interlocutor gains prominence relative to monologue.

Since other-oriented reflexivity has been much less investigated than speaker-oriented reflexivity, I look at SAY in the other-oriented function. The basic metadiscourse pattern is *you* + BE + *saying*, with three main functions: 'clarification', 'interpretation', and 'springboard'.

CLARIFICATION

The speaker wants the previous speaker to repeat, elucidate or confirm what he or she has said (Example 4). Elucidation requests are typically questions, to which the interlocutor is under obligation to respond. Responses can confirm or dispute the interpretation, or offer an elaboration of the original intended meaning.

(4)

two societies and you say that you **am i right that you saying** that you kind of want to
way of expressing it, (differs) i- is you are you **are you saying** that er, the imagery
@yeah or@ joo [@@] [@@]. er are you **are you saying** erm that this particle functions
could you just show that last example once more **were you saying** that in this the you
that's confusing [er so] [what you] **what you are you are saying** okay so the the reason
you have 71 per cent pardon nothing @**what were you saying**@ no i was looking to

INTERPRETATION

The speaker offers an interpretation of what the previous speaker meant. This is a means of ascertaining that the shared experience being co-constructed in the interaction is indeed shared (5). At the same time it keeps the interpretation negotiable; it is easy even if not necessary for the interlocutor to confirm or dispute the offered interpretation. The speaker can also express the interpretation more tentatively (*at least I took you to be saying*), in which case the invitation to respond is stronger.

(5)

supervenience using quantification over possible worlds **so you're saying** things like er yeah for any objects X and Y for any worlds W and B if X is

the same answer as for the first case **so you're saying** that there you cannot really make the difference between the two because

and in a way this also then covers probabilistic systems **so you're saying** that probabilistic system is fair at least under some er [a reasonable

another thing that that **i at least took you to be saying** was that that er literary works are individually different

and **to the best of my (xx) you were saying** to the best of my i think er there isn't any any any difference

SPRINGBOARD

The speaker paraphrases the previous speaker's meaning as a point of departure for a new direction in the discussion. This was the largest group of *you* + BE + *saying*. In these cases, see (6) below, the speaker does not indicate that the interpretation is open to negotiation but continues to develop his or her own agenda. No response, confirmatory or otherwise, is thus expected of the interlocutor concerning the correctness of the interpretation, and in fact it is not easy to do this without making an intervention.

(6)

part of **what you are saying** that indigenous knowledge and, and scientific er knowledge, but i have

if **what you are saying** about crystallisation is true or not you could use the D-S-C for that

when **you were saying** you know maybe er i would have wanted to talk about western

what **you're saying** proves that tanzania is pretty much a stable country and then time i mean

it's true **what you're saying** that er the the home is is very important talking about er place ballets

well **you're saying** one possibility is definitely cornell realism another possibility is erm

oil hydraulics that's just like **you are saying** water hydraulics, but er is it just possible to change the oil with water

forums er as diaspora outside fiji er **you were s- er saying** about digital divide between the disadvantaged and the so i was just wondering

This last set of examples where the speaker does not seem willing to negotiate his or her interpretation of an interlocutor's contribution looks clearly evaluative—the speaker moves on to criticize or question the previous turn (*so I was just wondering; another possibility is…*) or to support it and build upon it (*it's true what you're saying; what you're saying proves that…*).

The examples show that *You* + BE + *saying* plays an important role in ongoing argumentative dialogue. It contributes to creating a coherent, interrelated discourse by relating speakers' arguments to each other. Other-reference is integrated into the argumentation as a piece of shared understanding, to which the next stage of the argument is anchored. The speaker may be more tentative about interpreting the interlocutor, in which case the interpretation is open to negotiation (the clarification and interpretation types), or simply present it as given (the springboard type), when it serves as a more straightforward point of departure for the next stage. What we see here, then, is how reflexivity helps to co-construct discourse as a joint product between speakers.

6. Focus on the particular: three seminars

The corpus examples have already suggested that as we move our attention to dialogue, discourse reflexivity reveals features that have not been observed in the field earlier. To push the boundaries back a little further still, I would now like to shift the angle to individual discussions and the ways in which discourse reflexivity works in particular contexts. The events under scrutiny are ‘seminars’. These are comparatively transient communities of practice, set up for one or two terms. As multi-party discussions they are interesting from the perspective of discourse reflexivity, involving as they do frequent turn shifts and interaction management, as well as managing the discourse as text. They are relatively spontaneous and open-ended events, even though within limits: they operate within layered structural frames from the institution and from practices that the groups have established for themselves. Within those limits, the discussion is co-constructed by the participants fairly freely, so that it can take different directions, and there is a strong element of unpredictability, as in any discussion or conversation.

There are thus commonalities in seminars. A seminar is a ‘chain event’ in these study programmes, a serial event that gets performed by the participants in repeated encounters. Some of its norms and practices are imposed upon it by the institution that contains and validates it, others the group can decide for itself, and yet others are tacitly agreed upon, and evolve in the course of events. The language of instruction and communication is institutionally determined, while things like appointing a chairperson, the possibility or desirability of interruptions during presentations, or first-name use may be collectively decided. More subtle norms of language use tend to be tacit, a matter of linguistic self-regulation within the group.

I chose three seminars, as already explained in Section 4. The discussions in medical and women’s studies constitute the entire event for which certain written texts had been read as preparation, while in political science the discussion section was preceded by an oral presentation not included in the analysis.

Despite being called seminars, the three events are fairly different, which also shows in the ways in which they employ discourse reflexivity. Some variability is of course to be expected within a genre, despite its uniform labelling. Disciplinary differences alone set up expectations of distinctions, which however cannot be pursued here, as we only had one seminar from each discipline. Cultural differences are often relevant but do not transpire as particularly evident or relevant here, because these events are international even though they take place in the same national matrix culture.

The seminars discussed below are all from a late stage in the series. Although we thus have no access to the initial stages of negotiating linguistic norms, it is nevertheless unlikely that reflexive discourse gets explicitly discussed, because it is the means, not the object of negotiation in itself, and rarely something speakers are aware of. In brief, the sessions here are all late-stage single sessions in a seminar chain. The speakers are familiar with each other and group practices are well established.

6.1 Medical seminar: 'understanding facts'

The medical seminar consists of a discussion around a topic for which there had been a set text for students to read. One of the student participants acts as a discussion chair, while the seminar leader, a senior staff member, remains in the wings most of the time. She makes an appearance every once in a while to direct the discussion towards points of her choice, and her main role seems to be to answer questions students have not found an answer to. The event seems to unfold according to a routine; this being the final session in the seminar series, the participants appear to be familiar with the procedure and go through the motions smoothly. The participants are actively involved, take turns, overlap, and engage in backchannelling and laughter.

Discourse reflexivity is confined to a small role. The discussion moves on from stage to stage by simple prompts such as *and then* and *what about*, and direct questions from the chair, as in Example (7):

(7)
S6: alright, then, what about er fatty liver <P:05> i think it was the case
S2: there's fat in the liver cells
<P:11>

Sometimes questions come from the seminar leader, who has a tendency to preface her questions to the students with *I'm interested in X* (S7 in Example 8). The chairing role is nevertheless maintained by the student (S6):

(8)
S7: i'm very interested in hemochromatosis (S6: okay) what happens [in hemochromatosis]
S6: [so who who] wants to give us information
S5: it's er increasing er (xx) (S6: yes) iron , and that er cause deposition of iron, and er

The discussion revolves essentially around the facts at hand, with brief, even minimal insertions of metadiscourse elements (*I mean*):

(9)
S7: where does the ascites come from . when you're big like this
S2: i think it's the same thing when you're having hypertension so you have er your legs are swollen because the fluid goes to extra , cellular space
S6: but is it the is the same mechanism because i've been thinking about this
S2: @@ i don't know [i just thought it] @@
S6: [because i mean] when when the the legs are swollen isn't it because of the protein [lack of protein protein lack (xx)]
S5: [yeah well probably (xx)] in this case because albu- albumin (S6: yes) is going is increasing so probably a lot of liquids (S6: mhm) are going out
S6: but is it is it same with the ascites

Reflexivity thus appears mainly in a clarificatory role, to indicate that something was unclear or hard to understand, and to elicit elucidation (*do you mean*):

(10)
S6: it's the protein complex take in in the first phase takes take the cholesterol, and then it goes to the,
S3: do you mean the kilo (S6: yeah) micrones
SS: @@
S6: yeah [(xx)]

In addition, very occasional negotiations about language took place, and these concerned essentially terms or subtechnical vocabulary.

(11)
S5: yeah it is specific and erm, there are ways to control the alcohol (mhm) addictation do you say
S6: yes yes, it will go down in two or three weeks, when [you]
S2: [so what] was the thing you said, C-
S7: C-D-T
SS: C-D-T
S6: it's, carbohydrate deficient transaminase or something, C-D-T

Overall, the main weight in the discussion revolved around understanding the content. The orientation of the participants and the whole verbal activity is very much to the discourse-external, physical world of medical phenomena, together with problems and professional practices related to them. These constitute the central referents talked about, and the topics of questions and clarification requests. The purpose of the discussion appeared to be getting the facts right, thereby developing professional skills. In brief, the main point of this seminar could be described as ‘understanding facts’.

6.2 Women’s studies: ’Talking and sharing’.

For the second seminar, the chair, who is a staff member teaching this course, has asked the students to write something for her and those texts laid the foundation for the discussion topic of the day. The chair has selected the discussion topics from these and moves on along her pre-set agenda. She makes frequent reference to the submitted texts, earlier discussions in the group, and the general idea of the course. In this way, she draws on other discourses, which she presents as relevant to the topics at hand and engages in a lot of preparatory work for each topic or subtopic she introduces. As in the medical seminar, the participants seem to be familiar with the procedure, and actively involved in turn-taking, backchannelling, laughter, and cooperation in cases of difficulty. In contrast to the first seminar, speaker contributions are longer, they report more personal experiences, more evaluation of speakers’ own and others’ contributions. Discourse reflexivity is markedly more common than in the medical seminar.

In this event, discourse reflexivity is not merely more frequent, but also used in more ways than in the first seminar. This is illustrated in the following example (12), where S1 starts out by imposing order on the discourse (*then I wanted to talk about*), followed by an offer of the floor to S12 (*would you like to explain*). S12 starts with a distancing preface (*well*), upon which S1 starts to negotiate, modifying her offer (*or would you think about it*…). S12 now gives grounds for declining the offer to take the floor (*well, I don’t know how to explain it*), whereupon S1 backtracks and starts producing herself the response that complies with her initial request.

(12)
S1: … then i wanted to talk about some sort of expressions that we use . that are defined or thought of as positive, for example there's this <FOREIGN> hyvä jätkä </FOREIGN> would you like to explain it for us
S12: [well]
S1: [or would] you think about it and then i fill in
S12: mhm well, i don't know how to explain it so
S1: yeah [well] (S12: [mhm]) perhaps er . if other people that you're really er, you're a good good mate, or a good good friend or you do things you play well or

As in the medical seminar, participants negotiated their accumulating shared understanding of the topic, but this was achieved with much more verbalising in women's studies (13):

(13)
S2: what er i- i (S1: mhm) i can't understand what what what does it mean what is er real differences between women and men are is it that they were asking for er er is it the gender difference er er cultural difference or a biological difference was is this the question

In contrast to the medical seminar, transitions were largely made explicitly and elaborately. The tendency of metadiscourse to collocate with mitigation is seen in Example (14).

(14)
S1: [well i] i'll start with, some of my thoughts (xx) last session, try to summarise a little bit, what we discussed and, what you wrote about . this er somehow it became evident that er this categoration /…/ and actually er the most service occupations are such occupations . we are going to talk about emotional work…

Speakers used discourse reflexivity to move back and forth in the discussion, creating cohesive links with their own earlier positions (as in 15), or those of others (as in 16). In addition to coherence in the discourse, such links may well contribute to group cohesion among the participants.

(15)
S1: but do you think there's any er presse- er, pressure from the society
S8: yeah, definitely, at least in my experience it is yeah but then again i like i said i come from this huge family so many small children that it's just facing me every day almost so but maybe it's different for other people

(16)
S1: … so i'm ag- again referring to your story when really talked about the division of labour actually in the household that (S3: mhm-hm) the male went into the coal mine and then the women did all the chores at home er there's this strict division there, and also, you talked about this sort of that for women this traditional way…

Terms and concepts were discussed and shared understanding was sought, but the discussion was not oriented solely to discovering or establishing a predefined correctness. The terms commonly used in the field were seen as negotiable and open to redefinition as a result of the group discussion. The distinction between specialist terms and general language was thus blurred, and individuals were seen as being entitled to moulding terminological usage.

(17)
S1: [well] what is radical because we don't have any radical feminists in finland so it's no what's the, what's the definition of a [radical]
S4: [no] i i'm not sure if if radical is the is the is the right word maybe i don't know er b- women who are ah arguing in every situation er with with all the gender

Openly evaluative remarks were often made in connection with metadiscourse (18), apparently in recognition of the complexity or sensitiveness of certain topics. Language was thus crucially implicated in conceptual difficulty, as questions, answers, and just talking. This was quite different from the medical seminar, where difficulty was linked to understanding and conceptualising external-world phenomena, and terms were treated as referential items with an uncomplicated relationship to difficulties in the language-external world.

(18)
S1: …and when er talking about this gender difference thing it's a bit difficult, when in Finnish we…well, and then when we talk about gender difference it's usually talked in terms of cultural differences between this femininity and …it's more useful to concentrate on the latter one and we shall we talk about gender difference that's the main focus, and i was a bit er not well not amazed but a bit er, baffled when some of you when you wrote … and that's a really difficult one, cause i i don't think at least i don't have a such a fon- mhm answer to tell what's this ...

In all, the women's studies seminar event was characterised by frequent and versatile use of metadiscourse. As distinct from the medical seminar, there was a marked orientation to the situation at hand, the language used, and the participants themselves. A central ingredient was making reference to personal experiences, and the discussion also oriented to probing participants' views, interpretations, conceptualisations and feelings. These were related to language as well as the topics at hand, and participants presented their own contributions in relation to those of others, which obviously created demand for discourse reflexivity. Talking appeared to be valued in itself. The seminar chair did a good deal of the talking, with long prefaces to topic transitions, and many invitations for others to speak. She also brought other relevant discourses to play in the discussion, which seemed to enhance the sense of sharing perspectives. Hedging of metadiscursive imposition served to level out or soften asymmetries of power. These discourse strategies also appeared to be intended to offset some of the inherent power imbalance in a seminar discussion, where ultimately the teacher assesses the contributions of the others. In brief, this seminar could be characterised as 'talking and sharing'.

6.3 Political science: 'Constructing arguments'

The third session consisted of discussions around two presentations by students, which were each followed by a discussion. The two discussion sections are considered here without the presentations. This seminar resembles the women's studies seminar in that the chairperson plays a strong role in selecting the topics as well as organising the flow of the discussion, and also in that metadiscourse played a central role in negotiating meanings and in moving the discourse on.

Transitions from one stage of the discussion to another are largely in the hands of the seminar leader who acts as the chair, and although they are often brief and formulaic (*okay; and then*) as in the medical seminar, the chair also uses more complex transitions to organise the discussion (19).

> (19)
> S1: er okay before we go to the next topic, i i think that. in a way the question <NAME> made what made you study or be- become interested on this issue it is a relevant question cause this your topic leads us a bit further to more general (S2:yeah) discussion about human rights or in general whether we can…

The seminar chair took care of the overall structuring of the discussion, as in the women's studies seminar, but in this case student participants were also keen to initiate topics. Sometimes they took the floor by just announcing the topic (*about Stalin*), but most of the time they used advance labelling of their speech acts, prospecting ahead and making it clear in which light their turn was to be taken (*a couple of questions; can I ask you a difficult question; just a comment; I have couple of comments reactions to this; just wondering*). Discourse reflexivity was employed to achieve complex topic transitions, for instance indicating awareness of turn-taking norms while introducing a new subtopic:

(20)
S2: … and like, yeah it's it's another thing in sorry @@ i i just go on but it's another interesting thing it was like that in estonian press…

In referring to and resuming topics from earlier stages of the discussion, discourse reflexivity was also made use of, involving both speakers' own contributions (*my question based on minority; as I told*) and those of others (*what you said; what you also said; the problems you were discussing*). This created an impression of a coherent argumentative discussion, where speakers were jointly engaged. In this way, the discussion bore resemblance to exchanges following conference presentations, where the presenter's line of argument gives rise to questions, alternative views, and new points (see 21 below). Unlike conference discussion sections, though, this discussion was much longer (over half an hour) and could thus probe the issues in more depth.

(21)
S3: of course a couple of questions erm this citizenship how much does it influence the people are they the russians allowed officially to work and everything
S2: no yeah i can explain it's erm yeah sorry i i didn't probably didn't mention @@ it's a if you don't have a citizenship you can't vote

Discussion contributions were evaluated in a number of ways, some with metadiscursive expressions (*it's a good question; it is a relevant question*). The chair's evaluative comments on presentations or methods often seemed pedagogically motivated and intended for the whole group, as e.g. in (22), where we can also see the mitigating effect apparently sought by the hedged (*just some minor things*) forewarning that something negative may follow (*nothing to criticize you but*). This hedge and metadiscourse combination acts as an advance notification of a possible face threat (cf. Brown and Levinson 1987).

(22)
S1: … er, then just some minor things nothing to criticize you but just you give a good excuse to to mention these things in finland finns are very proud about…

Participants also negotiated the functions or purposes of each other's arguments and points:

(23)
S2: no, you mean why did i refer to that i was more like when i was defining why…

The principal role of discourse reflexivity in this seminar seemed to be to elucidate the co-construction of arguments. What seemed to be at stake were interpretations of past or present political situations and stances, which the participants were negotiating among themselves (24).

(24)
S1: but from this point of view what you said this is a minor thing about paasikivi being against finnish membership in UN i wouldn't say that he was against it was just a question a matter of the time [and then]

S1 here evaluates S7's interpretation of a past political stance. He uses discourse reflexivity to make an other-reference to S7's interpretation (*what you said… about Paasikivi being*…), gives an indication of how his contribution is to be taken (*this is a minor thing*) and then from this springboard he launches his own interpretation with a somewhat tentative metadiscursive preface.

The last extract (25) illustrates several typical functions of discourse reflexivity in a small space. Here it prefaces discussion points (*just a comment*) and questions (*wouldn't you say*), signals clarifying (*I mean*), backtracking and self-rephrasing (*let me correct myself*) and negotiating terms (*call it*):

(25)
S5: just a comment wouldn't you say that is a situation that is quite prevalent in in a number of countries in europe i mean that happens if you if you only talking about er or let me correct myself not only but you are talking about sort of bureaucratic repression er that kind of repression call it repression it goes on for example in france…

Reflexivity was used for preparatory work, relating arguments from the speaker, other participants, and third parties to each other. In this way, a network of arguments was being constructed, and the orientation was primarily towards arguments for and against certain interpretations of the world. Discourse reflexivity was also employed in offsetting power inequality in the manner of the women's studies seminar. Unlike the women's studies event, this seminar was more oriented to the arguments being developed than the personal experiences of participants. The main orientation in political science also contrasted with the fact-orientation of the medical seminar, as the focal points of discussion revolved around interpretations of facts rather than the facts themselves. These two seminars nevertheless showed certain affinities in putting the emphasis on non-personal events in the external world and downplaying personal experience and emotional responses that surfaced more in women's studies.

Three ostensibly parallel events chosen by external criteria revealed that there is much to be discovered about variability in the use of metadiscourse in spoken interaction. Patterns of metadiscourse use seem to be involved in constructing different conceptualisations of the world and associated epistemic beliefs. As variation in written texts has been known and much studied for a long time, dialogic speech deserves similar attention.

7. Conclusion

This paper has investigated discourse reflexivity in spoken dialogue. Three main points have emerged from the analyses. One is that discourse reflexivity appears to be crucial to successful spoken interaction: it enables fluent management of interaction in even complex multi-party discussions, and promotes communicative clarity and precision. In other words, it seems to confer the kinds of advantages to communication that were outlined at the beginning of this paper. Even though its amount varies, it seems ubiquitous. That this is so when English is used as a lingua franca among non-native speakers lends further support to the pivotal role of discourse reflexivity; it is not a feature of Anglo-American culture, or directly a function of language proficiency. We can postulate that it is a strong candidate for being a discourse universal (Mauranen 2003b), or in Hunston and Francis's (1999) terms, a 'necessary feature of language'. Speakers will find means of expressing reflexive functions in discourse because these constitute critical elements of fluent conversation even if the particular expressions used do not match some prescribed standards.

The second major finding is that dialogue brings out new facets and different emphases on the functions of self-referential language in communication as compared to written text analysis. A notable phenomenon was the amount of other-oriented metadiscourse. This deviates from earlier perceptions of metadiscourse, and also of speakers' orientation in speaking. For instance Schiffrin (1987: 124) suggests that "speakers' monitoring of their own talk is more finely attuned than their monitoring of others' talk", and while it may of course be possible, the present results certainly cast doubt on such a generalisation. At least in argumentative discussion other-oriented reflexivity seems particularly salient.

The third point I wish to emphasise here is that the present data again supported the tendency of discourse reflexivity and hedging to collocate in 'discourse collocation'. This has a bearing on our conceptualisation of metadiscourse. If we opt for a very broad, embracing notion of metadiscourse, we risk losing sight of its collocability and interaction with other discourse phenomena. The consequence of this is that our analytical tools lose some of their sharpness. I take this therefore as support for my initial argument that discourse reflexivity is a crucial aspect of human communication, which deserves to be studied in its own right.

All these findings have been scratches on the surface: there is a wealth of expressions in self-referential spoken language, which could be studied for patterning and functional diversity. Moreover, the settings in the present database were very similar in generic terms, as they were all academic dialogues. We could assume that many of the factors that have been found relevant to genre differences in written text reflexivity may be relevant to speech as well. The need for precision and explicitness in academic discourse along with its necessarily fairly complex organisation motivate a high level of metadiscourse. However, in any dialogic genre the need to manage spoken interaction in real time may assign discourse reflexivity a much more important role than tends to be found in non-academic written prose.

The contextual diversity of metadiscourse was remarkable in the light of the three seminar sessions. It is clear even from this small-scale study that the roles of professional or academic and national culture need to be kept separate, and the same goes for native languages and national cultures. To account for variability of the kind found here, new parameters ought to be taken on board, not assuming that first language, native culture, or disciplinary domain are omnirelevant categories even in academic settings. There is space for more work on contextual parameters which have a bearing on metadiscourse. Most importantly, new models of metadiscourse must take the dialogic perspective of interaction seriously on board.

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The Discourse Functions of Metadiscourse in Published Academic Writing: Issues of Culture and Language[1]

Carmen Pérez-Llantada, University of Zaragoza, Spain

Abstract
Taking the non-integrative approach to metadiscourse (Ädel 2006; 2008), this paper carries out a cross-cultural and cross-linguistic analysis of text- and participant-oriented metadiscourse in two rhetorically forceful research article sections (Introductions and Discussions). Results show that, across cultures, the average frequencies of the two types of metadiscourse are relatively similar in the two article sections. Findings also show that the micro-level discourse functions of these metadiscourse types seem to concentrate in specific information moves in these sections, suggestive of shared uniform conventions for academic writing across cultures and languages. The exploration of metadiscourse further reveals several culture- and language-specific traits regarding preferred lexicogrammatical realisations of metadiscourse units, different preferences for personal/impersonal metadiscourse types as well as different textual developments for constructing arguments.

1. Introduction

Echoing Bakhtin's contention on "the reader's apperceptive background and his degree of responsiveness" (1981: 346), genre-based approaches to academic prose have broadly argued that the research article genre (RA) is not only content-oriented but also dialogic and interactive in various different ways (cf. Berkenkotter and Huckin 1995; Swales 1990, 2004). In the current context of international scientific communication, where English has become the dominant *lingua franca* of all academic and research activities (cf. Ammon 2007; Dewey 2007), writer/reader interaction in non-native scholars' academic writing production has become a major focus of attention in the Contrastive Rhetoric (CR) field. Most CR studies have analysed linguistic features of stance, evaluation and metadiscourse and found preferred uses of personal/impersonal ways

[1] The paper is also a contribution to a research project (FFI2009-09792; subprograma FILO) funded by the Spanish Ministry of Science and Innovation.

of expression in RAs written by scholars from Anglophone and non-Anglophone contexts—the latter as varied as Finnish, Norwegian, German, French, Russian, Bulgarian, Ukranian, Russian, Spanish and Polish, among others (e.g. Mauranen, 1993a, 1993b; Vassileva 2000; Dahl, 2004; Blagojevic 2004; Yakhontova 2006; Moreno, 1997; Pérez-Llantada 2007, Duszak & Lewkowicz 2008).

Contributing to this line of investigation, this paper compares the use of metadiscourse in Introduction and Discussion sections—both sections described as rhetorically forceful and dialogic—in RAs written by scholars from two cultural contexts (North-American and Spanish) and in two languages (English and Spanish). The paper specifically borrows Ädel's (2006, 2008) non-integrative approach to metadiscourse and her taxonomy of text-oriented and participant-oriented functions.

The former type comprises all textual material that serves as signposts for readers through the text while the latter includes textual material that the writer uses to interact with the reader (Ädel 2006: 184), both types take place in the world of discourse, not in the real world. As opposed to the integrative approach to metadiscourse (cf. Vande Kopple 1985; Crismore 1989; Crismore et al. 1993; Hyland 1998), Ädel's non-integrative approach allows a precise identification of micro-level discourse functions and by this means provides a more accurate picture of the metadiscourse phenomenon than other broader, at times overlapping, theoretical frameworks such as stance or evaluation. The aim of this paper is twofold: i) to identify the micro-level discourse functions of metadiscourse in Introductions and Discussions across cultures and languages, and ii) to explore the correlation between these functions and the information-organising moves established for these sections (cf. Swales 1990; 2004). The paper also discusses some possible factors that may account for the similarities and differences found in the use of metadiscourse in the cultural contexts and languages selected for the study.

2. Methodology

For the analysis, we selected 144 Introduction and 144 Discussion sections from the biomedical component of the *Spanish-English Research Article Corpus* (SERAC; see Pérez-Llantada 2008). These RA sections were taken from 48 articles written in English by North-

American based scholars (ENG subcorpus), 48 articles written in English by Spanish scholars (SPENG subcorpus) and 48 articles written in Spanish by Spanish scholars (SP subcorpus). The articles from ENG and SPENG were retrieved from a sample of high impact-factor international journals, while the articles from SP were taken from a sample of Spanish journals. Table 1 below provides details on the corpus.

Table 1. Number of words in corpus sample

	Introduction sections	Discussion sections	Total words
ENG	19,114	47,922	67,036
SPENG	19,611	46,023	65,634
SP	18,858	53,755	72,613
Total words	57,583	147,700	205,283

Unlike other academic divisions, the biomedical field has a well-defined set of conventions for manuscript writing, as described in the *Uniform Requirements for Manuscripts Submitted to Biomedical Journals* (http://www.icmje.org/). These requirements apply to both international and national publications and were thus thought to guarantee a suitable basis for detecting cross-cultural and cross-linguistic variation of metadiscourse. It is worth noting that both the ENG and SPENG subcorpora satisfy the comparability criteria proposed by Moreno (2008: 35) in that "the text exemplars are similar in all of the relevant contextual factors".[2] An additional feature of the corpus is that, together with ENG and SPENG, it also includes a third set of data, the SP subcorpus, in order to allow the identification of L1 linguistic traits among the Spanish

[2] This applies to text form (scientific exposition), genre (research article), mode (written language), participants (the writers are researchers/professors with a university affiliation and readers are international researchers and university professors), situational variety (formal language), dialectal variety (standard), tone (serious), global communicative purpose (sharing results from research), other communicative purposes (persuading the audience), language (English) and scope of the journal (international, impact-factor based).

scholars and its comparison with their L2 textual practices (cf. also Mauranen 1993b).

In classifying the functional role of micro-level metadiscourse units we also sought to identify the correlation between these functions and the move-structure established for writing Introductions and Discussions (cf. Swales 1990, 2004). To do so, we used the 'Create-a-Research-Space' (CARS) model for writing Introductions, which consists of three main moves "[p]rimarily concerned with establishing the news value of the researchers' work" (Swales 2004: 236): 'Establishing the research territory' (Move 1), 'Establishing a research niche' (Move 2) and 'Occupying the niche' (Move 3) (cf. Swales 2004: 227). The overall pattern for Discussion sections includes the following three moves: 'Highlighting or consolidating overall research outcomes' (Move 1), 'Explaining specific research outcomes' (Move 2), and 'Stating research conclusions' (Move 3). These move-patterns were used for identifying writers' preferred linguistic realisations and discoursal uses of metadiscourse.

3. Results

Possibly because of the highly specialised knowledge background of the SERAC writers, the corpus displayed most but not all of the functions proposed by Ädel for argumentative student writing. Ädel's proposed functions occurred in the Introductions of the three subcorpora except for 'focusing', 'contextualising', 'concluding' and 'hypothesising about the reader'. Discussion sections in the three subcorpora contained the text-oriented functions of 'focusing' and 'concluding' but not 'contextualising' and 'introducing the topic'. The 'introducing the topic' function was rather re-conceptualised in this RA section as 'reminding', that is, a restatement of introducing the topic. Ädel's taxonomy of functions was adapted as follows (Table 2; 'I' refers to examples found in Introductions, 'D' Discussions).

Using corpus-driven procedures, a total of 1,498 discourse units were identified as explicit types of metadiscourse in the three subcorpora, an intra-rater reliability test was conducted by repeating the identification and categorisation of these units a month after the initial categorisation. This test showed 3.17% disagreement with the initial procedure. Contextual clues were used and colleagues in applied linguistics and

English-native scholars were consulted in an attempt to resolve cases of overlap between some micro-level discourse functions. A total of fifty-nine units were discarded since no agreement on their identification/categorisation was reached, which nonetheless corroborates the complexity of the metadiscourse framework.

Table 2. Ädel's discourse functions of metadiscourse adapted to SERAC

	Discourse function	**Examples from SERAC**
CODE	**Defining** disciplinary terms and concepts	A PSM was defined as…(I) Haematuria is a known late complication (D)
TEXT –ORIENTED	**Introducing** the topic of the text, which facilitates readers' processing of the subsequent text	The purpose of this study was…(I) In the present study we reviewed…(I) We report our success…(I)
	Focusing announces informational focus and narrows it down.	First,… second…(D)
	Summarising textual material which has been mentioned previously in the text	In summary, …(I&D) X can be summarised…(D)
	Exemplifying introduces an example commenting on the foregoing text	… as an example, For example, … such as…, e.g. (I&D)
	Reminding explicitly refers to textual material referred to before. In Discussions, it is usually a reminder of 'introducing the topic'	the more recent work described above (I) Previously we have reported… (D) As we report here… (D)
	Adding explicitly indicates that new information is being provided	In addition, … Additionally, … Furthermore… Moreover (I&D)
	Arguing explicitly claims centrality of the information provided the text	We demonstrated that…(I) The results of this study indicate that...(D) Therefore, we propose that…(D)
	Concluding is used to conclude the text	To conclude, …(D) In conclusion, …(D)

PARTICIPANT-OREINTED	**Anticipating readers' reactions** pays special attention to predicting the reader's disagreement to what is said	led us to speculate that it might be possible to induce (I) These results should be validated in ...(D)
	Clarifying specifies textual material in order to avoid misinterpretation	In other words, … That is … e.g. (I&D)
	Aligning with reader perspectives indicates that writers presuppose the reader's agreement	… in our knowledge of…(I) Our understanding of…(I) X can help us to understand…(D)
	Appealing to readers indicates writers' attitude with the aim of entreating readers and inviting them to share similar lines of thought	It is therefore important to understand … (I) It should be noted that…(D)

In agreement with Ädel (2006: 195), the amount of data retrieved from the corpus indicated that metadiscourse material (i.e. textual material referring to the world of the text or to its participants) represented a very low proportion compared to the amount of textual material referring to the real world. Text-oriented metadiscourse was slightly more common in the Introductions than in the Discussions of the three subcorpora (Fig. 1 below), most likely because it is in Introductions that authors are expected to include signposts to guide readers through the evolving discourse. Participant-oriented metadiscourse was relatively scarce in Introductions but played a more prominent role in Discussions. The higher frequency of text-oriented metadiscourse in Introductions and a relatively even distribution of the two metadiscourse types in Discussions might be explained in the light of the rhetorical goals established for these sections: to tell the reader what the text is going to be about (Introductions) and to engage with the reader at the end of the research article for the sake of seeking acceptance of the new knowledge claims (Discussions). Thus, the presence of metadiscourse suggests that, although research article writing is predominantly informative, it also favours some space for dialogism in these two RA sections.

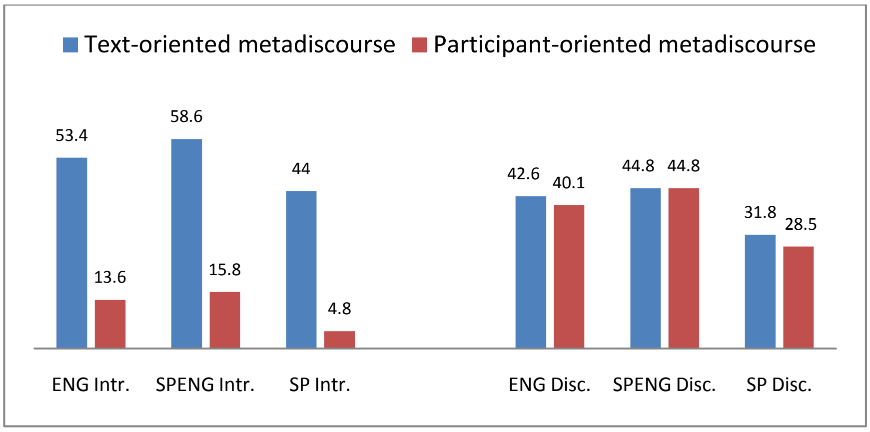

Figure 1. Average frequencies of metadiscourse types (F per 10,000 words)

Across cultural contexts (ENG and SPENG), text-oriented metadiscourse scored almost similar average frequencies in both sections. The same happened in Discussions, where participant-oriented metadiscourse, with a very timid presence in ENG and SPENG Introductions, is much more frequent in these two sets of texts. Across languages, both text- and participant-oriented metadiscourse scored slightly higher in SPENG than in SP Introductions and Discussions. The relatively close resemblance of the three sets of texts regarding the presence of metadiscourse may corroborate the notion that medical writers adhere to standardised conventions when writing these RA sections. As described below, the identification of micro-level discourse functions in each section revealed further similarities across the three subcorpora but also hinted at some culture- and language-specific preferences.

3.1 Metadiscourse in Introductions

As Fig. 2 below shows, the most salient text-oriented function in Introductions was 'introducing the topic'—also glossed as "purposive announcements" (Swales 2004: 231). These units represented almost 40% of all the text-oriented units in ENG and SPENG and 50% in SP Introductions. Introductions also included 'defining', 'adding' and 'arguing' functions, although with lower average frequencies. The remaining functions—'summarising', 'exemplifying' and 'reminding' —showed very low frequencies across the three subcorpora.

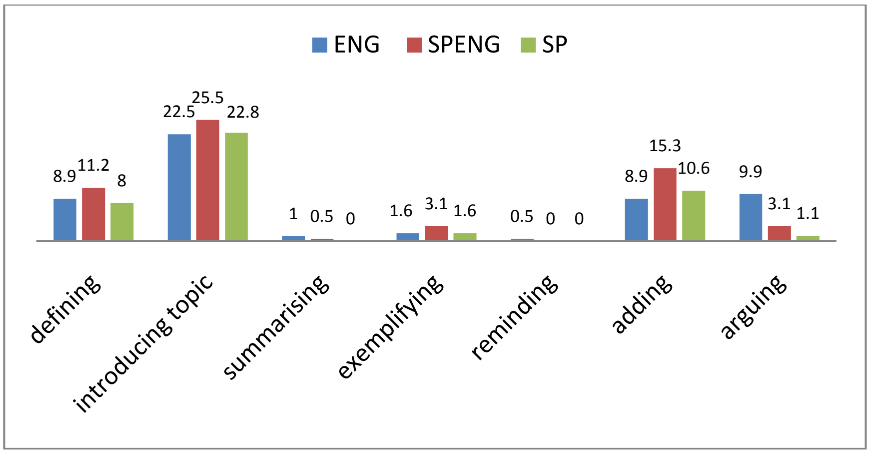

Figure 2. Text-oriented units in Introductions (F per 10,000 words)

Text-oriented functions tend to be distributed across the CARS model as follows. 'Defining' units initiate Move 1 and help writers explicitly characterise those key concepts that they are going to deal with in the forthcoming text (e.g. *AML is a heterogeneous collection; HL are clonal myeloproliferative disorders; la eritoproyetina es una hormona* [*x is a hormone*]). Having established their research territory, writers support arguments through 'adding' units that indicate a research gap, raise a research question or extend a previous finding, thereby constructing Move 2, 'Creating the research niche' (e.g. *In addition, protein S displays; In addition, recent data have demonstrated; Esta asociación es además* [*This association is also*]). Occasionally, authors claim centrality of new knowledge through 'arguing' units, which occur before (when authors refer to their own previous research) or after the 'introducing the topic' statement in Move 3 (e.g. *We demonstrated that; Because we reasoned that; Este estudio es la primera prueba que demuestra* [*This study is the first proof that demonstrates*]). In Move 3, writers occupy their research niche by 'introducing the topic' units, by this means complying with the Uniform Requirements specification that Introductions "should state clearly the objectives of the work" in the last paragraph of this section. Through purposive announcements (e.g. *[W]e report the characterisation of; [I]n the present report we sought to; [E]l objetivo de esta investigación consistió* [*The aim of this research was*]), the three groups of writers show concern with the explicit signposting of research objectives for their readers.

Across cultural contexts, similar lexicogrammatical patterns for 'introducing the topic' reveal a close resemblance between ENG and SPENG. These two groups of writers convey, at times, personal metadiscourse (through *we*-subject patterns) and, at other times, impersonal metadiscourse (through passives and inanimate subject constructions)—e.g. *here we report on; in the current study we show that; x are reported herein; [T]he purpose of the present study was*. In SP, however, more than 70% of the expressions in 'introducing the topic' are passive constructions and inanimate subject patterns (*En este trabajo se presentan los resultados* [*In this work results are presented*]; *el presente estudio pretende determinar* [*the present study seeks to determine*]). These impersonal realisations of metadiscourse in SP may instantiate the impersonal style characteristic of Spanish academic writing (cf. Montolío 1999; Cassany 2002).

Both 'arguing' and 'adding' functions also hint at culture- and language-specific preferences. Compared to the other functions, 'arguing' is far more frequent in ENG (almost 20% of the total text-oriented metadiscourse units) than in SPENG and SP (less than 5% in the two subcorpora). The ENG scholars occupy the research niche and claim centrality through both personal and impersonal 'arguing' units (e.g. *[W]e propose that; our data indicates*). Even if this function is scarce in SPENG, these writers seem to prefer personal rather than impersonal 'arguing' statements (the former representing more than 80% of the total number of 'arguing' units), possibly to achieve greater authorial visibility at this point in the text. Lack of arguing in the SP Introductions (only 2 instances) could result from the fact that writing locally obviously involves less competition and need for promotionalism than writing internationally.

When creating a research space, SPENG and SP writers tend to be more 'adders' than 'arguers' than their ENG counterparts (almost 25% of the total participant occurrences in SPENG and SP vs. 15% in ENG). Further, as illustrated below, the ENG scholars show a very linear textual development. They first 'argue' in order to claim centrality of information; then, they explicitly refer to the research niche and finally occupy the niche by announcing the purpose of the paper. The SPENG scholars first create their research niche through restrictive markers (*however, ...*); they then 'digress' and emphasise the existence of a research niche by adding reasons supporting the need for enquiring into this niche and finally occupy the niche. Similarly, Move 2 in the SP Introductions is abundant in concessive and reason/result clauses accompanied by 'adding' units through which writers make their arguments stronger when creating the niche. This convoluted textual development is also a typical feature of the Spanish intellectual style (cf. Montolío 1999, Cassany 2002):

> (1) *We propose that* MRI is an important adjunct in staging tumours prior to conservative surgery. However, there are few studies in the literature reporting the use of MRI in staging penile neoplasms [8-13]; the studies are limited by small patient numbers. *The aims of this study were* […] (ENG31)

> (2) *However*, most of the available data arise from patients who underwent an allo-SCT using BM as the source of hematopoietic stem cells, while information on patients receiving peripheral blood (PB) stem cell support or reduced intensity conditioning regimens (allo-RIC) is scanty. In addition, in previously published studies the control group was based on randomly selected healthy individuals, but to our knowledge there is no paired study that specifically compares […]. *To specifically address this issue, we analyzed* […] (SPENG16)

> (3) *Aunque* [*although*] el hemocultivo se considera la base para el diagnóstico de la bacteriemia, el valor de los hemocultivos en pacientes en que se sospecha bacteriemia es cuestionable, *debido a que* [*due to the fact that*] [...]. *Además* [*In addition*], los resultados de los hemocultivos pueden no tener ningún impacto en el tratamiento o, incluso, llevar a un tratamiento inapropiado. *A pesar de estas limitaciones, parece que el uso de hemocultivos puede llegar a ser excesivo* [*Regardless of these limitations, it appears that the use of hemocultures can become excessive*] en los pacientes adultos hospitalizados. *El objetivo de este estudio es determinar* [*the aim of this study is to determine*] […] (SP17)

Compared to text-oriented metadiscourse, participant-oriented functions in Introductions were relatively scarce in the three subcorpora—none of them showing average frequencies above 10.0 (Figure 3). 'Anticipating readers' reactions' and 'aligning with readers' were the most common functions, particularly in ENG and SPENG. The former function represents 50% of the total participant-oriented units in ENG and SPENG, and 30% in SP. 'Aligning with readers' amounted to 50% of the total participant-oriented occurrences in SP and almost 40% in ENG and SPENG. The highest frequencies of 'aligning with readers' and, above all, of 'anticipating readers' reactions' units in SPENG might indicate these writers' greater concern with interacting with the international audience than with the national readership.

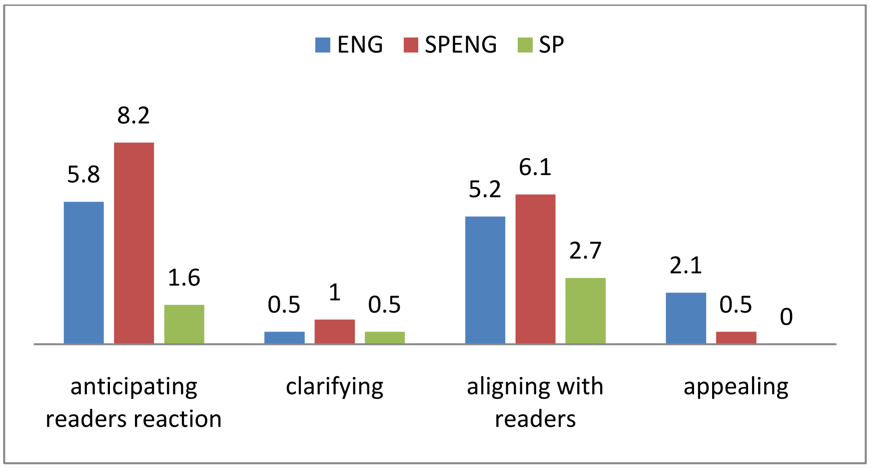

Figure 3. Participant-oriented units in Introductions (F per 10,000 words)

The three groups of writers align with readers when establishing their research territory (Move 1), in other words, they presuppose the readers' agreement and appeal to their shared background knowledge. They align with readers through either inclusive-*we* pronouns or oblique *we*-forms (e.g. *Our knowledge of their specific effect in ALL has been*; […] *recently been made in our knowledge of*; *De todos son conocidas*/[*We all know that*]). Despite these shared linguistic forms, this function amounts to 20% of the total participant-oriented units in ENG and SPENG, while in SP they represent more than 50%, suggesting that the Spanish writers establish a more collegial relationship with a national-based audience of practitioners than with the international audience.

'Anticipating readers' reaction' units tend to occur in the 'creating their research niche' (Move 2) of the three sets of Introductions. Writers seem to prefer anticipatory *it*-patterns to express limitations or shortcomings of previous work or to establish initial hypotheses in a cautious way. Comparative percentages across functions indicate that SPENG writers use 'anticipating readers' reactions' units more often than the ENG and SP writers do (50% vs. 40% and 30% in ENG and SP respectively), suggesting a more deferential positioning towards the international community of experts when seeking acceptance of new knowledge claims. Further, as exemplified below, these discourse units combine with probability modals, probability adverbs, shields and epistemic lexical verbs that help writers mitigate their discourse before occupying their research niche:

(4) The successful application of the novel nonmyeloablative bone marrow transplantation scheme for establishing stable mixed chimerism in normal dogs and correcting clinical symptoms of PK deficiency, leukocyte adhesion deficiency, and *GT led us to speculate that it might be possible to* induce donor-specific tolerance. (ENG18)

(5) It was also reported that some men with hypogonadism and ED who do not respond to PDE-5 inhibitors might respond to an androgenic supplement [7]. Therefore, although many points need to be clarified, *it seems clear that testosterone is important* in the erection mechanism. In the present study we analysed the total and free testosterone levels in a group of men with ED (SPENG34)

(6) *Parece razonable realizar estudios* [*it seems reasonable to carry out studies*] de evaluación económica en problemas de salud que supongan costes importantes y tengan diferentes alternativas de tratamiento. (SP21)

The cross-cultural comparison also showed that, at the very end of Move 2, ENG writers appeal to readers in an impersonal way with the aim of entreating them to share similar lines of thought (e.g. *it is therefore important to understand the mechanisms; it will be important to definitively identify*). ‘Appealing to readers’ was very rare in SPENG (3% of the total participant-oriented units) and showed no occurrences in the SP Introductions, which might represent a culture-specific strategy of the Anglophone-based writers before they occupy the research niche at the end of the Introduction.

No participant-oriented metadiscourse was found in Move 3 of Introductions, which indicates that the role of metadiscourse in this particular move is entirely text-oriented.

3.2 Metadiscourse in Discussions

Discussions showed a broader range of text-oriented metadiscourse functions than Introductions, although their average frequencies were relatively low (Fig. 4). ‘Arguing’ and ‘adding’ were the two most common functions in ENG and SPENG, while ‘focusing’, ‘arguing’ and ‘concluding’ scored the highest average frequencies of the SP subcorpus.

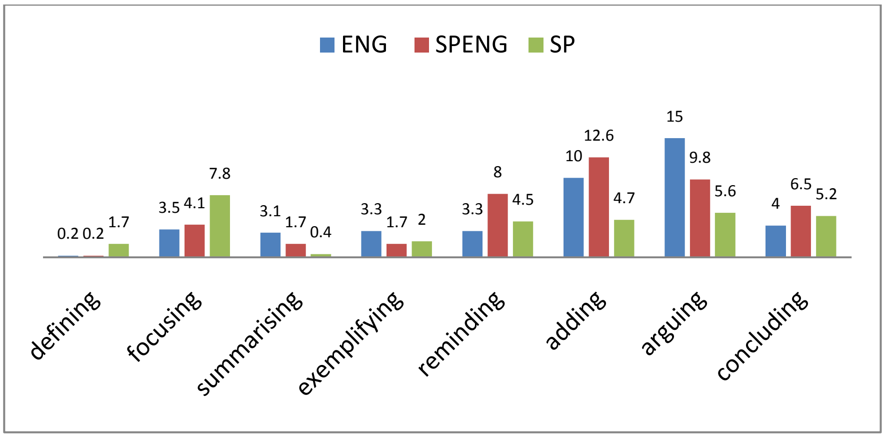

Figure 4. Text-oriented units in Discussions (F per 10,000 words)

As also happened in Introductions, text-oriented functions were distributed very similarly in the three subcorpora. In Move 1, ‘Highlighting research outcomes’, ‘defining’ units were scarce and functioned as opening sentences reminding readers of the main topic of the text (*Haematuria is a known late complication; occlusion of the postcavernous subalbugineal veins is; Se define como categoría de* [*x is defined as a category of*]). Other functions occurring in this move were ‘reminding’, ‘summarising’ significant findings and, very occasionally, ‘arguing’ in favour of them. By ‘reminding’—more common in SPENG (almost 20%) than in SP and ENG (14% and 7% respectively)—the three groups of writers re-describe central findings. In ENG, reminders are expressed by inanimate subjects and are often accompanied by evaluation (e.g. *The PIA assay described here [...] offers a unique advantage; Data presented in this article provide the first analysis*). In SPENG, reminders contain exclusive *we*-pronouns collocating with research process verbs referring back to information already stated in the RA; evaluation rarely occurs (e.g. *In this report, we have studied; As shown here, we detected the presence of; we showed here that Bcl- xL is up-regulated*). The SP writers use ‘reminders’ not only to restate the purpose of the paper but also to refer to information that has been previously mentioned in the RA. When SP writers remind readers of previous textual material, they opt for impersonal metadiscourse expressions, namely, passive constructions (e.g. *Como se ha comentado* *anteriormente, también se ha descrito* [*As previously reported, x has also been described*]). Following 'reminding' units, the SP writers often introduce 'arguing' statements containing exclusive *we*-pronoun patterns and authorial evaluation (e.g. *De todo lo expuesto en Resultados* [*from everything reported in the Results*], *deducimos que existe una influencia evidente* [*we deduce that there is a clear influence*]). Along with 'reminding', 'summarising' units are frequently followed by evaluative statements in ENG (e.g. *In summary, the assay that we present here is of clinical significance*) and sporadically in SPENG (e.g. *In summary, in the present study we show the presence; In summary, our findings have provided substantial assurance*). No summarising units appeared in Move 1 of the SP Discussions.

In Move 2, where specific research outcomes are explained and justified, the three groups of writers show very similar textual developments as they construct their discourse by exemplifying, focusing, adding and, above all, arguing. 'Exemplifying' units (e.g. *as an example, for example, such as*) help writers make information more specific when explaining outcomes. Through 'focusing' (e.g. *first, second, finally*), most common in SP (25% of the total participant-oriented units), writers guide readers through the explanation of research outcomes and provide reasons for justifying specific outcomes. As for 'adding' and 'arguing', the three groups of writers use similar additive markers (*moreover, additionally, furthermore, in addition, also* and the Spanish equivalents *además* and *también*) to justify the validity of findings (e.g. *Furthermore, we showed that; Moreover, no differences were found; Asimismo, merece destacar* [*Moreover, it should be noted*]). As happened in Introductions, the ENG writers tend to be 'arguers' (35% of the total participant-oriented units vs. approximately 20% in SPENG and SP), while SPENG writers seem to be 'adders' (almost 30% vs. 20% and 15% in ENG and SP respectively). Both 'adding' and 'arguing' help writers consolidate their research space, particularly in the texts published in international journals. In these two sets of Discussions, 'arguing' is mainly conveyed by impersonal metadiscourse expressions, namely inanimate subject constructions (e.g. *experiments presented here demonstrate; [T]he present study confirms*); the use of personal metadiscourse expressions such as exclusive *we*-pronoun patterns is very scarce (e.g. *We think that; We now advocate*). In both subcorpora, arguing units are unmodalised and at times accompanied by evaluation (e.g. *Nonetheless, our data argue that some threshold amount of cAMP formation is necessary; Our results not only provide further support for this hypothesis but also establish a potential mechanism*). In SP Discussions, 'arguing' units are expressed by inanimate subject patterns—as in ENG and SPENG—but there is also a noticeable preference for anticipatory *it*-patterns (e.g. *Se puede afirmar que* [*it can be affirmed that*]). As opposed to ENG and SPENG, these preferred 'arguing' patterns in SP are accompanied by modal markers and abundant subordination, again instantiating the impersonal and digressive style characteristic of Spanish academic prose (e.g. *Se podría argüir que el mayor porcentaje de ADVP en el primer período podría estar sesgado* [*it might be argued that the highest ADVP percentage in the first period might be limited to*]).

In Move 3, writers summarise their main research outcome(s) and provide conclusions. 'Summarising' units in ENG introduce writers' evaluative statements on the new knowledge claims (e.g. *In summary, the PIA assay is a useful surrogate; In summary, the assay that we present here is of clinical importance*). In SPENG, this function often introduces authorial evaluation (e.g. *In summary, our findings have provided substantial assurance; In summary, PET/CT is an accurate imaging tool*). Noticeably, whereas summarising units in Move 1 of ENG and SPENG lacked evaluation, authors frequently boost their research findings through these units in Move 3. Only one 'summarising' unit followed by a modalised clause occurred in SP (*Podemos terminar resumiendo que x puede curar* [*We can end by summarising that x can cure*]).

'Concluding' units in ENG are expressed by exclusive *we*-pronoun references and inanimate subject constructions. At times, they strictly refer to propositional material while at other times they introduce authors' evaluative remarks (e.g. *Therefore, we conclude that NIC does not enhance; In conclusion, this nonviral method ... is clearly capable of*). In concluding, SPENG writers also align with readers through impersonal metadiscourse expressions (e.g. *In conclusion, the results presented here suggest; In conclusion, our findings suggest that*). 'Concluding' units in SP help writers explicitly acknowledge limitations of research findings and convey deferential attitudes by hedging the discourse (e.g. *En conclusión, a pesar de que nuestra tasa de extracción se ha situado en niveles ligeramente mejores, todavía parece que puede* *haber margen para mejorar nuestros resultados* [*In conclusion, although our extraction rates are slightly better there still seems to be some margin for improving our results*]). Overall, the textual development in Move 3 is personal in ENG, tentative in SPENG and very impersonal in SP.

Participant-oriented metadiscourse takes a more prominent role in Discussions than in Introductions. Compared to the other functions, 'anticipating the reader's reaction' is the most frequent function in this section (Figure 5). Across subcorpora, SPENG writers seem to be most aware of possible readers' counterargumentation when seeking acceptance, followed by ENG. Scoring a lower average frequency in this function, the SP Discussions seem to involve less of a threat towards readers' disagreement on the part of the writers. The remaining functions—'clarifying', 'aligning with readers' and 'appealing to readers'—scored very low frequencies (below 10.0) in the three subcorpora.

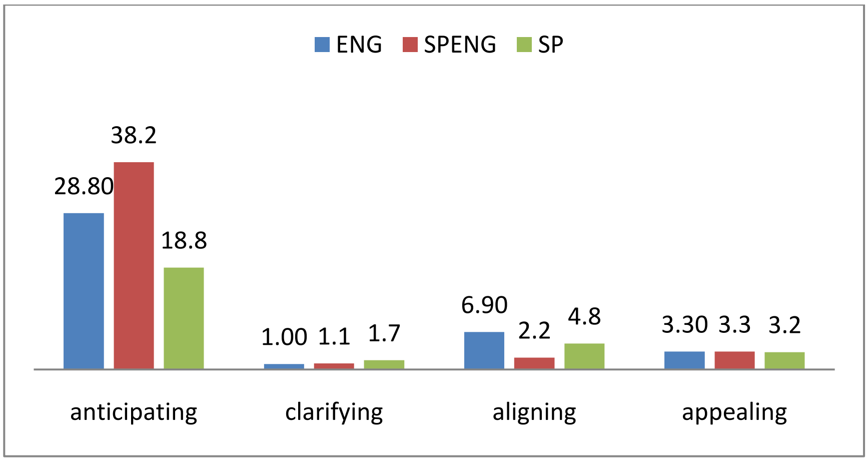

Figure 5. Participant-oriented units in Discussions (F per 10,000 words)

In the three sets of Discussions, 'anticipating readers' reactions' units occur towards the end of Move 1 and in Move 2, when writers highlight the new or important aspects of the study and interpret them in detail in order to advocate the "noteworthiness of the research" (Berkenkotter & Huckin 1995: 43). As stated above, this function is much more recurrent in the two sets of Discussions written in English, particularly those written by the Spanish scholars (representing 85% and 70% of the total occurrences of participant-oriented units in SPENG and ENG respectively). Impersonal inanimate subject patterns represent 90-95% of the total instances in the three subcorpora and help writers introduce interpretation of findings.

‘Appealing to readers’ units, very scarce in this section, are found towards the end of the first move, when authors make judgements about the most significant findings. Writers’ positioning when appealing to readers is again very impersonal in the three subcorpora (e.g. *One could also question whether a patient with microscopic hematuria should never undergo cystography; facts that should be discussed; La primera de las consideraciones debería hacerse respecto* [*The first consideration should be made regarding*]).

Despite these similarities, some culture- and language-specific preferences with regard to text development can be noted regarding ‘anticipating the reader’s reaction’. On the one hand, it is only in ENG that these findings are positively evaluated (e.g. *Collectively, these studies suggest that CDDO may have significant clinical activity; this new method should prove useful*), while in SPENG and ENG interpretation strictly refers to research outcomes (e.g. *these observations suggest that; parecería lógico que* [*It would be logical that*]). This cross-cultural variation might mean that Spanish writers take more guarded stances when selling the value of their research to the international readership.

On the other hand, this function involves different textual developments across subcorpora. As seen in the examples below, ENG writers evaluate research findings at the beginning of Move 1 (e.g. *provide additional evidence*; *thereby supporting*). Then, they anticipate readers’ reactions when recommending how to proceed with limitations (e.g. *[A]lthough additional confirmation of this finding is necessary, it might be reasonable to*). Finally, they boost their findings through overt evaluation (*data provide compelling evidence supporting*; *particularly useful*). The SPENG scholars consistently become impersonal and use ‘anticipating readers’ reactions’ (e.g. *Therefore, our findings should be confirmed prospectively*) in highly modalised statements thorough which writers explicitly acknowledge limitations in a very detailed way. Similarly, the SP scholars cautiously anticipate readers’ reactions when referring to limitations and construct their discourse upon cause/effect interpropositional relationships (e.g. *hay que tener en cuenta que los resultados se limitan a* [*it should be noted that the results are limited to*] … *por tanto, deben extrapolarse con cautela* [*therefore they should be extrapolated with cautiousness*].

> (7) Our results have broad and patient-specific implications. The discriminative abilities […] provide additional evidence of their validity, thereby supporting their use in this patient population. […]. *Although additional confirmation of this finding is necessary, it might be reasonable to* eliminate this line of questioning as a part of the postoperative assessment. Nonetheless, in aggregate, these data provide compelling evidence supporting […] These measures could be particularly useful [...] (ENG41)

> (8) Probably the main contribution of our report is that we have described the evolution of bone loss and the osteoporosis rate throughout a long period of ADT in a large number of patients. However our study was limited by being cross-sectional, retrospective, and nonrandomized. *Therefore, our findings should be confirmed prospectively*. As we noted, patient age was significantly different across the treatment subgroups. This brings up a significant point regarding the difficulty of interpreting our results. Moreover, correcting for age or other variables known to affect BMD, such as body mass index, nutritional status, race, alcohol intake, and smoking, *should be done in a prospective study*. (SPENG41)

> (9) *Nuestros resultados indican* [*our results indicate*] también la existencia de una relación entre anemia e insuficiencia renal en pacientes con ICC. En el grupo de pacientes con anemia los valores plasmáticos de creatinina fueron mayores, aunque sin alcanzar la significación estadística, mientras que la TFG fue significativamente menor. Respecto a las limitaciones de nuestro estudio, *hay que tener en cuenta que los resultados se limitan a* [*it should be noted that the results are limited to*] una serie de pacientes hospitalizados con ICC en un servicio de cardiología; *por tanto, deben extrapolarse con cautela* [*therefore they should be extrapolated with cautiousness*] al grupo global de pacientes con este síndrome. (SP15)

As mentioned above, ‘anticipating readers’ reactions’ also appears in Move 2 together with other functions such as ‘clarifying’ and ‘appealing to readers’. In the extracts below, clarifying again accompanies evaluation in ENG (e.g. *In other words, lack of selectivity (or “multitargeting”) may be important in*...), but not in SPENG and SP, where these units strictly perform a paraphrasing function (e.g. *In other words, opportunistic screening with PSA is performed*; *es decir, la carga genética se expresa* [*In other words, the genetic load is expressed*]).

As in Introductions, Move 3 is scarce in terms of participant-oriented metadiscourse, and is mostly occupied by text-oriented 'concluding' and 'arguing'. Following 'concluding' units, 'appealing to readers' units might tentatively suggest similar discoursal maneuvers across cultures and languages. In Move 3, after concluding and arguing, ENG writers align with readers through impersonal expressions (*it is clear that*) to refer to implications of research outcomes. Then, they appeal to readers by suggesting future lines of action that indirectly boost their own research results. In contrast, the SPENG writers provide arguments supporting their research but tend to hedge their discourse considerably. They also appeal to readers through oblique *we*-pronoun forms but refer to the implications of the new research in a vague manner. The SP writers appeal to readers when providing ways of advancing research and when involving themselves critically as regards how to further such research.

> (10) *It is clear that* cyclic nucleotides are a commonality in the mechanism by which HbF is induced by three very diverse agents, HU, AZA, and SB. *Understanding the role of cAMP and cGMP may help elucidate* the mechanisms of pharmacologic induction of HbF, leading to more-efficacious and less-toxic alternatives for treating hemoglobinopathies. (ENG23)

> (11) On the other hand, it has been shown that […]. However, our data indicate that this pathway does not seem to predominate in the control of Bim expression in these cells, although it could undoubtedly contribute to the fine-tuning of the system. The present results have pathological implications that *can help us to understand* the different phenotypes of ALPS or of other autoimmune diseases. (SPENG6)

> (12) *Los próximos años nos permitirán sopesar* [*The next years will allow us to assess*] los beneficios económicos y de reducción de toxicidad con los riesgos apuntados y establecer estrategias de tratamiento que pueden modificar la carga económica de la TARGA. […] *En cualquier caso ninguna estrategia teórica de ahorro de costos será útil sin la dotación de medios* [*In any case no theoretical strategy of cost saving will be useful without the necessary means*]. (SP5)

4. Discussion

The exploration of metadiscourse in Introduction and Discussion sections of research articles seems to confirm that academic prose is not simply information-oriented but also dialogic and interactive—in Swales's (2004: 218) words, "richly persuasive rather than flatly expository". Quantitative data has none the less shown that the amount of metadiscourse material is very limited compared to the amount of propositional, expository material. The greater presence of text-oriented metadiscourse in Introductions and the balanced merging of text- and participant-oriented metadiscourse in Discussions have shown to be justified by the specific rhetorical purposes of these RA sections. Text-oriented metadiscourse in Introductions helps writers provide readers with textual signposts anticipating information organisation. Intertwining with text-oriented metadiscourse, participant-oriented metadiscourse in Discussion sections reveals writers' aim at highlighting the newsworthiness of new research in order to seek readers' acceptance of the new knowledge claims.

The three sets of texts have displayed relatively similar uses of micro-level discourse functions in each rhetorical section. While the text-oriented functions of 'introducing the topic', 'adding', and 'defining' were the most common functions in Introductions, 'arguing' and 'adding' were most prominent in Discussions. All participant-oriented functions found in Introductions scored average frequencies lower than 10.0 except for 'anticipating readers' reactions', which was consistently higher in the three subcorpora. Discussions showed a broader range of participant-oriented functions than Introductions, with 'arguing' and 'adding' again scoring highest—these two functions serving writers to emphasise the new and important aspects of the study and strengthen their claims. This common use of metadiscourse in the three subcorpora may corroborate the existence of well-established rhetorical goals for these RA sections—hence, Introductions involve great persuasive efforts to get readers interested in the paper and Discussions involve greater persuasive efforts to get readers' acceptance of the new knowledge claims.

Taking the non-integrative approach to metadiscourse, the present study has identified the correlation of micro-level metadiscourse discourse functions with specific section moves and tentatively mapped the sequencing of these functions throughout each section in order to make propositional content "coherent, intelligible and persuasive to a particular audience" (Hyland 2005: 39). In Introductions, the three groups of scholars mainly rely on text-oriented metadiscourse to construct their research space. First, they define key concepts and align with readers when they set the research territory. Then, they build arguments, and add ideas and reasons to support those arguments. In doing so, they anticipate readers' reactions. Towards the end of the Introduction, writers tend to align with readers before introducing the statement of purpose and set suitable grounds for convincing audiences of the significance of the new research claims. Purposive announcements generally close this RA section in the three subcorpora.

A more complex merging of text- and participant-oriented functions across moves has been shown to occur in Discussions with the aim of assisting readers and interacting with them. The three groups of writers occasionally define key concepts but rather start this section by 'reminding' readers of the communicative purpose of the study. Then, they cautiously highlight their main research outcomes by means of 'anticipating readers' reactions' units. As the discourse evolves, writers explain specific outcomes by focusing, exemplifying, clarifying and, above all, adding and arguing. When arguing, they anticipate readers' reaction (as they did in Introductions) and it is only at the end of Move 2 that some 'appealing to readers' units occur. In the last move, they align with readers when summarising research outcomes and finally conclude, which is often accompanied by 'anticipating readers' reactions' statements serving face-saving goals. In sum, this shared use of text- and participant-oriented metadiscourse indicates that the three groups of writers seem to be adhering to the established rhetorical conventions—i.e. the uniform requirements—for writing these RA sections.

However, apart from these common metadiscoursal strategies for building dialogic spaces in Introductions and Discussions, the exploration of metadiscourse has brought to the surface both culture- and language-specific lexicogrammatical realisations of metadiscourse units, different preferences for personal/impersonal metadiscourse as well as preferred textual developments in the construction of dialogism through metadiscourse. In Move 1 of Introductions, ENG and SPENG writers aligned with readers through inclusive *we*-pronouns while the SP writers presupposed agreement at this point. In Move 2, ENG and SPENG writers argued through both personal and impersonal expressions while the SP writers provided no arguments in this move. When arguing and adding, both ENG and SPENG writers anticipated readers' reaction more than the Spanish scholars did when writing locally, which suggests writers' greater efforts in conveying the relevance of their research findings in a section in which "originality tends to be highly prized, competition tends to be fierce, and academic promotionalism and boosterism are strong" (Swales 2004: 226). In addition, the scholars publishing internationally proved to be more reader-friendly than the SP scholars and included more metadiscourse expressions telling readers what the text is about in Move 3 of Introductions. The 'introducing the topic' function also indicated that both ENG and SPENG writers tend to prefer personal metadiscourse expressions (i.e., exclusive-*we* references serving self-promotional goals), whereas the SP authors consistently opt for impersonal metadiscourse units and expressed purposive announcements by means of inanimate subject constructions.

As for Discussion sections, ENG and SPENG authors summarised the main research findings in Move 1. Summarising was often used by these writers to introduce overt evaluation. In Move 2, these writers hardly employed focusing units, unlike the SP scholars, and mainly concentrated their rhetorical efforts in providing arguments. Arguing in ENG and SPENG was expressed by means of impersonal inanimate subjects and was embedded in non-modalised and evaluative statements that helped writers make more forceful claims. Conversely, 'arguing' units were modalised in the SP Discussions—modalisation being a common resource in Spanish academic prose as a face-saving strategy. In Move 3, both ENG and SPENG writers used 'summarising' units again and were both assertive and evaluative, particularly the scholars from the Anglophone context. Further similarities were also traced when comparing 'anticipating readers' reactions' units in both ENG and SPENG Discussions. These two groups of writers took very detached and cautious stances when 'selling' the value of the new knowledge to the international audience.

These common rhetorical maneuvers in ENG and SPENG might indicate that Spanish scholars publishing internationally tend to adopt similar rhetorical strategies to those used by Anglophone writers for "alerting readers to the author's perspective towards both the propositional information and the readers themselves" (Hyland 1998: 443). Firstly, the existence of highly standardised rules for writing medical manuscripts may, in part, be responsible for the discoursal resemblance of the ENG and the SPENG texts. Also, according to data gathered from a recent survey addressed to Spanish-based scholars (Ferguson et al. forthcoming), broad exposure to reading Anglophone journals encourages scholars to adopt the established linguistic and rhetorical conventions. Some of these scholars even commented that they take expressions and set phrases from published manuscripts in English and use them to sort out their ideas in an attempt to make their papers acceptable for publication—a practice among Spanish scientists which was reported by St. John (1987) more than two decades ago. Secondly, institutional factors having to do with academic promotion, competition and prestige might also explain the pressure on scholars to publish internationally, particularly if we consider that the Spanish Accreditation System grants more credit to publications in English-medium high-impact journals than in Spanish journals (Pérez-Llantada 2007). The "publish (in English) or perish" quest in Spanish academia might thus explain why these scholars are eager to adopt the dominant rhetorical practices of Anglophone scholars in order to make their papers acceptable in high-impact journals and hence their research visible in the international context.

By "accommodating pragmatically to prevailing patterns" (Ferguson 2007: 9), when the Spanish scholars change their language of publication, they have shown to abandon the discoursal practices that they regularly use for communicating research to local practitioners. As instantiated in the analysis above, the linguistic resources for the expression of metadiscourse functions as well as the preferred uses of personal/impersonal metadiscourse at certain points in the texts used by SPENG and ENG scholars alike might be regarded as a clear indicator of the gradual homogenisation and standardisation of writing processes in academic English (cf. Mauranen et al, forthcoming).

However, the comparative analysis of metadiscourse in SPENG and SP has allowed us to identify some culture-specific linguistic traits in the two sets of texts written by the Spanish scholars. The comparison of 'arguing' units across the two cultural contexts and languages showed similar textual developments in Move 2 of the SPENG and SP Introductions. While the ENG writers seemed to prefer a straightforward style when arguing, the Spanish authors, when writing both in English and in Spanish, supported their arguments through 'adding' units—this results in the construction of a more elaborate and digressive discourse. The same occurred with 'anticipating readers' reactions' units at the end of this move, embedded within an elaborate and digressive ongoing discourse in SPENG, in stark contrast to the straightforward style of ENG writers.

Other common strategies in SPENG and SP also recurred in Discussion sections. In Move 1 of Discussions the SPENG authors used impersonal metadiscourse when reminding readers of textual material and, unlike the ENG writers, avoided overt evaluation in these units. The SP writers consistently used impersonal passive constructions, though at times they included some evaluative statements. 'Anticipating readers' reactions' units in this first move displayed similar linguistic forms in ENG and SPENG, but in the latter set of texts these forms were modalised with the aim of conveying deferential attitudes. Along similar lines, the SP writers anticipated readers' reaction by means of impersonal and highly modalised statements. In Move 2 of Discussions, both SPENG and SP scholars showed a greater preference for 'adding' units compared to the textual development of the scholars from the Anglophone context. In marked contrast to the ENG writers' straightforward style, this preference for adding reasons when building arguments contributed to an overall more elaborate and digressive discourse in the two sets of Discussions written by the Spanish writers. In Move 3, SPENG and SP writers again showed similar rhetorical preferences when concluding. Whereas the ENG scholars used expressions of involvement to provide conclusions, the Spanish writers—both writing in English and in Spanish—opt for impersonal metadiscourse units (e.g. inanimate subject patterns) in combination with abundant modalisation and clausal elaboration, again instantiating the digressive argumentative style of Spanish academic rhetoric.

These overall modalised discourses, impersonal positionings and common strategies for textual developments in the SPENG and SP subcorpora might be indicative that the Spanish scholars still retain part of their culture-specific intellectual style when they write in English as an additional language. In particular, the shared linguistic realisations of some metadiscourse functions and their specific functional work of metadiscourse for developing discourse in the Spanish texts in both L1 and L2 seem to bring to the fore the hybridisation phenomenon that is gradually being perceived in contemporary academic prose—a phenomenon which involves the mixing of local rhetorical practices with the dominant Anglophone discoursal and rhetorical models (cf. Mauranen et al. forthcoming). In fact, the steady adoption of the standardised norms established for academic English writing has been claimed to involve the gradual loss of rhetorical traditions, at least in

Romance languages such as Portuguese, Italian and Spanish (cf. Bennet 2007; Giannoni 2008; Pérez-Llantada forthcoming).

If we are to advocate cultural diversity in an English-medium academic and research world, the hybrid use of metadiscourse features in the SPENG texts described above would make it advisable to sensitise both native and non-native English scholars, journal editors and language advisors towards the standard vs. other multicultural traits of academic writing. Further, it would be important to enquire into the potential language disadvantages that culture-specific intellectual styles and, more specifically, preferred ways of guiding and interacting readers across cultures may affect the acceptance of non-native English scholars' contributions to international English-medium publications. Indeed, future research is needed to lead the debate on the extent to which non-native scholars should adopt new rhetorical conventions—the use of metadiscourse being but one of such conventions—when preparing their papers for international English-medium publications, or rather preserve their own culture-specific rhetorical traditions.

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Just to give you kind of a map of where we are going: A Taxonomy of Metadiscourse in Spoken and Written Academic English

Annelie Ädel, Stockholm University, Sweden

Abstract

One of the basic functions to which language is put is to comment on discourse or on language itself. Reflexivity in language occurs in everyday discourse as well as in specialised discourse, such as academic papers or lectures. It is often referred to as metadiscourse, or 'discourse about discourse', as in *In this paper, I explore…* or *just to give you kind of a map of where we are going*… Such expressions are very common in academic genres, where the writer/speaker is expected to guide the audience through the discourse, for example by making its structure explicit. While research into metadiscourse has focused on academic writing, academic speech has remained largely unexplored. Furthermore, comparisons of spoken and written metadiscourse are rare, so the similarities and differences between spoken and written types of metadiscourse are unknown.

The present qualitative and corpus-based study compares the use of personal metadiscourse in 30 spoken university lectures to that of 130 highly proficient essays by graduate students. The purpose is to present an empirically based taxonomy of the discourse functions of spoken and written metadiscourse with respect to academic English. Despite claims in previous research that separate treatment is needed, a lumping approach is taken rather than a splitting one. The goal is to create one taxonomy for both modes, thereby highlighting both similarities and differences in the distribution of discourse functions across speech and writing.

The proposed taxonomy consists of 23 discourse functions, divided into four main categories: *Metalinguistic comments*, *Discourse organisation*, *Speech act labels* and *References to the audience*. The findings reveal that most of the discourse functions in the taxonomy occurred in both speech and writing, although spoken metadiscourse performed a greater range of discourse actions than written metadiscourse. Differences in the conditions of speech and writing did indeed cause variation in the use of metadiscourse: The discourse functions REPAIRING, MARKING ASIDES and CONTEXTUALISING occurred only in the spoken data because of the lack of time for planning and revision in real-time discourse, while MANAGING COMPREHENSION/CHANNEL and MANAGING AUDIENCE DISCIPLINE occurred only in the spoken data because of the direct presence of an audience. Factors related to genre were also found to cause variation in the use of metadiscourse: ARGUING was considerably more common in the written data, since academic writers typically need to put a great deal of work into argumentation, while lecturers generally present information not based on their own research. MANAGING THE MESSAGE, on the other hand, was common in the spoken data, which can be attributed to lecturers adopting a more authoritative role than student writers.

1. Introduction

The concept of reflexivity in language (see e.g. Hockett 1977; Lyons 1977; Lucy 1993) goes back to the metalinguistic function in Jakobson's (e.g. 1998) typology of the functions of language. What reflexivity and the metalinguistic function refer to is, essentially, the capacity of natural language to refer to itself. Language users can use language to comment on language itself, the communicative situation, and their own roles in it.

Although Jakobson (1980) noted how common the metalinguistic function is in everyday language, most research into this function has been concerned with academic discourse—in particular, written academic discourse. Since the late 1980s, a relatively large body of research has developed on the basis of the phenomenon of 'metadiscourse' and its workings in written academic text, for example by Vande Kopple (1985; 1988), Crismore (1989), Markkanen et al. (1993), Mauranen (1993), Hyland (1998; 2005), Ädel (2006).

The research area of metadiscourse is not unified; rather, two quite different strands can be discerned, as noted by Mauranen (1993) and Ädel (2006): one adopting a narrow definition (referred to here as the 'reflexive model') and another adopting a broad definition (referred to here as the 'interactive model'). In the reflexive model of metadiscourse, reflexivity in language is stressed and is taken to be the starting point for the category. In the interactive model, by contrast, reflexivity is not a criterion but, instead, the concept is used to describe interaction—primarily in written text—between the writer and audience, conceived broadly. As I believe this approach to lead to the lumping of too many phenomena under 'metadiscourse', I adopt here the reflexive model.

The aim of this paper is to provide an analysis of the different types of metadiscourse that occur in spoken academic English—specifically, in the discourse of lectures. Written academic English—here in the form of highly proficient student papers—will be referred to throughout in order to bring into relief the specifics of spoken metadiscourse. A taxonomy of discourse functions of metadiscourse covering both speech and writing is offered.

In preparation for the comparison of the metadiscourse of speech and writing, I first give a brief overview of previous research on the two modes, which is followed by a summary of previous research on spoken metadiscourse. Section 2 introduces the present model of metadiscourse, while Section 3 describes the material and method used for the study.

Section 4 gives an account of the inclusions and exclusions of expressions involving the pronouns ‘I’, ‘we’ and ‘you’, on which the study will focus. Section 5 presents a taxonomy for the discourse functions of metadiscourse, illustrated with examples from the corpus material. In Section 6, I compare the discourse functions across speech and writing and discuss discrepancies in their distribution. Section 7 concludes the paper.

1.1 Previous research on speech and writing

At this point in time, we have approximately sixty years’ worth of accumulated knowledge about the relationship between speech and writing. Excellent summaries of previous research and approaches to the spoken versus written modes are found in Baron (2005), Biber (1988), Chafe & Tannen (1987), and Roberts & Street (1998). The “great divide” perspective which was predominant in the 1980s—in which speech and writing were essentially treated as apples and oranges—has largely given way to a view of language as embedded in social practices, with the spoken or written mode as such exerting no crucial influence on linguistic production. Thus, the pendulum has swung from a situation in which mode meant categorical difference—i.e. orality and literacy were seen as dichotomous—to one in which mode is largely irrelevant as a discourse constraint, but rather trumped by considerations such as context and genre. This is summarised in Besnier’s (1988:707) statement that “[t]he structural relationships of spoken and written language must be explained in terms of the social context of orality and literacy in different literacy traditions, rather than the cognitive demands of language production and comprehension in the spoken and written modes”.

Portraying speech and writing as static systems encoded by different media appears especially untenable with the advent of electronic media and the increased diversity of forms of communication (e.g. synchronous writing, as in chat, and asynchronous speech, as in a recorded and edited spoken talk). Instead, linguists, such as Chafe (1982), draw attention to the influence of contextual factors, specifically shared time and space, in any form of language production.

The observation that the amount of time available and the possibilities for interaction profoundly influence the linguistic output means that there are at least two constraints on spoken discourse which generally do not apply to written discourse. Those include (a) lack of time for planning and revision, and (b) the presence of an audience which is able to contribute to the discourse in real time. As for (a), what is in focus in the present study is university lectures which have been planned beforehand to some extent, but which are still given ‘live’. As for (b), the lectures have a live audience present, but the degree of interactivity is somewhat limited in the context of a lecture. Despite the relatively formal and monologic nature of these lectures, we can expect to find certain differences between academic speech and academic writing due to (a) and (b).

1.2 Previous research on spoken academic metadiscourse

The literature on the relationship between speech and writing helps to predict how spoken and written types of metadiscourse may differ. Previous work on metadiscourse has neglected to make this comparison for the main reason that research into metadiscourse has almost exclusively dealt with written language (for a summary of previous research into written metadiscourse, see Ädel 2006). Very little research has considered spoken and written metadiscourse simultaneously, and there are even fewer examples of research attempting to paint a unified picture of the types of functions that metadiscourse fills in academic discourse. My aim is to present a single taxonomy of the discourse functions covered by both spoken and written metadiscourse, so I will act a lumper rather than a splitter. The rationale for this is that the differences and similarities between spoken and written metadiscourse will be easier to capture with a unified approach.

The existing previous research on spoken metadiscourse in academic English is represented by Luukka (1994), Mauranen (2001), Pérez-Llantada (2006) and Thompson (2003). The spoken genres which have been studied include academic lectures (Mauranen 2001 and Pérez-Llantada 2006) and academic conference talks (Luukka 1994 and Thompson 2003).[1]

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1 There are a few additional studies of metadiscourse in spoken language; for example, Swales (2001) offers a discussion of metadiscursive expressions involving ‘point’ and ‘thing’ in a subset of MICASE (see Section 3), while Ilie (2003) studies metadiscourse in parliamentary debates. Furthermore, Keller

This research has, for the most part, focused exclusively on spoken discourse rather than on comparing speech and writing. Two of these sources, however, comment on both spoken and written metadiscourse: Mauranen (2001) and Luukka (1994).[2] Mauranen (2001) presents a splitting approach, stressing the differences between spoken and written metadiscourse. She explicitly comments on the desirability of splitting, stating that it seemed "more appropriate to try out other bases for categorisation than have been found relevant to the written mode" (2001:210). Luukka (1994), by contrast, takes a lumping approach and applies the same functions of metadiscourse to both spoken and written data. Luukka does not explicitly comment on her lumping strategy, however. It is possible that the material used (spoken and written versions of the same five papers delivered at a conference) may have appeared relatively uniform, due to the fact that she (a) considers highly monological spoken data, and (b) adopts the interactive model, which includes expressions of stance. The material used by Mauranen, by contrast, is quite diverse. Not only does it include both monologic and dialogic types of spoken discourse in academic contexts, but it also takes into consideration a much larger number of speakers, ranging from senior lecturers to undergraduate students.

Comparing the taxonomies used by Mauranen and Luukka, we find that they both consider three subtypes, summarised in Table 1.

(1979) and Schiffrin (1980) examine (aspects of) metadiscourse in non-academic spoken conversation.

[2] Although Pérez-Llantada (2006) also compares metadiscourse in academic speech and writing, her focus is primarily on form rather than function, which means that her findings are not immediately relevant here. Thompson's (2003) study, for its part, deals exclusively with text-structuring markers in spoken lectures, and written discourse is not brought in.

Table 1. Taxonomies used in Mauranen (2001) and Luukka (1994)

Subtypes in Mauranen (2001)	**Subtypes in Luukka (1994)**
monologic (organising the speaker's own ongoing speech)	*textual* (used by author to structure text)
dialogic (referring and responding to interlocutor's talk)	*interpersonal* (used to signal attitudes towards the content of the text or people involved in the communication situation)
interactive (eliciting response from interlocutor, e.g. asking questions, choosing the next speaker)	*contextual* (used by author to comment on the communicative situation or the text as a product)

In Mauranen's taxonomy, which applies to speech only, the point of departure is whose talk is being commented on, organised or elicited: the speaker's own or the interlocutor's. It is who takes the discourse initiative that is of primary interest. In Luukka's taxonomy, on the other hand, we find as the guiding principle the conventional distinction between text-organising and interactive expressions (the latter also including what I would term 'stance', as Luukka subscribes to the interactive model of metadiscourse), as well as an additional category of 'contextual' metadiscourse, which primarily seems to cover cases in which the speaker refers to audiovisual materials. Mauranen does not present any further subcategories as part of her taxonomy, whereas Luukka does: for example, 'signals of interactional attitudes' in 'interpersonal' metadiscourse, which is further split into 'presence of author (I)'; 'presence of audience (you)'; and 'presence of author and audience (we)'.

Neither Mauranen's nor Luukka's taxonomies will be applied here, as my interest is in specific discourse functions rather than in general subtypes of metadiscourse (see further Section 5). Also, while Mauranen's and my general definitions overlap for the most part, my intention here is to adopt a lumping rather than a splitting strategy as far as spoken and written types of metadiscourse are concerned.

2. The present model of metadiscourse

Metadiscourse is defined here as “reflexive linguistic expressions referring to the evolving discourse itself or its linguistic form, including references to the writer-speaker *qua* writer-speaker and the (imagined or actual) audience *qua* audience of the current discourse”, following Ädel (2006).[3] The reflexive model is used, which also follows Ädel’s (2006:27ff) criteria for metadiscourse: ‘explicitness’, ‘world of discourse’, ‘current discourse’, and—for personal types of metadiscourse—‘speaker-writer *qua* speaker-writer’ and ‘audience *qua* audience’. The ‘explicitness’ criterion (based on Mauranen 1993) refers to the fact that it is the explicit (and intended) commentary on the discourse as discourse that is of interest. The ‘world of discourse’ criterion states that the action should take place in the world of discourse rather than in the ‘real world’; put differently, it should be discourse-internal rather than discourse-external. The ‘current text’ criterion (based on Mauranen 1993) refers to the fact that metadiscourse makes reference to the current text rather than other texts; the latter would instead constitute intertextuality. The same principle applies to the current addresser and the current addressee, with the added requirement that they be talked about or referred to in their roles as discourse participants—that is, in the world of discourse. Section 4 provides examples to illustrate these criteria.

One aspect of the ‘current text’ criterion merits special attention. The present data suggest that the borders between events in spoken and written genres be treated somewhat differently. In spoken lectures, we often need to consider a class or a lecture series as one and the same ‘speech event’ or ‘text’, even though it is spread out in time and space. As well as referring to preceding and following locations within one and the same lecture unit, lecturers also refer backwards and forwards to previous and coming sessions, much in the same way as writers refer back and forth to sections and chapters (an example from the lecture data is *right* ***this is where we started last time*** *you can think of it in terms of…*). The position adopted here is that, as long as a stretch of discourse

[3] Ädel (2006) exclusively investigates written metadiscourse, so the definition has been somewhat modified in its wording to accommodate both written and spoken types of metadiscourse.

points to a lecture on a similar theme (with the same overarching purpose) by the same lecturer, addressing the same audience, it does not matter whether the lecture is not contiguous in time with the stretch of discourse in which the utterance was made. In other words, it is possible to consider something the 'current text' rather than 'intertextual' (which is by definition not metadiscourse) regardless of whether it takes place today, a week ago, or in a week's time. This position is also suggested by Mauranen (2001:204), who states that "[a] good deal of discourse organising talk refers to previous or later events which can be in an important way thought to be part of the ongoing discourse - as for instance in the case of a lecture series".

3. Material and method

The type of spoken academic English examined for this study represents a largely monologic genre: the university lecture. Transcripts from 30 large lectures from the Michigan Corpus of Academic Spoken English (MICASE; Simpson et al. 1999) were analysed, involving 33 hours of recordings and totalling 255,000 words. Almost all of the large lectures in the corpus are delivered in a traditional, monologic style, and they all have at least 40 students in the audience. The lectures represent a range of different subdisciplines from all four main academic divisions at the University of Michigan (the humanities, social sciences, physical sciences, and biological and health sciences).

The use of the selected personal pronouns and the discourse functions of metadiscursive units in the spoken data were compared to equivalent units in written academic English. The written data come from a corpus of written papers by advanced university students, represented by a subset of MICUSP, the Michigan Corpus of Upper-level Student Papers (see Ädel & Römer 2009), consisting of 130 A-grade papers by senior undergraduate and graduate students, which amount to just over 400,000 words.

The two data sets are not ideal for comparison. For example, the lecture genre involves an expert addresser and an audience of (more or less) novices, while the student paper genre involves a (more or less) novice addresser and an expert audience. Qualitatively, however, the comparison will still help to highlight what the differences and similarities are between spoken and written types of metadiscourse in academic English. In a future quantitative study, a corpus of published research articles in English (currently under construction) will be used as a more appropriate match for the lectures.

Following Ädel (2006), corpus-linguistic methods were used to retrieve potential examples of metadiscourse (the search terms were 'I', 'we', and 'you'), and then manual analysis of each example was performed in order to sift out irrelevant examples.

Only personal types of metadiscourse were studied, specifically units involving 'I', 'we', and 'you'. Personal metadiscourse includes reference to the discourse participants, as in *As for the seemingly common misconceptions **I mentioned above**...*, while impersonal metadiscourse includes no explicit reference to the discourse participants, as in *Doubtlessly, the **above-mentioned** conditions have a beneficial effect on...* (examples from Ädel 2006:14-15).

3.1 Disregarded data

Two types of data were disregarded in the study: quoted material and dysfluencies. Examples to illustrate disregarded data will be given below.

As argued elsewhere (e.g. Ädel 2006 and Mauranen 1993), when a phenomenon such as metadiscourse is studied, what is of interest is the wording of the current writer or speaker, not that of an external writer or speaker. This means that words borrowed from other sources—which tend to be quite common in academic discourse, whether written (see e.g. Hyland 1999; Ädel & Garretson 2006) or spoken (Ädel 2008)—need to be disregarded.

The following examples from the lecture data illustrate such disregarded sequences, where the stretch of discourse in focus is put in boldface:

(1) in that phrase, postquam bella civilia exstinxeram consensu universorum after **i had extinguished** civil war, by the consensus…
(2) so the liver is saying, okay, **i'm in trouble**, **i wanna shut down** glycolysis, which means…
(3) one also by Randy Newman on his latest album, C-D, **i'm dating myself**
(4) okay. um, we've covered **who am i**, **who are you**? um, you guys are…
(5) and i say **we** because, the disadvantage of women most women are…

Example (1) represents a translation into English of a Latin text (where the 'I' refers to Caesar, not the lecturer). Example (2) is part of a quote voiced by a hypothetical liver and not the current speaker, who is a lecturer in biology. The occurrence of 'I' in example (3) is part of a title. While examples (4) and (5) are strictly speaking not examples of quoted material; they represent cases of 'mention' rather than 'use' (see e.g. Ädel 2006:160) of the personal pronouns 'I', 'you' and 'we'.

Even formal and pre-planned types of spoken data, as in the case of lectures, typically involve a certain number of dysfluencies. Examples of false starts (6), repetition (7) and self-interruption (8) were disregarded on the basis of not representing complete metadiscursive units.

(6) good question **i_ i'll have to_** i'll email um one of the authors...
(7) okay **i'm gonna** i'm gonna carry that comment on because…
(8) now, **i wanna just give you two different_** i want to now contrast…

Another rationale for excluding such occurrences was to avoid boosting the number of occurrences simply due to a phenomenon which occurs in speech but not in writing.

Once the quoted material and the dysfluencies had been removed from the spoken data set, a total of some 10,000 examples remained. These examples were manually checked, and approximately 50 per cent of these were deemed not to function as metadiscourse.[4] The next section will further explain which examples were considered non-metadiscursive.

4. Metadiscursive 'I', 'we', and 'you'

The pronouns 'I', 'we' and 'you' can be used for a range of different purposes, not all of which serve a metadiscursive function (see Ädel 2006:30ff). Consider examples (9)-(14), which all involve a first person plural perspective.

(9) now, think back to what **we were talking about** earlier on in this hour
(10) so **we're going to discuss** the most common, charges that they have.

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[4] In the written data set, a total of 3,648 examples were retrieved based on the pronouns. Once quoted material and non-metadiscourse examples had been sifted out, just under 800 relevant examples remained.

(11) so this could be, uh water in Venice, and **we're going to put**, a, salt of a heavy metal, into that water source.
(12) so, um, there's been a lot of research, done on this [...] that's a problem with a lot of our ecological studies that **we don't have** long-term data and **when we're looking at** population cycles **we need** long-term, kinds of studies
(13) they can really do the most incredible things in France that **we are not allowed to** do
(14) gee, maybe the reason why we like **we tend to universally like** sweets and fats, is because of our evolutionary heritage

Note that, according to the interactive model of metadiscourse, every single occurrence of these pronouns is as an example of metadiscourse. In the reflexive model, by contrast, not all instances of such pronouns are considered self-reflective. While all of these pronouns mark 'involvement' (Chafe 1986) with the audience, the metadiscursive function is dominant only in certain contexts: specifically, in examples (9) and (10). Although such involvement features naturally may affect the relationship between the writer-speaker and audience—as emphasised by, for example, Crismore (1989) and Hyland (2005)—according to the reflexive model of metadiscourse, occurrences of first and second person pronouns do not automatically qualify as metadiscourse. This is where the self-reflective criteria of 'world of discourse', 'current discourse', 'speaker-writer *qua* speaker-writer' and 'audience *qua* audience', reviewed in Section 2, are applied.

Examples (10) and (11) above may illustrate the 'world of discourse' criterion: (10) involves doing something communicative (discuss), and (11) involves doing something in the physical world which has nothing to do with communication (put salt into something). In both examples, the lecturer is stating what is going to come next in the lecture (*we're going to*), but (11) is crucially carried out in the 'real world' and is thus not considered metadiscourse.

Only examples (9) and (10) meet the criteria 'speaker-writer *qua* speaker-writer' and/or 'audience *qua* audience', while examples (11)-(14) have no metadiscursive reference. There are oftentimes contextual clues present in the data which reveal something about the scope of a pronoun. For example, in (12) 'we' refers to researchers in the field; in (13), 'we' is contrasted to people 'in France', presumably meaning people in America; and in (14), 'we' is modified by 'universally', indicating that the speaker is talking about the human race as a whole.

None of these examples are considered metadiscourse in the reflexive model.

It is useful to think about metadiscursive reference in terms of personas. In a given discourse, the speaker-writer may appear in a range of different personas, only some of which are metadiscursive. For example, the speaker-writer may be visible as organiser of and commentator on the discourse, participant in the discourse scenario, teacher of the course, researcher in the field, or experiencer in the 'real' world—that is, as participant in popular culture, US citizen, or fellow human being. The audience, meanwhile, can also appear as commentator on the discourse, as participant in the discourse scenario, as student on the course, novice researcher, or, naturally, experiencer in the 'real' world.

The distinction between the current discourse and the current course, for example, can be related to personas being teachers/students. The current course is referred to relatively often in the lectures, as in (15):

(15) ...let you know then, um, uh **whether we're gonna open a section** or not.

Practical matters concerning the class take place in the 'real world' and not in the world of discourse. In (15), 'we' refers to the teachers, or even the university administration. Note, however, that the surface form of the unit suggests metadiscourse; 'gonna' is frequently used in previews of what is going to come in the discourse.

The complexity of 'we' reference is not as great as that of second person 'you' reference. Let me offer a few examples involving 'you' that further illustrate the inclusions and exclusions of the present reflexive model. Table (2) contrasts examples of the string *you can see* which are considered metadiscourse (left-hand column) and examples which are not (right-hand column).

Table 2. Examples of *you can see* functioning as metadiscourse (left) and not (right)

Specific reference: *you can see* functioning as metadiscourse	**Generic reference**: *you can see* not functioning as metadiscourse
(16) so **you can see** here, a Rendille child, herding his camels... and here's a… (17) and that triumphal arch that **you can see** on this slide too… (18) i leave it up to you to decide, how prevalent these attitudes still are, but **you can see** how, basically blatant they were, back in the nineteen fifties	(19) so we believe it because we've seen it, in action, i mean **you can see** evolution happening. (20) Kerouac did have a, sentimental streak and that's, just that **you can see** that one word, that's the difference, uh says a lot about…

In the metadiscourse examples, 'you' clearly refers to the audience, and the units are used to direct the audience's attention and influence their interpretation of the ongoing discourse. In the non-metadiscourse examples, the 'you' reference is generic, and the 'audience *qua* audience' criterion is not met.

The main objective of the present study is not to register the references or occurrences of individual pronouns, but to map out the discourse functions of metadiscourse units. These are described in the next section.

5. The discourse functions of metadiscourse

In dividing metadiscourse into different types, most taxonomies of metadiscourse either make quite broad distinctions (as illustrated in Table 1 above), or include types which are quite varied (e.g. ranging from the pronoun *I* counted individually as an instance of 'self mention', to transition markers such as *in addition*, to hedges such as *might*, to attitude markers such as *I am sure that…/quite extraordinary/limitations/ difficulties*[5] to full definitions such as *A plague of locusts is defined as a*

[5] The examples of attitudes markers are from Hyland (2005:79;150).

large, gregarious population present in at least two major regions[6]). While broad categories may serve as a useful starting-point, it is desirable to have a more detailed analysis of the types of metadiscursive acts that are performed in discourse. In the case of personal metadiscourse, we can study 'discourse functions', which essentially refers to the rhetorical function that the metadiscursive expression performs in its immediate discourse context (cf. Ädel 2006:57ff).

The taxonomy of discourse functions presented here is an extended and revised version of that of Ädel (2006). The taxonomy is likely to need further revision, but it can be seen as a first attempt at creating a comprehensive taxonomy covering both written and spoken metadiscourse. Within the taxonomy, a primary distinction is made between 'Metatext', which is primarily oriented toward the code/discourse itself, and 'Audience interaction', which is primarily oriented toward the audience (see Ädel 2006:36ff). 'Metatext' is divided into three different categories: *Metalinguistic comments* (described in 5.1), *Discourse organisation* (described in 5.2) and *Speech act labels* (described in 5.3). 'Audience interaction' consists of one category, labelled *References to the audience* (described in 5.4). These categories each include three or more discourse functions, listed in Figure 1 and described below.

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[6] The example is from Hyland (2005:98). Note that Hyland adopts the interactive model of metadiscourse and that none of the examples given are considered metadiscursive here.

METATEXT

Metalinguistic comments
REPAIRING
REFORMULATING
COMMENTING ON LINGUISTIC FORM/MEANING
CLARIFYING
MANAGING TERMINOLOGY

Discourse organisation
INTRODUCING TOPIC
DELIMITING TOPIC
ADDING TO TOPIC
CONCLUDING TOPIC
MARKING ASIDES
Manage topic

ENUMERATING
ENDOPHORIC MARKING
PREVIEWING
REVIEWING
CONTEXTUALISING
Manage phorics

Speech act labels
ARGUING
EXEMPLIFYING
OTHER SPEECH ACT LABELLING

AUDIENCE INTERACTION

References to the audience
MANAGING COMPREHENSION/CHANNEL
MANAGING AUDIENCE DISCIPLINE
ANTICIPATING THE AUDIENCE'S RESPONSE
MANAGING THE MESSAGE
IMAGINING SCENARIOS

Figure 1. The subtypes and the discourse functions of the proposed taxonomy of metadiscourse

The discourse functions will be explained and exemplified in the following sections. Examples to the left-hand side are always from the spoken corpus (MICASE), while examples to the right-hand side are from the written corpus (MICUSP).

5.1 Metalinguistic comments

The category of Metatext referred to as *Metalinguistic comments* includes the discourse functions REPAIRING, REFORMULATING, COMMENTING ON LINGUISTIC FORM/MEANING, CLARIFYING and MANAGING TERMINOLOGY. REPAIRING refers to both self- and other-initiated suggestions or alterations which correct or cancel a preceding contribution. REFORMULATING refers to the offering of an alternative term or expression not because the preceding contribution was seen as erroneous (as in the case of REPAIRING), but because of the added value of expansion. COMMENTING ON LINGUISTIC FORM/MEANING includes metalinguistic references to linguistic form, word choice and/or meaning. CLARIFYING is used to spell out the addresser's intentions in order to avoid misinterpretation. CLARIFYING here does not refer to a specifically interactive function, which is why it is not classified as a type of References to the audience; it involves examples of the addresser wishing to specify what he or she is saying (or not saying) in order to avoid misunderstandings. MANAGING TERMINOLOGY typically involves giving definitions and providing terms or labels for phenomena that are talked about.

REPAIRING

(21) they are deeply dependent on, and bound by, I'm sorry bound to the state…
(22) uh... maybe i should've said the possibility…
(23) i didn't mean to say that out loud

NO EXAMPLES FOUND IN THE WRITTEN DATA

REFORMULATING

(24) so if you'll allow me just, rephrase it a little…

(25) either necessary truths or necessary falsehoods (or impossibilities if you want)

COMMENTING ON LINGUISTIC FORM/MEANING

(26) now, what do we have going on in the Spanish?
(27) did i get those right? oop, i got surprise and fear wrong ugh
(28) i don't know exactly how to put it but…
(29) and this, kind of, competition, if you will, between the activities…

(30) To put it in Fregean language, we can therefore say that "statue" is one mode of presentation of…
(31) ES can be broken down into two different 'styles,' if you will -- pessimistic and optimistic.

CLARIFYING

(32) i'm not claiming uh that they know every…

(33) environmental things can cause mutations i'm not saying that but i'm saying that an organism…

(34) Again, I do not mean to say that…

(35) I should note for the sake of clarity that this distinction…

(36) I will not necessarily be trying to…

(37) I am by no means trying to…; I wish simply to…

MANAGING TERMINOLOGY

(38) …term which we'll use quite a bit, which we might as well define now, is that if…

(39) when we use the word influence we're talking about…

(40) and by this we mean that…

(41) When we use the term Creole in this paper, we will be using the following definition: …

(42) Following Schipper (1989), I define earnings management as "a purposeful intervention in…

(43) it is the result of what I shall call the unreflected imposition of a culture…

5.2 Discourse organisation

Discourse organisation includes a number of discourse functions having to do with topic management: INTRODUCING TOPIC (used to open the topic); DELIMITING TOPIC (used to explicitly state how the topic is constrained); ADDING TO TOPIC (used to explicitly comment on the addition of a topic or subtopic); CONCLUDING TOPIC (used to close the topic); and MARKING ASIDES (used to open or close a 'topic sidetrack' or digression).

INTRODUCING TOPIC

(44) what we're gonna do, in, today's lecture, is…

(45) In this paper, I explore the relationship between suicide and individual versus social factors.

DELIMITING TOPIC

(46) we're not gonna deal with all eight here

(47) okay we won't go into that, that's a little too much for us to consider.

(48) … is outside the scope of this paper, I have restricted my discussion to a few of the most common…

(49) I will focus on what the participants believe are the most pertinent actions to…

ADDING TO TOPIC

(50) uh i should add too that that uh, Ueda Akinari was known as a contemporary of Motoori Norinaga

(51) We might add that their oppressors, equally maligned by the privileges they…

CONCLUDING TOPIC

(52) okay. so we've now talked in detail about the first two steps

(53) we've now covered the types of sediments…

(54) We conclude that our results are consistent with the hypothesis that…

(55) I have attempted in this paper to to bring research on implicit racism together with…

MARKING ASIDES

(56) and now um, actually i want to do a little aside here…

NO EXAMPLES FOUND IN THE WRITTEN DATA

Discourse organisation also includes a series of discourse functions having to do with phorics[7] management: ENUMERATING is used to show how specific parts of the discourse are ordered in relation to each other. ENDOPHORIC MARKING is used to point to a specific location in the discourse; it refers to cases in which it is not clear or relevant whether what is referred to occurs before or after the current point (unlike PREVIEWING and REVIEWING), as for example when the audience is instructed to look at a table, or turn to a specific point in a handout.[8] PREVIEWING points forward in the discourse, while REVIEWING points backward in the discourse; these are used by the addresser to announce what is to come, or remind the audience what has already taken place, in the discourse.

ENUMERATING

(57) and we're gonna talk about mutations first.

(58) uh we wanna deal with two, things. one thing we wanna do is deal with, the concept of…

(60) In the following section I will present this objection followed by…

(61) Finally then, we are left with the eighth, and last tenet, of…

(62) I have two objections against this

[7] Phorics point to various locations and portions in the current discourse (see Ädel 2006:101ff). They can be referred to as the road signs of discourse.

[8] The label 'endophoric marker' is also used by Hyland (1998:443), though he uses it to include types which are referred to here as REVIEWING and PREVIEWING.

(59) um i first wanna make clear a couple of things…

proposal. First of all…

ENDOPHORIC MARKING

(63) okay so if you look at question number one, uh in your handout…

(64) However, as we can see in (5)…

(65) From these map points, we see that the proper gene order is…

PREVIEWING

(66) and we'll be coming to that

(67) and um the second question which we'll examine in the in the second hour…

(68) uh in in more technical language that we'll get to next week, they're…

(69) and by the way later in the semester we're gonna talk an awful lot about…

(70) and this is stuff that we won't get to so much right now but we…

(71) As I discuss below, the group…

(72) In Section 5, I evaluate the predictions Cole & Hermon's analysis makes with respect to…

(73) Below, I give a very brief history of the movement…

(74) although, as we will see later, other coexisting beliefs may cause…

(75) Before we examine his thoughts, let's briefly look at the background of his work.

REVIEWING

(76) uh we ended last time uh with…

(77) okay we ended the class last time talking about…

(78) …end of last Wednesday's discussion after we had critiqued, um that article that i…

(79) so that was, again something we talked about the first day

(80) now, think back to what we were talking about earlier on in this…

(81) We have seen two different arguments purporting to show how…

(82) As we have seen, it cannot be the diagonal one, but it cannot be…

(83) During this time, as I discussed above, the rhetoric of domestic violence…

(84) Firstly, as I mentioned above in the discussion of limitations, behavioral principles…

Finally, *Organising Discourse* also includes the discourse function CONTEXTUALISING, which is used to comment on (the conditions of) the situation of writing or speaking, and thus contains traces of the production of the discourse. In this discourse function, we typically find spelled-out justifications for choices made in planning or organising the discourse.

CONTEXTUALISING

(85) okay let's uh, we're doing pretty well on time so let's…

(86) so i i have entitled this lecture,

(90) Larson does not go into great detail on this and I will not do so here either.

philosophy of science...
(87) uh, in the time we have remaining we can't um um, go on to great detail…
(88) oh we have time to do this okay
(89) there's still time for another question
(91) However, I have said little about how transformations within this realm take place.
(92) I have reused the examples because both of them are cases in which the Urdu word…
(93) In keeping with the intended scope of this project, I have decided to…

5.3 Speech act labels

Speech act labels includes the discourse functions ARGUING, which is used to stress the action of arguing for or against an issue; EXEMPLIFYING, which is used when explicitly introducing an example; and a general category of OTHER SPEECH ACT LABELLING for those speech acts which are not sufficiently frequent—at least not in the present data set—to have their own label (examples below include giving a hint; suggesting; mentioning; emphasising).

ARGUING

(94) it's an extremely profound point i argue cuz...
(95) i was arguing to you that the different…
(96) I am postulating that…
(97) I argue that there are three ways in which…
(98) I argue that though this argument is convincing, the solutions that [X] proposes…

EXEMPLIFYING

(99) these people were, part of that group of painters uh we're talking Helen Frankenthaler Grace Hartigan.
(100) …that his life should be an example, um we have the biography of uh of Augustus in antiquity…
(101) I will use the embezzlement example to examine answers with respect to…

OTHER SPEECH ACT LABELLING

(102) that's the only hint i'm gonna give you for that question, um…
(103) i wanna remind you that we do not have class meeting…
(104) is that a question or a, thank goodness we're done, back there?
(105) … recycled cultural entities, okay. i will unpack that for you...
(106) , and I am suggesting that…
(107) …I am just mentioning it here as a possible alternative to...
(108) Based on this cross sectional analysis, I cannot answer any of the above hypotheses.
(109) I want to emphasize, however, that this does not mean that family is in any way…

5.4 References to the audience

The category of metadiscourse called *References to the audience*, finally, includes five discourse functions. The function of MANAGING COMPREHENSION/CHANNEL is to ensure that the addresser and addressee(s) are 'on the same page', to use a common metadiscursive metaphor. It is used to check or at least refer to participants' understanding and uptake in relation to the channel. MANAGING AUDIENCE DISCIPLINE refers to cases in which the audience is directly addressed and typically instructed to do something; it may also include cases in which the audience are reprimanded or complimented for their behaviour.[9] ANTICIPATING THE AUDIENCE'S RESPONSE pays special attention to predicting the audience's reaction to what is said, most often by attributing statements to the audience as potential objections or counterarguments. MANAGING THE MESSAGE is typically used to emphasise the core message in what is being conveyed; as such, it tends to provide the big picture, or at least state what the addresser wishes the audience to remember or experience based on the discourse. It also refers to cases in which the addresser explicitly comments on the desired uptake. IMAGINING SCENARIOS asks the audience to see something from a specific perspective, often in a vivid and engaging fashion. It is a strategy for engaging the audience and can be thought of as a mutual thought experiment between the addresser and the addressee, taking place in the shared world of discourse rather than in the 'real world'.

MANAGING COMPREHENSION/CHANNEL

(110) …more compact digital <u>you know what i mean</u>? (111) <u>can you guys hear</u>? (112) <u>i didn't catch that</u> (113) <u>did i answer your question</u>?	NO EXAMPLES FOUND IN THE WRITTEN DATA

[9] Note that cases in which the audience are directed to look at tables and handouts fall into the category of ENDOPHORIC MARKING, as it is more to do with organising the discourse than disciplining the audience.

MANAGING AUDIENCE DISCIPLINE

(114) alright, can i get your attention please?
(115) can we have, can we have a little bit of quiet?
(116) …due to your, extremely, short, attention span i will now skip right to the end

NO EXAMPLES FOUND IN THE WRITTEN DATA

ANTICIPATING THE AUDIENCE'S RESPONSE

(117) you guys'll probably, end up thinking... that i'm a twisted bastard for for uh for giving the…
(118) i don't know if that explains it

(119) You might still think that…
(120) I of course acknowledge that introspection is not always a reliable form of data analysis…
(121) You might then wonder how ontological relativity…

MANAGING THE MESSAGE

(122) that's a very powerful theory but what i want you to remember is...
(123) and what you will find, what i want you all to think about...
(124) but one, lesson you should also take away here of course is, is we've ran through, some data, that was…

(125) I hope that the reader has arrived at similar positions after reading this paper.
(126) I hope you enjoyed reviewing these materials.
(127) I have attempted to present the reader with…

IMAGINING SCENARIOS

(128) we'll give this guy a name we'll call him A. and let's say, there's…
(129) that's disinhibition. and sure you can imagine the scenario, you know if your visual cortex cells just…
(130) so suppose you're the researcher, hired by Columbia University you're just down there doing research…

(131) Suppose I say that it is wrong for me to steal some money, by which I mean I ought not…
(132) To use Hare's example, if I say that I ought to join the army…
(133) Imagine the following situation. You have to translate a foreigner's Physics. Her theory A happens to…

6. Discussion

The quantitative analysis of the two data sets revealed a great deal of shared discourse functions in speech and writing. The majority of the 23 discourse functions in the proposed taxonomy were found both in the spoken and the written data. However, there were also some salient differences in distribution across discourse functions. Seven discrepancies between the spoken and the written data were found. Five of these can be related to differences in conditions between speech and writing, while two of them have to do with genre differences. Future analyses taking frequency information into account may reveal further discrepancies between spoken and written types of metadiscourse.

The discrepancies found to be due to differences between the conditions of prototypical speech and writing concern REPAIRING; MARKING ASIDES; CONTEXTUALISING; MANAGING COMPREHENSION/CHANNEL; and MANAGING AUDIENCE DISCIPLINE. These functions were common in the spoken data, but altogether absent from the written data. The presence of REPAIRING and MARKING ASIDES in the spoken data is attributable to the lack of time for planning and revision in real-time discourse. The cancellation of a previous element is highly unlikely to occur in written academic discourse, precisely because writers have the opportunity to edit their discourse. Although such cancellations do occur in the writing process, they are rarely visible in the final written product.[10] As for MARKING ASIDES, these can occur in writing, although they appear to be uncommon in academic writing, with none found in the MICUSP data. Note that asides in written academic discourse commonly take the form of footnotes, but these require no overt linguistic marking.[11]

Even though CONTEXTUALISING does occur in the written data, it is considerably more common in the spoken data. Despite the MICASE lectures being largely pre-planned, we still find types of metadiscourse which show the typical ad-libbing of the spoken mode in contrast to the revised and edited written mode, for example when the lecturer refers to the time available. The temporal constraints on live, spoken discourse are quite often commented on in the lectures, as in *oh we have time to do this okay* and *there's still time for another question*.

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[10] Similarly, note that dysfluencies, omitted from the study, are also specific to spoken discourse.

[11] Interestingly, research in contrastive rhetoric has shown that there may be cultural/linguistic differences in tolerance for digressions in academic prose. For example, Clyne (1987) shows that digressions are more likely to occur in German prose than Anglo-American prose.

The occurrence of MANAGING COMPREHENSION/CHANNEL and MANAGING AUDIENCE DISCIPLINE in the spoken data is attributable to the direct presence of an audience, which makes possible live exchanges, not just 'imagined exchanges' (cf. the other subcategories of audience-oriented metadiscourse present in the written data). This is not to say that these types could not occur in written discourse. Consider, for example, an electronic version of a paper making a statement like *If the hyperlinks do not work, copy and paste the links below*; a journal making a statement like *If you are reading the printed version of this journal you will notice a subtle change in the paper. This issue is printed on...*; or a textbook giving an instruction like *You should always read these sections carefully, even if you skim everything else*.[12]

The two discrepancies found to be due to genre differences and not differences between speech and writing concern the discourse functions ARGUING and MANAGING THE MESSAGE. Note that these discrepancies are conditioned by the nature of the data used for this study. Also, as mentioned above, the spoken lectures and the advanced student writing are not a perfect match in terms of genre. ARGUING is considerably more common in the written data, and is likely to be genre-related in the sense that academic writers typically need to argue a point crucial to their "research story", while lecturers generally present data and facts not necessarily based on their own research. By contrast, the discourse function MANAGING THE MESSAGE is rare in the written data but quite common in the spoken data. This is likely due to genre-related factors involving power relations; specifically, lecturers often tell students what to pay special attention to, while student writers (even very advanced ones) are rarely able to present the 'big picture' perspective to their readers (who generally are their teachers). Written research articles, by contrast, would be more likely to involve instances of this discourse function, as they are produced by professionals who both need to and have the ability to project a knowledgeable persona.

[12] These are attested examples found on the internet.

7. Conclusion

The lumping approach taken to the spoken and written data sets has worked well; it has produced a comprehensive taxonomy of both spoken and written types of metadiscourse. Overall, the majority of the discourse functions in the taxonomy occurred in both modes, although spoken metadiscourse appears to have a greater range of discourse actions than written metadiscourse. The discrepancies found between the spoken and written data sets were not sufficiently large to warrant separate taxonomies. However, it should be stressed that only academic types of discourse have been considered; it is an empirical question whether the metadiscourse used in informal conversational speech would fit as easily into the same taxonomy. In any case, a lumping rather than a splitting approach enables easy comparison across spoken and written types of discourse, pinpointing not only how they differ, but also what they have in common.

The results of the analysis showed that differences in the conditions of speech and writing cause variation in the use of metadiscourse. The existence of constraints on the amount of time available in speech leads to less opportunity for planning and revising the discourse. The presence of an audience which is able to contribute to the discourse—as is the case in the lectures—means more opportunity for interaction between the speaker and the audience. The discourse functions REPAIRING, MARKING ASIDES and CONTEXTUALISING occurred primarily in the spoken data due to the lack of time for planning and revision in real-time discourse, while MANAGING COMPREHENSION/CHANNEL and MANAGING AUDIENCE DISCIPLINE occurred in the spoken data due to the direct presence of an audience, which makes live exchanges possible.

Another cause of variation in the use of metadiscourse was genre: the spoken lectures and the written student papers used for comparison have different purposes, audiences, and even represent somewhat different speaker-writer roles, which led to a couple of differences in the distribution of discourse functions. ARGUING was considerably more common in the written data, since academic writers typically need to put in a great deal of work on their argumentation, while lecturers generally present information not based on their own research. By contrast, MANAGING THE MESSAGE was common in the spoken data, which is likely due to power relations. Lecturers tend to take on the role of instructors, telling students what to pay special attention to, while student writers are rarely able to present the 'big picture' perspective.

This qualitative study has offered a general overview of those discourse functions which academic speech and writing have in common and those for which there is a marked difference in distribution. What is needed in future research is quantitative approaches to uncover more specific differences between spoken and written metadiscourse. In fact, it would be desirable to have not only frequency information about discourse functions across modes, but also across different speaker groups (e.g. teachers versus students; professional writers versus novice writers). Mauranen's (2001:209) hypothesis that "those in a dominant position in any speech event will use more reflexive expressions" may be further fine-tuned with access to such information.

Despite the relatively large body of data analysed for the present study (more than 13,000 examples were originally retrieved, out of which fewer than half were classified as metadiscourse), only personal metadiscourse has been considered. Future comparisons of spoken and written metadiscourse also need to include impersonal types. It is reasonable to assume that spoken genres would make greater use of personal types of metadiscourse, and, conversely, that written genres are likely to rely to a greater degree on impersonal types. A thorough study of impersonal types of metadiscourse may even result in categories being added to the taxonomy proposed here.

Since the focus of the present study has been the discourse functions of metadiscourse, the actual linguistic forms of these functions have not been dealt with. However, the phraseology of discourse functions also deserves thorough analysis. Many metadiscursive expressions are likely to play a prominent role as stored units that help in discourse processing; for example, as discourse-structuring devices (see e.g. Chaudron & Richards 1986). This brings me to my final point, which is that there is potential for the analysis of metadiscursive acts and their wording to be packaged pedagogically, especially for the benefit of non-native speakers of English. Anyone using spoken and written academic English needs to be intimately familiar with the rhetorical acts and recurrent linguistic patterns involved in metadiscourse, both for comprehension and for production.

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Metadiscursive Practices in Introductions: Phraseology and Semantic Sequences across Genres

Marina Bondi, University of Modena and Reggio Emilia, Italy

Abstract

The study of metadiscursive practices is particularly fruitful in introductory part-genres where the representation of disciplinary discursive procedures plays a major role for the discourse community. The main aim of this paper is to investigate the ways in which some English metadiscursive expressions (forms of self-mention and illocution markers in particular) are used to offer a representation of academic argument in different genres. The paper concentrates on the representation of discourse procedures in introductory moves, looking in particular at how economists identify their research purposes and their discourse space, while providing a definition of their topic or contextualizing their research in current debates. The study is based on two small corpora of article introductions and textbook introductions. The approach adopted looks at phraseology as a perspective integrating meaning, form and function. The phraseological patterns identified are analyzed as sequences of semantic units—involving reference to a textual source, a discourse procedure and a cognitive construct. Cross-generic variation highlights a different lexical range and different lexical combinations in the two corpora examined. This is interpreted in terms of the ethos of the discourse community and the different role played by argument in the two genres.

1. Introduction

Research on reflexive features of academic discourse has revealed growing interest in variation across languages, genres and disciplines (e.g. Dahl 2003, 2004; Bondi 2005; Hyland 2005). A variety of factors may be shown to affect the representation of one's own evolving discourse, with a view to the inherently argumentative nature of academic discourse. First of all, culture—used here to refer to both local culture and local academic culture—may determine what is considered appropriate argument (Ventola & Mauranen eds. 1993; Mauranen 1993a and b, 2001; Fløttum & Rastier eds. 2003; Bondi 2007). Then the ethos of the discipline—what the community considers appropriate methodology and relevant objectives—may have an impact on language choice and determine in particular the representation of research activity (Hyland & Bondi eds. 2006). Finally, the status of the genre within the discipline—what sort of functions are normally attributed to individual genres—may be equally relevant, especially in the degree of explicitness of self-reference (Bamford & Bondi eds. 2005).

Choosing to talk about "metadiscursive practices" (Bondi 2005; Bamford & Bondi eds. 2005) means emphasizing the centrality of discourse as social action and the need for discourse participants to refer to their own discourse and represent its nature and development. While recognizing that the word "metadiscourse" may be slightly misleading in suggesting that metadiscourse is somewhat "outside" discourse, it can be argued that the "M-word" (Sinclair 2005) still proves to be inevitable when the aim of research is to illuminate features of discourse. Reflexivity may be the most appropriate expression when looking at features of individual lexico-grammatical units, and therefore of Language as system, but metadiscourse is often preferred when linking work on Text—in particular the study of organizational units (Sinclair & Mauranen 2006) in the linearity of text—and work on discourse as social practice. The expression thus refers to a "folk linguistics" perception of discourse within the community, i.e. the words used by the community to represent its own discursive activity. This may not coincide exactly with what linguists recognize as reflexive language. In academic discourse studies, for example, the study of metadiscursive practices will be equally concerned with illocution markers that are inherently reflexive (*we define*) and illocution markers that only become so in specific discourses (*can be measured as*, followed by the appropriate mathematical expression).

The study of metadiscursive practices may be particularly fruitful in introductory part-genres where the representation of disciplinary discursive procedures plays a major role for the discourse community. By comparing a corpus of article introductions and a corpus of textbook introductory chapters within the same discipline—economics—we should be able to highlight cross-generic variation and to discuss the different representations of disciplinary discourse in a research genre and a didactic genre.

The main aim of this paper is to investigate the ways in which some English metadiscursive expressions (forms of self-mention and illocution markers in particular) are used to offer a representation of academic argument in different genres. The paper concentrates on the representation of discourse procedures in introductory moves, looking in particular at how economists identify their research purposes and their discourse space, while providing a definition of their topic or contextualizing their research in current debates.

Reporting expressions—*verba dicendi* like *find, suggest, show, argue*, etc. with their nominalizations—have been a key issue in metapragmatic studies of illocution and in studies on reflexivity in language. The language resources available in a community offer interesting insights into the culture of the community itself. Verbs referring to discourse or research acts may variously characterize evaluative positions (Thompson 1996; Hunston & Thompson eds. 2000; Hunston 2004), as well as disciplines or genres (Hyland 1999, 2000; Thompson 2005; Groom 2005; Charles 2006; Dahl 2003).

Similarly, self-reference markers—*we/our, this/the present + paper/ study/research/section/chapter* etc.—identify discourse participants and discourse units in ways that may be characteristic of a discipline or a genre, as shown by the numerous studies of academic discourse that have looked at these as signals of writer identity, often acting as tools of self-promotion (Hyland 2001, 2002; Breivega et al. 2002; Fortanet 2004).

Both reporting expressions and self-reference markers are core elements of metadiscourse—often defined as "discourse about discourse" (Vande Kopple 1985; Crismore 1989)—and deserve special attention in most classifications of its language resources, whether including or excluding evaluative elements (see Ädel 2005, 2006). It is my contention that their use in academic discourse can be more closely related to issues of generic structure if the two are looked at in combination, as phraseological patterns involving both reporting expressions and self-reference markers.

Metadiscourse is best defined functionally rather than formally and metadiscourse studies have often had to look at phraseology rather than isolated words, placed as they are at the intersection of descriptive, theoretical and educational work. The emphasis here is on patterns (Hunston & Francis 1999) and especially on "semantic sequences" (Hunston 2008), that is, sequences of semantic elements that may reveal patterning even in contexts of formal variation.

The next section outlines the approach to phraseology as integrating meaning, form and function. This methodological framework leads to a presentation of the corpora examined and the specific analytic procedures applied. The results of the analysis are presented by dealing with article introductions and textbook introductions separately. This is followed by comparative discussion of the phraseological patterns identified—semantic sequences involving reference to a textual source, a discourse procedure and a cognitive construct.

2. Phraseology, framework sequences and metadiscursive nodes

Phraseology is identified here on the basis of a combination of frequency-based information and semantics. Starting from the frequencies of word forms or multi-word units, we study the extended lexical unit (Sinclair 1996), identifying both the potential semantic associations between otherwise different forms and the association of the unit with further textual-pragmatic functions. The aim is to integrate meaning, form and function in phraseological studies, along the lines of work carried out by Groom (2005), Charles (2006) and Hunston (2008).

Such a view of phraseology also integrates corpus and discourse perspectives. A corpus perspective looks at words in combination and sees phraseology as the ideal starting point for the exploration of the systematic relation between text and form (Sinclair 2005). A discourse perspective sees interaction and argument instantiated in textual practices recognized and redefined by discourse communities. Integration of both perspectives ensures that corpus data are interpreted in terms of verbal action and textual structures, beyond immediate lexico-semantic associations (Bondi 2008:35).Introductory moves which identify the discourse space chosen by the writer are typically characterized by phraseological combinations of self-reference markers and reporting expressions combined in specific sequences of semantic units (Hunston 2008) constituting acts of self-reference (Sinclair 2005): *in this paper we show, the next section outlines*, etc. These sequences help structure discourse by pointing at its macro-argumentative structure, thus acting as interpretative “frameworks” for the whole discourse. These “framework sequences” can be studied as core features of academic disciplinary discourse, signalling the way communities represent their own practices.

Metadiscursive practices seem to cluster around specific functional steps in the generic structure of the text, acting as “metadiscursive nodes”. There are basically two potential metadiscursive nodes in article introductions:

(a) Presenting the research, by identifying the **topic** (*the present paper explores the interdependence...; in this paper we study the links between...*) or **purpose** (*the purpose of this paper is to extend the analysis...; the present study was undertaken with two key objectives in mind...*). These are closely related, although there may be some intercultural variation.

(b) Presenting the paper **outline** (*the paper is organized as follows...; in the next section we discuss the model...*).

In terms of the move structure of article introductions as outlined by Swales (1990, 2004:230), they both relate to Move 3 (*Presenting the present work*), referring in particular to obligatory Step 1 (*Announcing* present research descriptively or purposively) and Step 7 (*Outlining* the structure of the paper). For an extended analysis of metadiscursive units connected to move/step analysis, see Pérez-Llantada (this volume). An example of both is provided below, where signals of the two steps are underlined:

> (1) 1. Introduction. Given the governance issues arising from the separation of ownership and control, it is not surprising that the form of the relation between the performance of firms and managerial ownership has been the subject of empirical investigation (for example, see Morck et al., 1988; McConnell and Servaes, 1990 and McConnell and Servaes, 1995; Kole, 1995). To date the analysis has been primarily US based and the purpose of this paper is to extend the analysis in a number of important ways. First, the analysis of the relationship between the performance of firms and managerial ownership is extended to the UK where there are important differences, as compared to the US, in the governance system. In addition, the distribution of managerial ownership in the UK is different to that of the US and it has certain properties which are a positive benefit given the nature of the present analysis. Second, the analysis is conducted with a more generalized form of the relationship between management ownership and firm performance and with different measures of the performance of firms.
> The paper is structured as follows. Section 2 outlines briefly the extant literature concerning the relation between the performance of firms and managerial ownership. As a means to guiding the methodology of the present paper, Section 3 discusses how institutional differences between the US and UK might lead to differences in governance mechanisms. Section 4 details hypotheses and empirical methods. Section 5 describes the sample and data, while the empirical findings are presented in Section 6. Section 7 presents conclusions and summarizes the findings of the paper. (I-23, *Journal of Corporate Finance*)

Similarly in economics textbooks one can identify functions like Mapping the *discipline* (i.e. providing a definition of the discipline and its object in relation to neighbouring disciplines) and Mapping the *text* (i.e. providing an outline of the text) (Bondi 1999:63-64). It is this second function that is particularly relevant here, as represented by attempts to establish conventional chapter structures and announce content and procedures. Introductory chapters usually set out the basic definitions—in particular a definition of economics as such—and anticipate the structure of the book. Notice for instance how Example 2 closes the introductory chapter by summarizing what has been established and announcing the objective of the second chapter, as well as the basic distinction of the textbook into micro- and macro-economic issues:

> (2) In this chapter, we have attempted to explain the nature of economics, to outline some of the major concepts which modern economists employ and to discuss the methodology of economics as a 'science'. It should be clear by now that the basic function in an economy is the production of goods and services. Without production, no economy as such could exist. For this reason, before delving into the main areas of micro- and macroeconomics, it is useful to set out the major concepts of production. This is our objective in Chapter 2. (Hardwick Ch.1)

3. Materials and methods

The study is based on two small corpora that have been designed to be representative of different part-genres—article introductions and introductory textbook chapters.

The CAI corpus (Corpus of Article Introductions) consists of 35,994 words. It is composed of 40 introductions of a random selection of research articles taken from a larger corpus of articles collected over two years (1999-2000) from eight refereed journals representative of a wide range of economic subdisciplines and approaches.[1] The small corpus of

[1] The corpus comprises articles from the following journals: *European Economic Review* (EER), *European Journal of Political Economy* (EJOPE), *International Journal of Industrial Organization* (IJOIO), *International Review of Economics and Finance* (IREF), *Journal of Corporate Finance* (JOCF),

introductions can be measured against the corpus of the 40 full articles. From the point of view of article types, or subgenres of the research article, these can be described as: two historical essays, two argumentative essays, two surveys, 34 model-based formal analyses, i.e. papers where a model is presented and tested with empirical data or simulations.

The CTI corpus (Corpus of Textbook Introductions) comprises 10 introductory chapters of economics textbooks, amounting to 70,776 words. The textbooks were chosen on the basis of a variety of criteria: they were all major works whose authority is established by their longevity (there have been regular revisions and numerous editions) and by their being included as set reading texts or reference texts in reading lists for British and American university students (and A-Level students). A reference corpus of 40 chapters from the same textbooks is also available.[2]

The analysis—supported by *WordSmith Tools* 5.0 (Scott 2007)—starts by exploring the frequency and use of metadiscursive elements and moves on to concordance analysis of highlighted elements, in order to identify similarities and differences between the genres through collocational and phrasal patterns. Repeated strings of words point to some of the most interesting metadiscursive nodes of the part-genre "Introduction". An analysis of the semantic relations between elements is

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Journal of Development Economic (JODE), *Journal of Socio-Economics* (JOSE), *North American Journal of Economics and Finance* (NAJEF).

[2] The included textbooks are: W.J. Baumol & A.S. Blinder, *Economics. Principles and Policy*, 4th Edition, Orlando, Harcourt Brace Jovanovich, 1988; D. Begg, S. Fischer & R. Dornbusch, *Economics*. British Edition, Maidenhead, McGraw-Hill, 1983; J. Craven, *Introduction to Economics*, Blackwell, Oxford, 1984; E.G. Dolan & D.E. Lindsey, *Economics*, 5th Edition, NY, Holt, Reinhart and Winston, 1988; S. Fischer & R. Dornbusch, *Economics*, NY, McGraw-Hill, 1983; P. Hardwick, B. Kahn & J. Langmead, *An Introduction to Modern Economics*, 3rd Edition, 1990; R. Lipsey, *An Introduction to Positive Economics*, 7th Edition, London, Weidenfeld and Nicholson, 1963, 1989; P.A. Samuelson & W.D. Nordhaus, *Economics*, 14th Edition, NY, McGraw-Hill, 1992; G.F. Stanlake, *Introductory Economics*, 5th Edition, London, Longman, 1967, 1989; P. Wonnacot & R. Wonnacot, *Economics*, 2nd Edition, NY, McGraw-Hill, 1982.

then necessary to identify repeated semantic sequences. Different combinations of lexical units can be analysed in terms of repeated semantic units. Expressions such as *the paper discusses the model; the chapter examines the issue; the effects are discussed in the next chapter; the results are reported in section 3,* etc. can all be related to three main categories:

a) Discourse units/participants (*section, paper, chapter*; *I, we, you* etc.)

b) Research/discourse procedures (*discuss, report, examine* etc.)

c) Cognitive constructs (*model, results, effects, issue* etc.)

4. Article introductions: Generic structure and framework sequences

The advantage of working with a small corpus of articles is that their rhetorical structure can be studied more closely, so as to illuminate the analysis of lexis with a consideration of the pragmatic context. A close reading of the corpus of introductions confirms that all introductions (40 out of 40) announce the present research, whereas a smaller number—25 (62.5%)—have an outline.

Outlines are highly standardized. They are mostly positioned after the presentation, as the final move of the introduction itself (only two examples were interspersed with the presentation). They are also highly formulaic in form. An analysis of key-clusters—strings of words repeated with higher frequency than in the reference corpus of the full articles—highlights metadiscursive nodes of this kind: clusters such as *is organized as follows* and *the rest of the paper* only occur nine and three times respectively, but only in introduction outlines.

The key clusters thus clearly point to the metadiscursive node "Presenting the paper outline", but do not account for the full range of realizations. The outline itself is mostly introduced by a purely prospective unit with a recognizable semantic structure: reference to the text is typically associated to a verb that signals textual structure and is followed by a cataphoric element, as shown in Table 1.

Table 1. Outline introductory formulae

DISCOURSE UNIT	V-STRUCTURE	CATAPHORA
This paper/ the paper/ the rest of the paper/ the remainder of the paper	*is organized/ is structured/ proceeds*	*as follows/ in the following way*
the structure of the paper	*is*	

The rest of the outline is also constructed by clearly organized frameworks, which can be better described as combinations of a few basic patterns. On the one hand, we have the conventional form of *that*-reporting (*the model suggests that; we show that; it is argued that,* etc.). On the other hand, we have variations on this basic pattern, typically involving cognitive or research constructs in a "narrative" report of speech acts; what is introduced is not so much a proposition but rather a research or cognitive tool: *a model is presented; a possibility is examined; a case is considered*, etc. These are mostly explicitly related to a source, either personal (*We present the model*) or impersonal (*The model is presented in section 2; Section 2 presents the model*).

A "framework semantic sequence" is thus a combination of elements referring to a textual source—either personal or "locational" in Dahl's terms (2004)—with verbal reference to the rhetorical structure of the text and nominal reference to a cognitive construct (*model*, *aspect, implication*, etc.) identifying the nature of the speculation reported. References to discourse units or participants, cognitive constructs and research or discourse procedures can vary noticeably from a lexical point of view, but they share the basic semantic value. The types of units and some typical lexical realizations of each category are illustrated in Table 2:

Table 2. Framework sequences: Semantic units

DISCOURSE UNIT/PARTICIPANT	RESEARCH/DISCOURSE PROCEDURE	COGNITIVE CONSTRUCT
section, paper, chapter/ we, I	*discuss, report, examine… discussion, examination…*	*model, results, effects, issue…*

The basic units can combine in different syntactic patterns and give rise to different types of framework sequences. Example 3 below shows the three basic patterns: the opening sentence combines locative reference to the discourse unit with attribution of the discourse procedure to the discourse participant (*in the next section we discuss the model*), whereas the second sentence attributes the discourse process directly to the discourse unit (*section 3 reports the results*) and the third adopts a passive construction with a locative reference to the discourse unit.

> (3) In the next section we discuss the model in detail. Section 3 reports the results of measures imposed and changes in market structure for various degrees of cost asymmetry. The robustness of these results are checked in Section 4 where we consider extensions of the model. The welfare effects are discussed in Section 5, where the possibilities for rent shifting are examined. In line with the political economy of protection hypotheses, the issue of rent-seeking is touched upon in Section 6. The last section summarizes the main results and hints at some policy conclusions. (I-14, *European Economic Review*)

Reference to locational units can also be "non-integral" (with locative reference to the unit in brackets). This is very limited in the corpus of article introductions: there is, in fact, only one example:

> (4) The paper consists of three sections. In the second section we use a simple model to derive the optimal feedback rule of a central bank which cares about output and inflation (Section 2.1). (I-16, *European Economic Review*)

Table 3 below illustrates the patterns, with examples and quantitative data from the CAI.

Table 3. Framework sequences: Units and patterns in article introductions

TYPE OF SEQUENCE	PATTERN	EXAMPLES	F
Personal	(*IN* DISCOURSE UNIT) +*(I)/ WE* [PARTICIPANT]+ RESEARCH/ DISCOURSE PROCEDURE + COGNITIVE CONSTRUCT(*IN* DISCOURSE UNIT)	*- In the next section we discuss the model* *- In Section 3 we turn to our empirical work*	21
Locational passive	(*In* DISCOURSE UNIT) + *a /the* COGNITIVE CONSTRUCT + *is/are*+ R./D. PROCEDURE (V-PP) (*In* DISCOURSE UNIT)	*- The welfare effects are discussed in Section 5- The empirical findings are presented in section 6*	20
Locational active	DISCOURSE UNIT + RESEARCH/DISCOURSE PROCEDURE + COGNITIVE CONSTRUCT	*- Section 3 reports the results* *- Section 7 presents conclu-sions and summarizes the findings*	87

The different patterns are realized by different combinations of (research/discourse) verbs and (cognitive construct) nouns. The range of lexicalizations is wide and the combinations are highly variable. The range and the potential combinations would increase even further if we looked at the same kind of patterns in a wider spectrum of rhetorical functions: the same basic combination can in fact be used to introduce basic assumptions (*a simple framework is adopted*) and definitions (*the rate is determined*) or in stating the purpose of the whole paper (*the analysis is extended).*

5. Textbook introductions

The analysis of textbook introductory chapters reveals functions and structures similar to those found in article introductions. Framework sequences can be seen at play both in the introduction to the chapter itself and in internal references to other chapters or to the structure of the whole book. Examples of both types of metatextual reference are provided in 5 (introduction to the chapter) and 6 (introduction to the book as an expansion of preliminary definitions):

> (5) <u>The first part of the chapter is intended to give you some idea of the types of problems</u> that can be approached through economic analysis and the kinds of solutions that economic principles suggest. […] <u>The second part briefly introduces the methods</u> of economic inquiry and the tools that economists use. (Baumol)

> (6) As we will learn in Chapter 6, the failure to understand this principle has caused troubles for our tax laws, for the financial system, and for the housing and public utility industries. And in Chapter 16 we will see that it has even led to misunderstanding of the size and nature of the government budget deficit. (Baumol)

What is most noticeable is that—although introductory chapters are highly standardized in their need to provide the basic definitions and assumptions of economics—there is greater variation in the ways in which they frame their own discourse. The length of the unit may in part explain the fact that not only are the framework outlines diversified in reference (*book, section, part, chapter*), but also they are usually distributed throughout the chapter. The expositive nature of the genre may also explain the fact that references are more often given in terms of topic than purpose. Syntactically non-integral references are numerous (23), but they are limited to two textbooks only. They all map out cross-references in terms of content, pointing the reader to chapters where the same topic is dealt with.

When looking at framework sequences, both qualitative and quantitative differences can be noticed. As can be expected, the range of discourse units looks more varied (*chapter, book, text, textbook, section, part*). References to the whole (text)book and to individual chapters are almost equally frequent when there is no other personal source for the discourse/research process: 23 vs. 18 occurrences. But there is a great number of occurrences where reference to discourse participants is combined with reference to discourse units.

Personal sequences (*in the remainder of this chapter we will discuss some of the chief causes; in chapter 2 we look at the behaviour*) are not restricted to the use of *I* and *we* found in article introductions. Notice in particular the use of *you*, which is quite frequent:

> (7) In the pages that follow, you will find a wide variety of analytical tools: supply and demand, cost schedules, and the like (Samuelson)

The use of second person pronouns is mostly limited to subordinate clauses of the kind exemplified above, or to a few more explicit sequences in which the reader is predicted to learn principles, find analytical tools or understand the role of factors or notions. If absolute use of *you* is frequent in introductory chapters (175), the vast majority of occurrences are involved in hypothetical examples (*Suppose you buy a* *hamburger*) and only seven are part of full framework sequences. Framework sequences are more often attributed to the textbook writers themselves. The total occurrences of *we* are very high (454), but once again they are often used as general reference pronouns. Frameworks using prototypical forms of reporting are also common: *in Chapter 8 we show that*.

Framework sequences of the kind studied here are occasionally used to introduce single moves in the argument (*if we want to measure the impact of car prices on the number of cars purchased, <u>we</u> must <u>examine the effect</u> of changing car prices*), but more often to refer to higher discourse units which are pointed to forward or backwards (*we shall study changes of this kind more fully later; in this chapter we have attempted to explain the nature of economics*). Examples of the different types of sequences with their frequency in the corpus of textbook introductions are offered in Table 4.

Table 4. Framework sequences: Units and patterns in introductory textbook chapters

TYPE OF SEQUENCE	PATTERN	EXAMPLES	F
Personal	(*IN* DISCOURSE UNIT) + *(WE/YOU* [PARTICIPANT]+ RESEARCH/DISCOURSE PROCEDURE + COGNITIVE CONSTRUCT (*IN* DISCOURSE UNIT)	*- In this section we discuss three specific economic issues* *- In the remainder of the chapter we explain economic concepts*	88
Locational passive	(*In* DISCOURSE UNIT) + *a /the* COGNITIVE CONSTRUCT + *is/are* + R./D. PROCEDURE (V-PP) (*In* DISCOURSE UNIT)	*- the analysis of production is dealt with in greater detail in chapter 2* *- lessons are found on virtually every page of this textbook*	23
Locational active	DISCOURSE UNIT + RESEARCH/DISCOURSE PROCEDURE + COGNITIVE CONSTRUCT	*- Chapter 3 will provide an economic analysis* *- The first part of the chapter is intended to give you some idea*	15

6. Patterns and lexical combinations: Comparing sub-genres

On the whole, considering that the corpus of textbook introductions is double the size of article introductions, the frequency of framework sequences is more than double in article introductions: 128 in about 35,000 words (36.6 pttw) as against 126 in about 70,000 words (18 pttw). The type of pattern is also clearly marked for generic preference. Figure 1 below illustrates the difference between the three patterns (in nonnormalised numbers), showing that textbook introductory chapters definitely favour personal forms whereas articles introductions favour impersonal active forms.

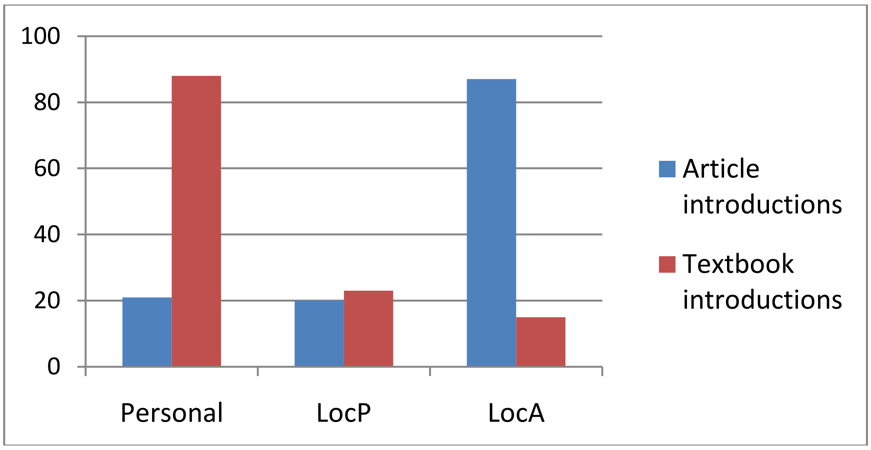

Figure 1. Types of framework sequences (Personal, Locational Passive, Locational Active)

The key patterns are identified by lexico-grammatical features (type of source and transitivity direction), but they are characterized by lexical choice and lexical combinations. Tables A, B and C in the Appendix report the full set of lexical items considered for each of the patterns isolated. The data show a high degree of dispersion in lexical distribution: if we consider the verbs, for example, the only element common to all the patterns in both corpora is *discuss*. The nominal elements that combine with the verb are also widely dispersed, and the only element common to both corpora and more than one pattern is *issues*.

Personal patterns show the widest range of verbs and nouns, including general cognitive constructs (*idea*, *concept*), meta-argumentative lexis (*reasoning*, *assumptions*), research-based constructs (*theories*, *methodology*), as well as basic causal relations (*effect*, *impact*) and specific economic notions (*frontier*, *inflation*). In article introductions, they are very limited and predominantly used to point to the model adopted or the results presented.

Locational passive patterns are the most restricted in range in both corpora. They are quantitatively balanced across the two genres, although the only common elements are *discuss* and *model*. The data, of course, may simply be too limited to highlight other potential common elements. It shows, however, other general trends, such as the frequent association of the pattern with specific terminology and complex noun groups, especially in article introductions.

Locational active patterns are very limited in textbooks and mostly restricted to presenting topics. The verbs involved typically represent textual processes or general verbal processes. The nouns privilege meta-argumentative and research-based constructs, such as *implications, assumptions, models, literature*. The pattern also reveals a core of verbs and nouns that become prominent in frequency, for example verbs such as *conclude* (10 occurrences), *describe* (11), *introduce* (7), *present* (7), *provide* (8), *summarize* (6) and nouns such as *implications* (5), *model* (11) and *results* (8). These may identify core elements of the pattern, but they are more likely to point to core elements of the genre, given the quantitative prominence of article introductions in the pattern.

Moving on to a focus on the two part-genres, it is important to note that the lexical range of the verbs used in article introductions is wide: 44 verbal lemmas were found to be used in framework sequences, variously combined with 57 types of nominals.

The verbs cover the whole cline of research and discourse processes. They tend to vary widely in research processes (*analyze, apply, assess, check, compare, derive, estimate, formalize, measure, test*, etc.), while they are rather poor in references to pure discourse processes (e.g. *conclude*, *outline*, *summarize*). Some of these are relatively frequent (12 occurrences of the lemma *conclude* and 6 of *summarize*) but the range of verbs characterizing predominantly verbal processes is limited, when compared to the wealth of verbs describing predominantly research processes.

The most distinguishing feature of article introductions, however, is the wide range of nominals used, many of which can be related to the argumentative nature of articles, variously referring to argumentative premises or warrants (*literature, assumptions, theoretical basis, approaches*), argumentative procedures or techniques (*implications, extension, consequences, impact, observation, findings*). In terms of frequency, two lexical elements stand out as being particularly frequent: *model* (21 occurrences) and *results* (16), highlighting the methodological reliance of mainstream economics on model-based reasoning and data analysis.

The lexical range of the verbs used in textbooks is even wider than in the articles: 54 lemmas were found to be variously combined with 69 types of nominals.

The verbs cover the whole cline of research and discourse processes, although they tend to include numerous examples of verbs referring to general discourse processes, mostly used to introduce the topic rather than purpose of the text: *build up, come back to, contain, deal with, develop, devote, encounter, focus on, get into, go into, highlight, include, introduce, list, look at, outline, plot, return to, set out, touch upon, turn to.* Most of the verbs are only used once or twice, bust some prove to be rather frequent: *discuss* is the most frequent (with 15 occurrences), followed by *find* (9), *examine* (7), *look at* (7), *study* (5) and *explain* (5). The argumentative dimension of the text is largely downtoned: what can be "found" in textbooks, for example, are mostly *examples, concept, tools, summaries*, etc.

The range of nominals used in textbooks is wide and the distribution is more even. Nothing emerges as really outstanding in frequency. The most frequent elements are *concept/s* (7 occurrences), *issue/s* (6), *question/s* (6), *examples* (5), *assumptions, idea/s, principle/s* and *problem/s* (with 4 occurrences). These are surely related to the expositive nature of textbooks, but they also remind us of the important function that most of these introductory chapters have, i.e. introducing the novice reader to the main elements of the discipline.

On the whole, lexical variability in framework sequences does not reveal a significant difference in quantitative terms: when related to the number of types in the two corpora, the types involved in framework sequences represent more or less the same proportion, around 2% of the types. And yet this relative similarity becomes remarkable when set against the background of the general trends. The global type/token ratio varies greatly across the two corpora: 7.01 for the CAI corpus and 11.85 for the CTI. This shows that there is in general much greater lexical range in article introductions, whereas textbook introductions tend to rely highly on a common lexical core. When it comes to framework sequences, however, the difference in lexical range is mostly qualitative: article introductions focus more precisely on research verbs, while relying heavily on a very limited set of cognitive construct nouns;

introductory chapters, on the other hand, rely heavily on verbs referring to general discourse processes, while making more balanced use of nominal elements. This is in line with the impression that textbooks aim at introducing students to general argumentative procedures of the discipline rather than to a wealth of specific terminology.

7. Conclusions

The study has shown that phraseological analysis in terms of semantic sequences can help illuminate features of metadiscourse. Focusing on a single discipline—economics—we have studied references to purpose, topic and structure in article introductions and textbook introductions. We have looked at the types of framework sequences in which they have been realized in our small corpora. Framework sequences report discourse through a combination of a verbal element (referring to discourse or research procedures) and a nominal element pointing to a cognitive construct. Attribution to a source can be either personal (with reference to discourse participants: *I, we, you*) or locational (with reference to a discourse unit: *next, in section 2*).

The study of framework sequences has illuminated typical trends of the two genres examined. Discourse units, for example, were shown to be dominant as subjects of the framework sequence in article introductions, whereas textbook introduction outlines favoured different types of sequences, mostly involving discourse participants in an active role.

Similarities and differences between the genres were also seen through collocational and phrasal patterns. Textbooks do not only favour personal forms (*we discuss*), they also tend to adopt combinations highlighting topic-setting (*look at notions*) and the explanatory function of the genre (*provide examples; explain concepts*). Articles, on the other hand, favour non-personal forms (*Section 1 discusses*), together with combinations highlighting purpose (*present model*) and research structure (*test hypotheses; review literature; provide results*).

The combinations favoured clearly point at the textual structures of each genre as well as at the dominant epistemology of the discipline. Metadiscursive practices can be shown to reflect both the ethos of the *discipline*—e.g. the central role of model testing in economics—and the status of the *genre* within the discipline—research-based genres vs.

expositive educational material. The representation of academic discourse in textbooks (see also Bondi 2005) has been shown to downtone the argumentative dimension of disciplinary knowledge, while explicitly or implicitly introducing the reader-student to the conventions of the discourse community. Article introductions have been shown to refer to the article itself and its textual structure as objects to be represented and interpreted in terms of argumentative and scientific coherence and value. In both cases, these reflect the purposes of the genres and the values of the community.

From a methodological point of view, this brings us back to the distinction drawn at the beginning between language, text and discourse perspectives. Discourse has been our starting point: looking for the moves that instantiate the metadiscursive practices of the discourse community, we have been able to identify recurrent sequences of semantic categories, together with the lexical elements that characterize them. Some of these have an inherent reflexive component, while others only become "metadiscursive" in the text. The elements thus identified can be studied more closely in terms of their lexico-semantic features and the textual (lexico-grammatical) patterns they become part of. The data can in turn be interpreted in terms of the values and beliefs of the discourse community.

A few tentative conclusions can also be drawn as to the role of phraseological units in the study of metadiscourse. The study of metadiscourse draws attention to the phraseological dimension of language and points at the need to integrate form and meaning, semantic and pragmatic associations in phraseology, beyond repeated strings of words. Looking both at word combinations (at the level of lexico-grammar) and semantic sequences (at the level of lexico-semantics) produces a much more varied picture of the language of textual units, as well as of their discourse function. The most typical metadiscursive "nodes" of various genres, in particular, can be used to illustrate assumptions of the discourse community: the role attributed to genres and the representation of academic discourse they offer.

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Appendix

Table A. Lexical combinations in personal patterns

VERB	CTI	CAI
APPROACH	problems	-
BUILD UP	examination	-
COME BACK TO	reasoning, question	-
CONCLUDE		Ø (2)
CONSIDER	variables, problem	-
DEAL WITH	analysis, welfare economics	-
DERIVE	principles	-
DESCRIBE	-	results (2)
DEVELOP	frontier (2), concept	specification, relation
DEVISE	list	-
DISCUSS	studies, issues (2), causes, areas, implications, problems, circumstances, tools	problems, model, results
ENCOUNTER	assumptions	-
EXAMINE	effect, behaviour, role (3)	-
EXPLAIN	nature, concept, construction, principle	-
EXTEND	-	Results
FIND	applications, tools, summary, examples, pits	-
FOCUS ON	prices, theories	-
FOLLOW	tradition	-
FORMALIZE	-	Link
GAIN	insight	-
GET INTO	policy issues	-
GO INTO	question, details	-
HAVE	idea	-
ILLUSTRATE	distinction, combinations	-
INTRODUCE	concepts, tool	-
INVESTIGATE	inflation	-
ISOLATE	impact, effects	-
LOOK AT	market, economy, numbers, table, distribution, issue, behaviour	-
MAKE	assumptions	-
MEASURE	impact	-
MEET	issues	-
NOTE	arguments	-
OUTLINE	methodology, reasoning	-

PLOT	combinations	-
PROVIDE	-	Extension
RAISE	questions	-
REFINE	notion	-
RELATE	-	results, model
REPRESENT	relationships	-
RESTRICT TO	relationships	-
RETURN TO	concept, question	-
RETAIN	assumptions	-
SET OUT	-	Model
SHOW	frontier (2), returns	-
SOLVE	-	Game
STUDY	changes, illustrations, behaviour, principles	-
TOUCH UPON	considerations	
TURN TO	task, consideration	Work
UNDERSTAND	damage	-
USE	concept, definition, graph (2)	model (2)

Table B. Lexical combinations in locational active patterns

VERB	**CAI**	**CTI**
ANALYZE	impact, distribution	-
BUILD ON	source	-
CONCLUDE	Ø (6), paper (3), discussion	-
CONTAIN	conclusions, direction, implications	-
DEAL WITH	impact, model, extensions	-
DERIVE	distribution, equilibrium	-
DESCRIBE	model (3), procedure (3), theory, results (2), sample, data	-
DEVELOP	concept (2), model (2)	-
DETAIL	hypotheses, empirical methods	-
DISCUSS	issues, dilemma, implications	issues, role
EXAMINE	competition, theoretical basis	implications, relationship
EXTEND	analysis (2)	-
EXPLORE	implications	-
FORMALIZE	role	-
GIVE	-	overview, idea
HIGHLIGHT	-	trade off
HINT AT	conclusions	-
INTRODUCE	policies, model (3), types, analytics	Economics

LOOK AT	impact	-
MAKE	remarks	Assumptions
MEASURE	costs	-
OFFER	comments	-
OUTLINE	literature	-
OVERVIEW	literature	-
PRESENT	results (2), conclusions, consequences, model, solution, approaches	-
PROVIDE	summary (2), concluding remarks, conclusions	examples (2), analysis
RAISE	-	Issues
REPORT	results (3)	-
REVIEW	literature	Pitfalls
SET OUT	techniques, methodology	-
SET UP	model	-
STRESS	disequilibrium	-
STUDY	-	workings
SUMMARIZE	Ø, implications, observations, results, paper, findings	-
TURN TO	issue	-

Table C. Lexical combinations in locational passive patterns

VERB	**CAI**	**CTI**
ADOPT	-	principles
ANALYZE	differences	-
APPLY	model	-
ASSESS	exposure	-
CHARACTERIZE	equilibrium	-
CHECK	robustness	-
COMPARE	parameter	-
CONSIDER	aspects	-
CONTAIN	-	Ideas
DEAL WITH	-	Analysis
DERIVE	model	-
DESCRIBE	model	Conditions
DEVOTE	-	Study
DISCUSS	results, industry, effects	questions, curve, idea, topics
ESTIMATE	parameter	-
EXPLAIN	-	Concept
FIND	-	examples (2), answers, concepts
GIVE	-	Definitions

HIGHLIGHT	-	trade off
INCLUDE	-	Detail
LIST	-	paradox
OUTLINE	objection	-
PRESENT	results, findings, model, results	-
POSE	-	questions
SET FORTH	hypotheses	-
SET OUT	-	problems
STRESS	-	questions
TEST	hypotheses, theory	-
TOUCH UPON	issue	-
USE	-	diagrams, models (2)

Metadiscourse: Mapping Interactions in Academic Writing

Ken Hyland, University of London, UK

Abstract
Metadiscourse in the argument presented here is based on a view of communication as social engagement and in academic contexts reveals the ways writers project themselves into their discourse to signal their understandings of their material and their audience. In this paper I explore how advanced second language writers deploy these resources in a corpus of 240 doctoral and masters dissertations totalling four million words. The analysis suggests that writers use language to offer a credible representation of themselves and their work in different fields, and thus how metadiscourse can be seen as a means of uncovering something of the rhetorical and social distinctiveness of disciplinary communities.

1. Introduction

Metadiscourse is a widely used term in current discourse analysis and English for Academic Purposes, but it is not always used to refer to the same thing. For some, it is a concept restricted to elements which refer to the text itself, looking inward to those aspects of a discourse which help organise the text as text. This position is represented by the work of Mauranen and Ädel in this volume and given the label of ‘the reflexive model’ (Ädel, this volume). For others, those taking an ‘interactional’ position, a writer’s commentary on his or her unfolding text represents a coherent set of interpersonal options. This more encompassing model is the one I will employ in this paper, taking metadiscourse as a set of features which together help explain the working of interactions between text producers and their texts and between text producers and users.

This paper, then, develops a view of metadiscourse which responds to a growing interest in the interactive character of academic writing, expanding the focus of study beyond the ideational dimension of texts, or how they characterize the world, to the ways they function interpersonally. It has been particularly valuable to those who study academic writing as the insights and descriptions it has produced of different genres have fed successfully into teaching practices (e.g. Intaraprawat & Steffensen 1995; Jalilifar & Alipour 2007). In this paper I intend to sketch out what I hope is a coherent view of metadiscourse and employ this to shed some light on a high-stakes academic genre: the postgraduate dissertation. Drawing on a detailed analysis of 240 masters and doctoral dissertations written by Hong Kong students totalling four million words, together with interviews with student writers, I will explore some of the ways that L2 writers negotiate the interpersonal demands of this genre. First, however, I will explain how I understand the term.

2. A view of metadiscourse

Metadiscourse emerged as a way of understanding language in use, representing a writer or speaker's attempts to guide a receiver's perception of a text (Harris 1959) but it is now understood in different ways (e.g. Ädel 2006; Crismore 1989; Hyland 1998, 2005; Mauranen 1993). It has certainly outgrown its early characterisation as simply "discourse about discourse" and come to be seen, in the 'interactive model', as an umbrella term for the range of devices writers use to explicitly organize their texts, engage readers, and signal their attitudes to both their material and their audience (Hyland 2005). This position grows out of the pioneering work of Vande Kopple (1985), Crismore (1989), and others in the 1980s. As Vande Kopple (1985:83) observes, "writers do not add propositional material but help our readers to organize, classify, interpret, evaluate, and react to such material".

Metadiscourse options are the ways we articulate and construct interactions, stressing the fact that, as we speak or write, we negotiate with others, making decisions about the kind of effects we are having on our listeners or readers. In this extract from a hiking guide, for instance, it is clear that the writer is not simply presenting information about the suggested route by just listing changes of direction, but taking the trouble to see the walk from the reader's perspective:

> There is a fine prospect of Penshurst Place as you cross the field and the walk takes you directly to the stone wall surrounding it. Go along this wall and in 200 metres cross the style into the churchyard of St John the Baptist church. Walk through the churchyard—the church is well worth visiting if you have time—and continue out to the road where you turn left, your direction 110 degrees. (Time Out Book of Country Walks 2001: 153)

The use of imperatives, second person pronouns, and evaluative commentary in this text helps the writer to involve himself in the text to both convey information more clearly and to engage the reader as a fellow enthusiast. Removing these metadiscourse features would make the passage much less personal, less interesting, and less easy to follow. If we look at these features systematically, metadiscourse provides us with access to the ways that writers and speakers take up positions and align themselves with their readers in a particular context.

Essentially, metadiscourse emerged as a corrective to earlier views of language which saw it as principally a propositional and expository mode of representation, where the function of communication was to match words to ideas. As Coates (1987:113) points out, "there has been a dangerous tendency among many linguists, philosophers and semanticists to concentrate on the referential function of language at the expense of all the others". The study of metadiscourse therefore reminds us that statements simultaneously have an orientation to the world outside the text and an orientation to the reader's understanding of that world through the text itself. In other words, language is not simply used to convey information about the world. It also acts to present this information to others through the organisation the text itself, on what Sinclair (1982) calls 'the autonomous plane', and engage them as to how they should understand it, on 'the interactive plane'. Metadiscourse thus offers a means of conceptualising communication as social engagement. It illuminates some aspects of how we project ourselves into our discourses by signalling our attitude towards both the content and the audience of the text (Hyland & Tse 2004).

So while some may lament what they see as the over-extension of the term to cover interpersonal uses of language (e.g. Mauranen 1993), it is a convenient way of capturing writing (and speech) as a social and communicative engagement between writer and reader. This emerging understanding of metadiscourse draws attention to the fact that academic writers do not simply produce texts that plausibly represent an external reality, but use language to offer a credible representation of themselves and their work, and to acknowledge and negotiate social relations with readers. This interactive perspective therefore understands metadiscourse as a coherent set of interpersonal resources used to organise a discourse or the writer's stance towards either its content or the reader (Hyland 2000: 109). It brings together the heterogeneous array of features which help relate a text to its context and helps us to see how readers connect, organise and interpret material in a way preferred by the writer and with regard to the understandings and values of a particular discourse community.

2.1 An interpersonal model of metadiscourse

An orientation to the reader is crucial in securing rhetorical objectives in research writing as writers have to anticipate and respond to the potential negation of their arguments. But the interpersonal dimension of language has two elements which can be distinguished for analytical purposes. Borrowing Thompson's (2001) useful terms, I shall call these *interactive* and *interactional* resources. The former are concerned with ways of organising discourse to anticipate readers' knowledge and reflect the writer's assessment of what needs to be made explicit to constrain and guide what can be recovered from the text. The latter concern the writer's efforts to control the level of personality in a text and establish a suitable relationship to his or her data, arguments and audience, marking the degree of intimacy, the expression of attitude, the communication of commitments, and the extent of reader involvement. These macro-purposes are realised through a heterogeneous array of features as shown in Table 1 and elaborated below.

Table 1. A model of metadiscourse in academic texts

CATEGORY	**FUNCTION**	**EXAMPLES**
Interactive	Help to guide reader through text	Resources
Transitions	express semantic relation between main clauses	*in addition / but / thus / and*
Frame markers	refer to discourse acts, sequences, or text stages	*finally / to conclude / my purpose is*
Endophoric markers	refer to information in other parts of the text	*noted above / see Fig / in section 2*
Evidentials	refer to source of information from other texts	*according to X / (Y, 1990) / Z states*
Code glosses	help readers grasp meanings of ideational material	*namely /e.g. / such as / in other words*

Interactional	Involve the reader in the argument	Resources
Hedges	withhold writer's full commitment to proposition	*might / perhaps / possible / about*
Boosters	emphasise force or writer's certainty in proposition	*in fact / definitely / it is clear that*
Attitude markers	express writer's attitude to pro-position	*unfortunately / I agree / surprisingly*
Engagement markers	explicitly refer to or build relationship with reader	*consider / note that / you can see that*
Self mentions	explicit reference to author(s)	*I / we / my / our*

Interactive resources allow the writer to manage the information flow to explicitly establish his or her preferred interpretations. These resources include the following:

TRANSITIONS comprise an array of devices, mainly conjunctions, used to mark additive, contrastive, and consequential steps in the discourse, as opposed to the external world. FRAME MARKERS are references to text boundaries or elements of schematic text structure, including items used to sequence, to label text stages, to announce discourse goals and to indicate topic shifts. ENDOPHORIC MARKERS make additional material salient and available to the reader in recovering the writer's intentions by referring to other parts of the text. EVIDENTIALS indicate the source of textual information which originates outside the current text. CODE GLOSSES signal the restatement of ideational information.

Interactional resources focus on the participants of the interaction and seek to display the writer's persona and a tenor consistent with the norms of the disciplinary community. They include the following subcategories:

HEDGES mark the writer's reluctance to present propositional information categorically. BOOSTERS express certainty and emphasise the force of propositions. ATTITUDE MARKERS express the writer's appraisal of propositional information, conveying surprise, obligation, agreement, importance, and so on. ENGAGEMENT MARKERS explicitly address readers, either by selectively focusing their attention or by including them as participants in the text through second person pronouns, imperatives, question forms and asides (Hyland, 2001a). SELF MENTIONS suggest the extent of author presence in terms of first person pronouns and possessives.

These categories will be familiar to those who know the work of Crismore and Vande Kopple, but while I have borrowed some of their labels, the conceptual premises are very different. Basically the classification sees discourse as propositional and metadiscoursal. If we recognise that a large proportion of every text is not concerned with things in the world but with the internal argument of the text and its readers, then we can see that metadiscourse is one means by which propositional content is made coherent, intelligible and persuasive to a particular audience. Here I try to avoid the confusion caused by erroneously using Halliday's (1994) *interpersonal* and *textual* labels. While I admit to having been guilty in this regard, following Crismore and others in the use of this distinction to classify metadiscourse is misleading (Hyland 2005; Hyland & Tse 2004). Not only does it ignore Halliday's insistence that these functions are spread throughout the clause, rather than being identified with particular lexical items, but it neglects the difficulties of distinguishing a purely textual role for metadiscourse. Put most simply, unlike propositional and interpersonal meanings, both of which orient to non-linguistic phenomena, the textual function is intrinsic to language. It is what we do when we string words together and create coherent discourse and so exists to construe *both* propositional and interpersonal aspects of texts into a reasoned whole.

Essentially, textual features can be oriented towards *either* the experiential *or* the interpersonal, to either propositional or interactional meanings and so must be seen as enabling these functions, facilitating the creation of discourse by allowing writers to generate texts which make sense within their context. In other words, *all* metadiscourse is interpersonal in that it takes account of the reader's knowledge, textual experiences and processing needs and that it provides writers with an armoury of rhetorical appeals to achieve this (Hyland & Tse 2004). It refers to the linguistic devices writers employ to shape their arguments to the needs and expectations of their target readers.

3. Texts and methods

For this paper I explored the role and distribution of the features mentioned in Table 1 in a corpus of 240 dissertations by L2 postgraduate writers together with interviews with postgraduate students themselves. The students attended five Hong Kong universities and overwhelmingly spoke Cantonese as their first language. The corpus consists of 20 masters and 20 doctoral dissertations from each of six academic disciplines: Electronic Engineering (EE), Computer Science (CS), Business Studies (BS), Biology (Bio), Applied Linguistics (AL), and Public Administration (PA). The scanned texts produced an electronic corpus of four million words, 2.6 million in the PhDs and 1.4 million in the masters' texts.

The corpus was searched electronically for some 300 items which commonly perform metadiscourse functions in academic writing (see appendix in Hyland 2005 for a list of these) using *MonoConc Pro*, a text analysis and concordance programme. All instances were carefully analysed individually to ensure they were performing metadiscoursal functions and the results normalized per 10,000 words to allow comparison across corpora of different sizes. In cases where the counts produced thousands of instances of high frequency devices, such as some modals and conjunctions, 100 sentences containing each individual lexical item in each discipline and degree sub-corpus were randomly generated from the corpus. A final figure was calculated as a proportion of the sample size multiplied by the total number of words in that discipline and degree. In addition, two MA students and two PhD students from each discipline were interviewed as a way of both gaining insights into the text data and of discovering something about their own preferences and thoughts on disciplinary practices.

4. Overall findings: Metadiscourse in postgraduate writing

The frequency counts show the importance of metadiscourse to students writing in this genre with 184,000 cases in the four million words, or one signal every 21 words. The fact that metadiscourse is often realised by signals which can stretch to clause or sentence length means that these figures are not meant to convey the overall amount of metadiscourse in the corpus, but simply compare different patterns of *occurrence* of metadiscourse in corpora of unequal sizes. Table 2 shows that overall writers used slightly more interactive than interactional forms, and that hedges and transitions were by far the most frequent devices in the corpus.

Table 2. Metadiscourse in postgraduate dissertations (F per 10,000 words)

Category	**Masters**	**Doctoral**	**All**	**Category**	**Masters**	**Doctoral**	**All**
Transitions	75.8	95.6	89.0	Hedges	86.1	95.6	92.4
Evidentials	40.0	76.2	64.1	Engagement markers	39.7	51.9	47.8
Code glosses	27.4	40.6	36.2	Boosters	31.7	35.3	34.1
Frame markers	20.7	30.3	27.1	Attitude markers	20.4	18.5	19.2
Endo-phorics	22.3	24.0	23.4	Self mentions	14.2	40.2	31.5
Interactive	**186.1**	**266.7**	**239.8**	**Interactional**	**192.2**	**241.5**	**225.0**

The most frequent sub-category in the corpus is *hedges*, which comprise 41% of all interactional uses, reflecting the importance of distinguishing fact from opinion in academic writing and the need for academic writers to evaluate their assertions in ways that are likely to be acceptable and persuasive to their examiners and supervisors. Indeed, we have found similar distributions of features in published academic writing (Hyland 1998; 2005). In fact, *may*, *could* and *would*, used to present claims with both caution and deference to the views of readers/examiners were among the highest frequency metadiscourse items in the corpus. In general, then, these students' use of metadiscourse demonstrates a principal concern with expressing arguments explicitly and with circumspection.

There is also a large number of transitions in the corpus. Mainly consisting of connectives, these are central to academic writing as they assist readers in recovering how the writer links the argument. Strictly, to qualify as metadiscourse, these conjunctions must mark transitions in the *argument*, rather than linking *events* in the world beyond the text. This means identifying as metadiscourse those cases where transitions, and equally frame markers, are used to link sequences in the argument (1) and discounting those cases where they are used to express relations between processes (2):

(1) The *next* question I want to examine is the relationship between the teacher's language proficiency and teaching effectiveness. (AL MA)

Crops accounted for a significant proportion of heavy metals dietary intake. *The reasons are two fold. Firstly*, crops are the bottom positions of many food chains and food webs. *Secondly*, vegetables are one of the major dietary components of Hong Kong people. (Bio PhD)

(2) In the *next* step, this residual signal is reconstructed by adding the same prediction as was subtracted earlier in the encoding process. (CS PhD)

For the boric acid indicator, *firstly*, 5g of boric acid crystals was dissolved in 200ml of warm distilled water, *secondly*, 40ml of methyl red indicator [0.02% (w/v) in 60% ethanol] and 15ml of bromocresol green indicator [0.1% (w/v) in 60% ethanol] were added to the boric acid solution. (Bio PhD)

This reflects Halliday's (1994) distinction between items which have 'text-internal' functions and those which are 'text-external'. The terms distinguish the roles of linguistic items in referring to either the reality denoted by propositions or the propositions themselves, and also applies to modals. Here, items such as *might* and *possible* can be regarded as interpersonal (or epistemic) features where they express writers' inferences about the likelihood of something, and as propositional (deontic) where they are referring to real world enabling conditions (Coates 1983; Hyland 1998a). Thus (3) comments on the writer's estimation of possibilities, and is thus an example of metadiscourse, while (4) is propositional as it represents an outcome as depending on certain circumstances.

(3) It is *possible that* instruction in one would lead to increased ability in the other. (AL PhD)

Perhaps this paved the way for their significantly better improvement in TL and CT as compared to students at the lower levels of study. (AL MA)

(4) Using this scale *makes it possible to* compare the results of the present study with those of previous socialization studies. (BS PhD)

Perhaps they represent many in the local Chinese community whose voices we never hear often and who could counter the tide of widespread social prejudice as represented by the vocal population. (PA PhD)

In other words, metadiscourse is concerned with interpersonal, not experiential relations, as it is these which reveal the ways writers seek to support their theses and relate their texts to their readers.

4.1 Differences of degree

Since the use of metadiscourse is closely related to the social contexts it helps construct, it is not surprising to find variations across the doctoral and masters sub-corpora. The PhD dissertations contained 35% more metadiscourse overall (per 10,000 words), and almost double the amount of interactive forms. These differences might be explained by the fact that the PhD corpus was twice the length of the masters corpus, making more interactive devices necessary to structure texts with more discursively elaborate arguments. However, while we cannot say that more metadiscourse equals better writing, this might also be seen as a greater awareness of readers and self. Metadiscourse represents a reflective awareness of self, text and audience, and its use here suggests writers' attempts to present themselves as competent academics immersed in the ideologies and practices of their fields.

In the *interactive* categories, for instance, the doctoral writers made far more use of evidentials, with over four times the number of intertextual references compared with the masters students. Obviously citation is a key element of persuasion in academic writing as it helps provide justification for arguments and helps display originality, but for PhD students it is much more than this. It also allows them to present their knowledge of the field's literature and so to display a credible ethos that values a disciplinary research tradition. These interviewees, for example, showed a clear grasp of the rhetorical importance of evidentials:

> References are important not only for showing readers that I've read a lot, but also for evaluating others' work and to justify my own perceptions. Unlike in writing undergraduate thesis when we cited others' as background information, in a PhD we need to be more critical and be able to evaluate what others have done so to make our own opinions prominent. (CS PhD interview)

> It is important to give references, especially in describing the project design. I have to justify the reasons why I do the project, so I need to point out what other people have done and the need of the general market, this requires references to others' work. (BS PhD interview)

In contrast, the masters students seemed less concerned about establishing their academic credentials. These students typically have less investment in their studies: their texts are not only much shorter, but are also completed fairly quickly and in addition to substantial coursework. The students themselves are normally studying part time and are looking forward to returning to their professional workplaces rather than aspiring to a career in academia. Consequently, their reading of the literature, and their desire to demonstrate their familiarity with it, may be less pressing.

The PhD students' attempts to address their audience in understandable and credible ways is also evident in their greater use of transitions, code glosses and frame markers. The PhD students, in fact, were very aware of their audiences and repeatedly raised the issue in the interviews:

> I suppose my thesis does not appeal to the general audience. However, I consider this group of general audience in organising my thesis, as it is my goal to write in a way that even outsiders could understand. When I'm writing the thesis, I consider people outside my field and imagine they will read it, so I write it in a simple way with all the jargons explained. (CS PhD interview)

> As I don't know who exactly would be my examiners, so I've to take all possibilities into account, and this definitely affects my writing. I'd avoid using jargons, because my examiners should be in the same discipline, but there are still many different areas of studies. I'd also include some classic literature as examiners would ask why I didn't. If I were to publish my paper, I'd have a totally different approach. (PA PhD interview)

Similarly, doctoral students employed some 20% more *interactional* metadiscourse markers, with particularly high differences in the use of engagement markers and self mention. While students are often taught to avoid the use of first person, it is a key way in which professional academics gain credit for their research claims (Hyland 2001b). While there are considerable disciplinary variations, PhD writers made far more use of this resource, with the doctoral dissertations containing four times more cases. The points at which these writers chose to metadiscoursally announce their presence in the discourse, moreover, were where they were best able to promote themselves and their individual contributions:

> (5) I will demonstrate that a set of formal criteria can be established for interpreting a serial verb construction, and that the indeterminacy of the interpretation of… (AL PhD)
>
> I have exercised care in my analyses and generated some useful observations. (BS PhD)
>
> Using Y chromosome sequences from male fetuses as a marker and the highly sensitive and specific real-time quantitative PCR assay as a tool, I show that circulating fetal DNA is cleared rapidly from maternal plasma, with a half-life of the order of minutes. (Bio PhD)

There was, however, considerably more confusion about the use of self mention among the masters students, who often said in the interviews that they would avoid it:

> In our discipline, it is ok to use "I", but only for established scholars. It is not appropriate to use "I" for students as "I" sounds like you are teaching the readers something. That you are powerful. (BS MA Interview)
>
> I don't think the use of "I" is appropriate as it gives personal opinions. (CS MA Interview)
>
> Though I'm not sure if "I" is acceptable, I'd avoid using it because it gives some kind of self opinion while most of the content in a thesis need to be objective. I think my supervisor would also cross out instances of "I". (EE PhD Interview)

So, while the more advanced students may have been slightly more comfortable using self mentions, many saw it as conflicting with the requirement of objectivity and formality in academic writing.

4.2 Differences of discipline

Not only did the use of metadiscourse vary across the two degree corpora, but also across disciplinary communities. In particular, the more "soft knowledge" social science disciplines employed more metadiscourse overall (56% of the normed count) with over 60% of the interactional features (Table 3).

Table 3. Interactional metadiscourse in postgraduate dissertations by discipline (F per 10,000 words)

Category	Applied Linguistics	Public Admin.	Business Studies	Computer Science	Electronic Engin.	Biology
Hedges	111.4	109.7	93.3	55.8	61.5	82.1
Boosters	37.9	39.5	29.8	29.4	28.0	30.5
Attitude markers	20.3	26.1	20.7	16.2	10.6	15.5
Engagem. markers	66.1	42.0	35.8	59.2	32.7	15.4
Self mentions	50.0	22.4	31.6	29.3	18.1	5.7
Total	**285.7**	**239.8**	**211.1**	**190.0**	**150.9**	**149.2**

The greatest differences were in the use of hedges, attitude markers, and self mention, reflecting the greater role that explicit personal interpretation plays in the humanities and social sciences. In these fields, the writer is unable to draw to the same extent on empirical demonstration or trusted quantitative methods and so must work harder to build up a relationship with readers to persuade them of interpretations (e.g. Hyland 2000). The fact that evaluative and epistemic judgements are more prominent indicates the importance of metadiscourse in negotiating arguments and managing the perils of presenting appropriate opinions and degrees of certainty.

The use of hedges to soften categorical assertions is a good example. This is, of course, a feature of all academic writing, but is particularly important in the soft disciplines, represented here by business studies, public administration, and applied linguistics. These fields all deal with human subjects and rely on qualitative analyses or statistical probabilities to construct and represent knowledge. For these reasons, they require elaborate exposition and considerable tentativeness in expressing claims and so contained over 60% more hedges than the natural science disciplines:

(6) The results of these studies *tend to suggest* that the background characteristics of judges such as age are important factors in error evaluation. (AL PhD)

Nevertheless, it is also *possible that* we *may* overestimate the degree of divergence in per capita income. (BS PhD)

...it *seems likely that* they were more oriented towards Western medicine than traditional Chinese medicine in coping with their illness. (PA MA)

The sciences, on the other hand, are prepared to trust the results of quantitative methods and express their arguments as proofs based on these, at least in postgraduate genres:

> The findings are certain as they are based on facts. There can be more than one interpretation, but I'd present the one that I think is the most appropriate in a certain way as it is deducted from statistical profile. Even if I were not sure, I will try and express it in a definite way. (Bio MSc Interview)

> In fact in our field it is very practical, statistics is everything, there is no such case as uncertain about the findings. If you ask me, we can't say we are 100% sure about anything, so sometimes I'd be careful, but again in our field we only value sure ideas, you cannot say you are uncertain all the times or your research would not be valuable no matter how many references you use to support yourself. (EE MSc Interview)

Self mention is also far more frequent in the soft disciplines, and for similar reasons. In the humanities and social sciences students are often encouraged by style guides and supervisors to present their own 'voice' and display a personal perspective. While this needs to be supported with data and intertextual evidence, there is a clear implication that writers need to display a discipline-situated stance towards the issues they discuss by making a clearly individual contribution. In the hard fields, and particularly in the more 'pure' sciences, competence in research practices is given a greater priority. A personal voice is thus subsumed by community knowledge and routines. Biology students, for instance, employed only one tenth of the stance markers used by applied linguists.

> My supervisor gave me a lot of ideas on this. His comment was that my own opinions did not stand out in my thesis, it is ok in the literature review section in which you are reporting others' work and though you may have your ideas, you make it hidden. However, he suggested, in later chapters like the theoretical framework and discussion, I should be more prominent and this helps to show that you are not only parroting others. (PA PhD Interview)

> We are taught to use passive voice in writing thesis and avoid "I" as it shows subjectivity, because the focus of the thesis should be on the experiments instead of the student who did them. I expect my supervisor would not agree the use of "I" too. (Bio PhD Interview)

The computer science texts differed from this general picture of scientific impersonality, containing higher frequencies of both self mention and engagement markers. It is difficult to explain this with any certainty, after all, this is a hard knowledge discipline, largely concerned with impersonal computational calculations and software development. It is, however, also very much an applied discipline, practical in its orientation and concerned with applications in a range of other areas, including internet marketing, machine translation and e-business. Thus, unlike the other two hard fields discussed here, it leans more to the everyday world rather than to the development of discipline-internal theories. As a result, the ways writers use metadiscourse may have evolved to speak to both academics within the discipline and to practitioners outside it, thus mimicking writing which appears more like that in the social sciences.

Table 4 indicates that the use of *interactive metadiscourse* was relatively more balanced between the 'hard and soft' fields, although frequencies showed considerable variation between disciplines.

Table 4. Interactive metadiscourse in dissertations by discipline (F per 10,000 words)

Category	Applied Linguistics	Public Admin.	Business Studies	Computer Science	Electronic Engin.	Biology
Transitions	95.1	97.8	89.1	74.3	76.9	86.6
Frame markers	25.5	29.5	25.3	35.4	24.7	22.5
Endophorics	22.0	15.5	19.6	25.9	43.1	23.0
Evidentials	82.2	55.6	60.7	31.1	20.1	99.5
Code glosses	41.1	36.6	30.0	32.3	30.7	36.0
Total	**265.9**	**240.5**	**224.7**	**199.0**	**195.5**	**267.6**

We can see that transitions tended to be more extensively and carefully marked in the soft fields, for example, perhaps reflecting the more discursive nature of these disciplines and their need to rely more on the careful crafting of a coherent and persuasive discourse. Students in the hard disciplines, on the other hand, employed relatively more endophorics, especially those in engineering, emphasising their greater reliance on the multi-modal character of argumentation in the sciences which requires frequent reference to tables, figures, photographs, examples, and so on:

(7) *Refer to Appendix 3* for a full description of the writing topic. (AL MA)

From Figure 6.6 we see that OD-H maintains a very small miss rate, and is relatively unrattled even under a small slack situation. (CS MSc)

> The C code of the MAE function is *listed in table 3.1*, ... (EE PhD)
> Daily growth rings on the sectioned sagittal otolith of T. lepturus are *shown in Figure 4.9.* (Bio PhD)

Turning to evidentials, it is interesting to note that there were four times more citations in biology than the average for the hard disciplines and they exceeded those of all other disciplines. Evidentials are metadiscoursal features which provide intertextual support for the writer's argument, a frame within which new textual claims can be both anchored and projected. As such they tend to be more prominent in the discourse of the soft disciplines where issues are less dependent on a single line of development (Becher 1989). Because new knowledge follows more varied routes in the soft fields, there can be less assurance of shared understandings and less clear-cut criteria for establishing claims. As a result, writers often have to pay greater attention to elaborating a context through citation to demonstrate a plausible basis for their claims.

Intriguingly, however, biology had the greatest density of citations in the corpus. This emphasis on giving recognition to the ownership of ideas and showing how current research relates to, and builds on, the work of others is also clear in the biology style guides (e.g. Council of Biology Editors 1994; McMillan 1997), papers by undergraduate and postgraduate students (Ädel & Garretson 2006) and in biology research articles (Hyland 2000). The biology students in the study were also conscious of this disciplinary ethos and stressed both the proprietary rights to claims and an interest in how particular research contributes to a bigger scientific picture in their interviews:

> References are important to justify the approach I used, in showing what people in different countries have done, and as basics for arguments in the Discussion section. (Bio MSc interview)

> References are important to support my own ideas. I'd think that more references are better as it may show that you are familiar with the field and that your ideas are common consent with support from other's work. The age of the references doesn't matter, and I don't suppose more recent references are better. For example, some theories dated back to the 1940s but they are still considered as important today, time doesn't change their truth. (Bio PhD interview)

In sum, these advanced L2 postgraduate writers used metadiscourse in different ways to present their research and interact with their readers, revealing something of the links between patterns of metadiscourse and the socio-rhetorical contexts of its use.

5. Conclusion

The main point I want to emphasise is that an interactional model of metadiscourse, or an 'interpersonal model' in my terms, offers a coherent and principled means of analysing the texts of writers in different communities. The analysis shows that masters and doctoral students, and members of different disciplines, represent themselves and see their readers in quite different ways. What assistance they assume readers will need in making connections between ideas, how they anticipate readers will react to arguments and claims, and how they should project themselves into their texts to present themselves as credible academics and writers is, to some extent at least, indexed in their metadiscourse choices. While it is true that rhetorical decisions may sometimes reflect either conscious choices or unreflective practices, the analysis of metadiscourse use in a large corpus such as this indicates that effective argument involves a community-oriented deployment of appropriate linguistic resources. Metadiscourse, then, reveals how writers seek to represent themselves, their texts and their readers as they frame, scaffold, and present their arguments and research findings in ways recognised and valued by their disciplines.

Seen in this way, then, metadiscourse is a response to the writer's evaluation of his or her readers' need for elaboration and involvement, ensuring that he or she supplies sufficient cues to secure an understanding and acceptance of propositional content. Metadiscoursal analysis is therefore a valuable means of exploring academic writing and of comparing the rhetorical preferences of different discourse communities. For this reason, it offers teachers a useful way of assisting students towards control over disciplinary-sensitive writing practices. Because it shows how writers engage with their topic and their readers, exploration by students of metadiscourse in their own and published writing can offer useful assistance for learning about appropriate ways to convey attitude, mark structure, and engage with readers. Only by employing these interpersonal features in their texts will students be able to get feedback on their practices to evaluate the impact of their decisions more clearly. Assisting students to an awareness of metadiscourse can thus provide them with important rhetorical knowledge and equip them with ways of making discourse decisions which are socially grounded in the inquiry patterns and knowledge structures of their disciplines.

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Understanding Metadiscoursal Use: Lessons from a 'Local' Corpus of Learner Academic Writing

Wendy Noble, The Australian National University, Australia

Abstract
Classroom-based corpus research into learner writing using both computational and manual text analysis can provide a starting point for shaping students' understanding of academic argumentation including metadiscourse. Following Mauranen (1993), Ädel's (2003) model delineates metadiscourse from evaluation, refocusing attention on explicit reflexive language. This study examines the use of metadiscourse in high-scoring and low-scoring essays written by undergraduate L2 business students. The subcategories studied are connectives, frame markers, code glosses and self-mentions. The results show striking differences in the range and use of markers to structure text. The wider aim of this study is to identify accessible models and methods to enable teachers to analyse metadiscourse in academic literacy.

1. Introduction

This paper on learner use of metadiscourse came about from a larger study on the ways texts reveal writers' strategies to create argumentation in academic texts (Noble 2006). It is motivated by questions arising from this researcher's experience teaching university student writers in English as a second or other language and the experience of compiling a corpus of learner academic writing. These experiences have highlighted two areas of need in academic writing pedagogy. First, teachers need to be able to determine how argumentation in writing has been attempted by a particular cohort of students so that their writing can be further developed. Second, teachers need to be able to articulate and demonstrate the rhetorical strategies available to learner academic writers in a developmental approach appropriate to their students' individual levels of understanding.

In terms of analysis, in contrast to the current trend of studying larger and larger corpora, it will be argued that we must not lose sight of the value of small, classroom-based corpus research, here referred to as 'local' corpus research. Using a combination of simple computational and manual methods of text analysis enables teachers to identify competence levels as the starting point for building and shaping their students' understanding of academic argumentation. One aspect of particular interest in the literature on metadiscourse in learner writing (Crismore et al. 1993; Cheng and Steffensen 1996; Ädel 2003) is the use of metadiscourse which is the focus of this paper.

The goal of this study is a practical, pedagogical outcome useful to teachers of academic English or subject lecturers. If they are to make use of the methods used here, the comprehensibility of each method is paramount. The data collection replicates university tutorial conditions where a teacher or lecturer has very limited information about the students' background, let alone writing experience. What the educator does possess, however, is essay texts themselves and all that text analysis can reveal about the writer and their notions of how to use metadiscourse in a particular academic context.

2. Metadiscourse

Variously referred to as metadiscourse, metatext, or text reflexivity, this concept is used to refer to a variety of non-propositional elements that help to organise text, in other words, "the text's commentary on itself" (Mauranen 1993:113). These elements may include, for example, linking words that express contrast, sequence or additional information (e.g. *however*, *secondly*, *also*) as well as asides made by the writer to the reader (e.g. *as we will see*) or guidance to different parts of the text (e.g. *in the next section*).

Metadiscourse is a highly relevant area to examine in learner academic writing as it helps to organise text, establish relations between writer and reader, and in its broadest definition, to convey a writer's attitudes towards text or the readers themselves (Hyland 2000). In other words, metadiscourse signals the presence of the writer in a text (Vande Kopple 1988). The term, though, is problematic due to two main strands that have arisen; one focusing on text organisation; the other on this and writer attitudes.

The development of a classification system for metadiscourse may be attributed to Vande Kopple (1985, 1988) and later adapted for academic discourse by Crismore and Farnsworth (1990). Their approach brought together Halliday's textual and interpersonal functions with Vande Kopple's seven categories of metadiscourse. Of these, Crismore and Farnsworth chose five to examine: those that are textual—code glosses, modality markers—and those that are interpersonal—hedging/emphatics, attitude/evaluative markers, and commentaries. Other researchers base their analysis on this taxonomy to varying degrees (Crismore et al. 1993; Hyland 1998, 2000, 2004). Application of the whole model, both textual and interpersonal components, has come to be known as 'the integrative approach' (including, for example, studies by Vande Kopple 1985; Crismore & Farnsworth 1990), whereas implementation of textual or organisational functions is known as 'the non-integrative approach' (including, for example, the study by Mauranen 1993); alternative labels are the 'interactive approach' and the 'reflexive approach' (Ädel, this volume).

In order to establish the metadiscoursal framework best suited to the analytical and pedagogical requirements of this study, the issue to be addressed is whether or not the writer's attitude towards the content and readership of a text be included, or should it be excluded and classified elsewhere as stance, evaluation (Hunston & Thompson 2000) or appraisal (Martin & White 2005).

An alternative theoretical model of metadiscourse to the interpersonal metadiscourse model is proposed by Ädel (2003) based on three of Roman Jakobson's six functions of language (1980, 1998) namely: the metalinguistic, expressive, and directive. Thus, Ädel's model, as seen in Figure 1, focuses on these functions played out in discourse within a three-way reflexive relationship between the text, writer, and reader (2003:73).

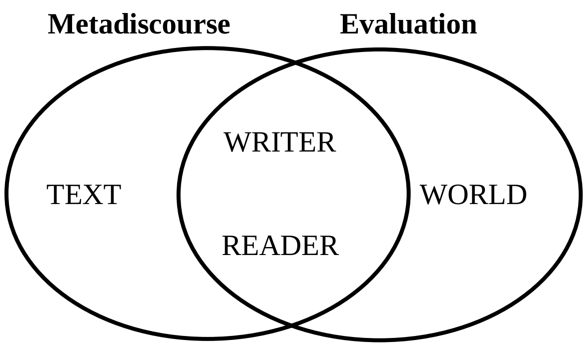

Figure 1. Overlap between metadiscourse and evaluation (Ädel, 2003:90)

While in agreement with Mauranen (1993), who argues that the most important feature of metadiscourse is that it refers to the current text or the writing process, Ädel adds that reference is needed not only to the reader of a text but the writer as well (2003:76). This clearly delineates metadiscourse from evaluation without which, Ädel asserts, too many features have been housed under this one term for historic reasons, making the definition of metadiscourse vague as it has moved away from a focus on explicit reflexive language. To be meaningful in a pedagogical context, it may be wise to adhere to the advice of Swales (2002:67) regarding structural models:

> One seemingly predisposing feature for the acceptance of structural models is certain simplicity […] It looks as though being simple engenders being memorable, and this in turn engenders being useful, quotable, and perhaps teachable.

In order to maintain the practical pedagogical purposes of this study, the definition of metadiscourse applied here consists of a simplified, restricted model, adapted from Ädel (2003) in which self-reflexive language is the defining feature of the type of metadiscourse examined. The term metadiscourse may be thought of as a writer's "commentary on the running text" (Ädel 2003:74) referring to references made by the writer about him- or herself, to the reader or about the text at hand, but not about the world 'outside' the text. As seen in Figure 1, the model delineates between metadiscourse and evaluation, as well as metadiscourse and attribution to outside sources.

Metadiscourse here will focus on what Mauranen (1993) calls 'text reflexivity' consisting of features that explicitly guide the reader through the text (e.g. *This essay will…; Firstly...*), and writer-reader interaction, meaning the writer discloses his/her intentions or includes the reader with reference to the text (e.g. *I will discuss...; as we have seen...*). Connectors are included insofar as their scope is textual (*however, first of all*), that is, intersentential, but sentence-internal connectors are not. The model will not include intertextual references, that is, comments made by the writer about other texts (e.g. *As McKenzie points out…; Some of their results…*), nor stance markers which express the writer's opinions or attitudes to topic other than the text itself (e.g. *This trend seems to indicate…; There is no evidence to suggest…*).

Questions used to guide this research project focus on observations to be made about learner use of metadiscourse markers. Possible practical outcomes to improve the teaching of metadiscourse in academic institutions will be suggested in the discussion. The research questions are: Which metadiscourse markers are mainly employed by learner writers and which are not? What, if any, are the main differences in the use of metadiscourse in high and low scoring undergraduate essays?

3. Method

One purpose of this study is to find an approach not only to analyse texts for the illumination of the profession of linguistics, but also to provide possibilities for the development of an accessible text-based teaching model based on a local corpus of texts produced by a class of student writers. Just as a teacher examines his or her students' texts to assess their level of competence in a given skill, close textual analysis allows the teacher/researcher insight into not only the target linguistic items chosen by a student, but also the absence of what might have clarified the writer's meaning and thus potentially the next step the writer could take to improve his or her writing. In this study, the combined force of two types of textual analysis, computational and manual, provide different insights into the rhetorical choices made by student writers. Thus this study is textual, rhetorical and practically oriented for a pedagogical outcome.

3.1 Corpus-Based Research

A significant contribution to text analysis has been the development of computer-assisted corpus analysis. Due to the limits of human observation often influenced by preconceptions and intuition, "much deep patterning is beyond observation and memory" (Stubbs 1996:21). A concordancing program, however, identifies every example in the data whether or not they fit expectations. While the differences between learner language and native-speaker language have been much debated, now corpus-based research can substantiate claims with hard evidence (Bowker & Pearson 2002:211). The study of learner corpora can provide insights into how certain groups of students tend to express certain meanings, and to what extent certain items are overused or underused (Granger 1998). Corpus analysis tools allow the analyst to study broadly or narrowly focused interests. For example, these tools are able to find the highest frequency terms in a corpus or find an individual token within the context of a sentence fragment or string.

The creation of a local corpus consisting of the output of students in the same class provides a rich source of learner text for a variety of purposes. Such a corpus may be used to teach, model, discuss, challenge and improve texts that are familiar and attainable by students. Moreover, the use of terms found in a learner corpus may be contrasted with the way they are employed in a corpus of expert writing on the same topic.[1] In addition, a corpus of successful learner texts may be used by students in the role of researcher in an experiential investigative approach to learning to write (Johns 1997:92). In my study a learner corpus is not only used to examine the use of metadiscourse devices in student essays, but also to create a database appropriate to the local context of the course from which to draw pedagogical materials.

When used for class work, all identifiers, such as the file specification used below (*Essay36A*), are removed from sentence fragments to retain the anonymity of students.

> effects of heavy television viewing. <p> In addition, the field experiment (Essay 36A)

The learner corpus used in this study is deliberately small, as it mimics the size of a typical first-year cohort. As Fillmore states, “every corpus I have had the chance to examine, however small, has taught me facts I couldn’t imagine finding out any other way” (1992:35). Moreover, recent research recommends the development of small corpora for use in EAP programs (Hyland 2000; Tribble 2002). While large corpora are desirable to determine the frequency of particular words to generalise findings, analysing a small corpus using a concordancing program combined with manual analysis allows a deeper understanding of individual learner writer strategies.

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[1] In the larger study this paper has come from, an additional corpus comprised of the scholarly texts from the class reading list was used for comparison with the learner corpus.

4. Materials

The essays analysed in this study were written by first-year university students who had English as a second or other language (L2). These students were majoring in business studies and computing, but were entering university through a bridging program, consisting of one or two years' study in a private college, Sydney Institute of Business and Technology (SIBT), before being admitted into a regular second year university degree program at Macquarie University. The level of English required for entry into SIBT was an overall IELTS score of 5, while direct entry Macquarie international students were required to have an overall IELTS[2] score of 6. SIBT students whose first language was not English, whether Australian-born, immigrants or international students and who had not attended an English-speaking high school were required to pass a credit-bearing course named "English for Academic Purposes 100" (EAP 100) before being admitted to Macquarie University. During the course, students received instruction in both global and discrete aspects of academic writing including: taking a critical approach to reading, summarizing, structuring an essay and using reporting verbs.[3] In this course, students wrote the essays that have been used to form the learner corpus in this study. Students came from a range of language backgrounds including Mandarin, Cantonese, and Korean.

The data for this study consist of a 120,000 word corpus comprising 80 essays approximately 1,500 words in length ranging in grading from high (28/30) to low (15/30) with a high score roughly equivalent to an IELTS score of 5.5. The scores where determined by course tutors based on these criteria: clear argument; logical structure; appropriate use of evidence; strong cohesion; and grammatical accuracy. Grading in most Australian universities uses the cline of High Distinction (HD) for excellent, Distinction (D) for very good, Credit (CR) for good and Pass (P). The corpus contains essays from two classes of approximately 40 students in each. These classes are represented by A or B in the file

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[2] International English Language Testing System (IELTS) is an English proficiency test accepted by most Australian, British and Canadian universities. The four skills test a nine-point band with 5.5 overall needed for undergraduate university entry and 6.5 overall for postgraduate entry.

[3] Materials from EAP 100 have since been published (cf. Brick 2006).

specification seen at the end of each concordanced sentence fragment, as in *Essay 34A*.

The essays are argumentative (rather than expository) and were written using scholarly readings from psychological and sociological studies on the topic "Does television violence affects children's behaviour." The texts are authentic student texts so no corrections have been made to spelling, grammar or other errors. Therefore, examples from the learner corpus discussed in this study are intentionally left in their original state and may contain usage errors. Noting the types of errors made is pedagogically informative.

5. Analysis

The present study used three stages of analysis. First, the computational technique of concordancing was used to analyse the learner corpus to identify the range and number of metadiscoursal items. The concordancing software used was MicroConcord (Scott & Johns 1993). Second, two subcorpora, extracted from this learner corpus, consisting of high and low scoring texts, were analysed to compare difference in usage based on score. Third, manual text analysis of several essays added a deeper view of patterns of use than frequency lists by revealing how metadiscoursal choices affect the structure of a complete text.

The analysis compares and contrasts the use of metadiscourse markers in all texts and then high (HD) and low (P) scoring texts specifically. The meaning of "metadiscourse marker" as used here is that of an element that helps the writer to talk about or organise the text, to engage the attention of the reader, or to reflect on the text. The categories of metadiscourse markers investigated in this study are listed below.

Connectives
  Logical connectors: e.g. *therefore, in addition, however*
Frame Markers
  Sequencing: e.g. *first, second, then*
  Label stages: e.g. *finally, to conclude*
Code Glosses: e.g. CALL, DEFINE, MEAN, *i.e.*
Self-mention: *I, we, my, our*

Corpus analysis of the whole learner corpus[4] (80 essays) was conducted in order to ascertain which types occur and how frequently. Firstly the learner corpus was examined for patterns of interest to explore in depth. Next the two subcorpora were compared, one consisting of 10 high scoring essays and the other 10 low scoring essays (approximately 14,000 words each). These subcorpora allowed for observation and comparison of the kinds of choices learner writers make when attempting to clarify their textual intentions to the reader, and also the tracking of relationships between metadiscourse markers. Clearly the goal here was not to accumulate statistically accurate frequencies as in large corpus studies. As Tribble states, "the large corpus […] provides either too much data across too large a spectrum, or too little focused data, to be directly helpful to learners with specific learning purposes" (2002:132). It is important to note that, in general, learner writing does not present a wide range of types used with the most frequent type being connectors. Finally two essays were examined to observe how metadiscoursal connectors, as the most prevalent type of tokens, operate in context. Particular attention was given to the number of tokens employed, how they were distributed, and where they were placed in the sentence.

6. Results

Internal text structuring in the learner corpus using metadiscoursal markers is examined focusing on connectives, framing, code glosses and self-mentions. Overall the learner writers show heavy reliance on a narrow range of connectors, but differences are seen in the types employed. Also a comparison of high and low scoring essays highlights differences in the, albeit infrequent, use of framing, code gloss and self mentions.

6.1 Connectives: Whole Corpus

Connective use is particularly prevalent in learner writing (Field 1994) as these linking words are relatively easy to use, and require little or no

[4] Here "learner corpus" refers to the students being both learners of English and learners of academic writing in a university context.

grammatical adjustment when added to a sentence. The most frequent linking words found in the learner corpus can be seen in Table 1 below.

Table 1. Frequency of Connectives in the learner corpus

Rank	**Connectives**	**Total**
1.	*Also*	435
2.	*But*	316
3.	*However*	299
4.	*Therefore*	212
5.	*on the other hand*	69
6.	*Moreover*	62
7.	*in addition*	53
8.	*in conclusion*	44
9.	*In fact*	30
10.	*as a result*	20

The marker *also* was by far the most frequently used, perhaps because it is commonly used in spoken text as well as written text and thus would be very familiar to students. In fact, some essays used this connector almost exclusively.[5] A student's reliance on one connective is not *per se* an indicator of writing quality as indicated by the essay grades listed in Table 2. Yet, this result may indicate students' lack of knowledge or confidence to apply other types.

Table 2. Predominance of *also* in Four Essays

Essay	***also***	**other connectives**	**grade**
9A	21	0	CR
46A	14	0	D
41A	13	0	F
45B	12	1	CR

A more informative result is found when the total number of uses is compared to the range of terms or the token/type ratio employed. Figure 2 shows a comparison of High Distinction, Distinction, Credit and Pass

[5] From the sample set of connectives that were tested.

level essays. It is important to note that most HD essays had twelve or more occurrences of connectives, and utilized five or more different types of markers. In contrast, in ten Pass essays, only one used more than twelve markers. Thus higher scoring essays contained more connectives and a greater variety of different types.

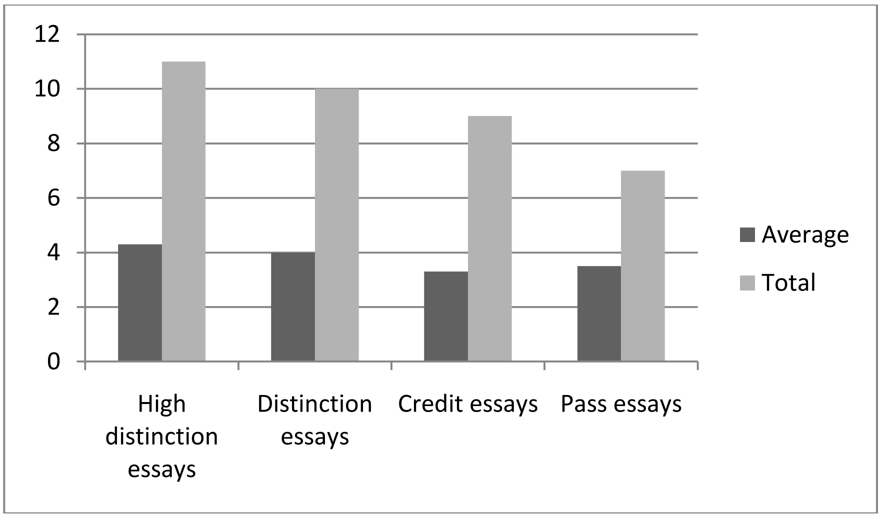

Figure 2. Average number of metadiscourse markers used and total frequency

In terms of placement in the sentence, some connectors appeared in the initial position very often (*in addition*), and others very rarely (*and*) (see Table 3). This result may have been influenced by exercises the students completed during EAP 100 on the placement of connectors (cf. Thurstun & Candlin 1997). Moreover, research has shown that Cantonese speaking students from Hong Kong tend to have a distinctive way of organising essays characterised by very frequently prefacing points with connectors possibly entrenched through Hong Kong school textbooks (Field 1994; Field & Yip 1992). A large cohort within the EAP 100 course consisted of students from Hong Kong, so a residual educational effect could have also contributed to this result.

Table 3. Markers in initial sentence position

Marker	**Initial**	**%**	**Total**
in addition	51	96.2	53
therefore	42	76.4	55
however	13	4.3	299
on the other hand	12	1.7	69
and	11	0.7	1,590

In examining the placement of connectives, a useful method for identifying the common problem of overusing connectives in initial position by learner writers was found. By searching the learner for a full stop followed the connective in question, for instance *'. In addition'*, overuse is immediately evident. For instance, in concordance Extract 1 the concordanced sentence strings readily show which essays contain *in addition* in initial position in the sentence. Even more problematic are those instances where connectives with an additive function (e.g. *in addition, further, also, moreover*) or a contrastive function (e.g. *however, yet, instead, in contrast*) are inappropriately used because they refer back across paragraph boundaries (<p>), as seen in lines 2, 4, 8 and 9 below.

Concordance Extract 1 from the learner corpus

```
1)  still observable 2 years later. In addition, researchers were led
2) f heavy television viewing. <p>  In addition, the field experiment
3) iment is criticised by Freedman. In addition, timing difference of
4) en have VCRs in their house. <p> In addition, there are all uncut,
5) ate so to children's aggression. In addition, we should regard TV
6)  increased aggressive behavior.  In addition, the cognitive develo
7) ad to a decrease in aggression.  In addition, many of the published
8) n Singer & Singer, 1988: 5). <p> In addition, children's perception
9) ve sign pattern disappeared. <p> In addition, it should add one stu
10)tical significance is distorted. In addition, the reasons which cou
11)effects on his aggression level. In addition, Freedman's studies on
12)children's aggressive behaviour. In addition, Freedman (1988: 3) ha
13)y were angry in the first place. In addition, a recent study conduc
14) and violent television program. In addition, Milavsky also conduct
15)in a whole full of TV influence. In addition, parents and teachers
16) really exist or was very small. In addition, other similar studies
```

6.2 Connectives in Subcorpora

As is characteristic of student writing, a narrow range of types of markers is represented here. Table 4 shows a comparison between connectives found in the subcorpora of low and high scoring essays. Low scoring texts contained a smaller range of connectives meaning that a few types were used repeatedly. Moreover connectives often associated with spoken English were prevalent in the low scoring essays, such as *but* and *so*. High scoring texts, on the other hand, exhibited more types of connectives often associated with the more formal written register, e.g. *in addition* and *thus*. Although an overlap of constituents is evident in the main, the presence of connector types from the academic register in higher scoring essays indicates a developing emergence of register awareness.

Table 4. Frequency of Connectives in the subcorpora[6]

Low Score	**F**	**High Score**	**F**
but	42	*also*	52
because	40	*however*	38
however	37	*but*	25
also	37	*because*	25
therefore	28	*therefore*	20
although	19	*still*	12
still	15	*although*	11
so	13	*in addition*	8
since	12	*thus*	8

6.3 Comparison of Two Essays

When few connectives are used in an essay, it tends to be either an indication that there is a problem, or that another method of linking ideas has been employed. Example 1 consists of text segments from two essays for comparison. Both essays 3A and 33B exhibit fewer occurrences of connector use overall compared with other essays, yet they are structured quite differently. In essay 3A, the writer's focus is on Freedman (the researcher) and his actions. This connector use is rather descriptive and narrative-like in the way that ideas are treated like events that unfold

[6] Table 4 compares two subcopora consisting of high and low scoring essays. Thus the frequencies differ from those found in Table 2 representing the entire learner corpus.

sequentially. In contrast, the writer of essay 33B focuses on the problematic results of particular experiments, thus demonstrating a more analytical understanding. In essay 33B, as seen in Example 2 below, links are made between sentences by topical or lexical connections (e.g. weak, contradictory results) rather than by connectives.

Example 1: Few Connectives in Essays 3A and 33B

Essay 3A	Essay 33B
<p>In ***Freedman*** article, ***he*** argues that there is a little or no solid evidence to support the assertion that TV violence lends to increased aggression, that is opposite to Singer & Singer's idea. ***Freedman*** look at the three experiment as well, ***he*** says that these studies vary in terms of role of anger in determine aggressive behavior, the argues that if anger is a precondition aggressive behavior, **<u>Then</u>** the effects of TV violence are in doubt **<u>and</u>** ***he*** disagree that what happen in the laboratory is what happen in the real world. **<u>On the other hand</u>** ***Freedman*** showed that the field experiment are too small in number **<u>and</u>** some must be disregarded, **<u>because</u>** they are case studies rather than real experiment or the results were weak **<u>and</u>** in consistent. ***Freedman*** **<u>also</u>** compared the rate of crime in some cities that had television to tee rates of crime in those that did not. It found that TV had no effect on serious crimes or other serious crimes, **<u>but</u>** only on petty theft. (J.L. Freedman 1988)	p>***The results*** of control experiments conducted in the field are too weak **<u>and</u>** inconsistent to show that there is a positive correlation between TV violence and aggression. This is not surprising **<u>since</u>** ***this kind of experiment*** is difficult to control **<u>and</u>** requires a lot of time, effort and money. ***An experiment*** by Fesbach and Singer (1971) shows that the children who watch non-violent programs tend to be more aggressive than those who watch violent program. ***This finding*** contradicts the hypothesis that there is a correlation between TV violence and aggression. ***Research*** conducted by the same method by Wells (1973) showed a weak opposite result to the one by Fesbach and Singer (1971). ***These contradictory results*** **<u>also</u>** raise questions about the consistency of the findings and the methodology of this research. ***An experiment*** by Friedrich and Stein (1973) convincingly shows that there is no correlation between TV violence and aggression (Freedman,1988;Singer&Singer,1988).

Example 2: Linking in Essay 33B

S1 results . . . weak and inconsistent
S3 findings contradict the hypothesis
S4 Research showed . . . weak opposite results
S5 These contradictory results . . . raise questions about consistency
S6 convincingly show . . . no correlation

The use of lexical chains to establish cohesion is outside the scope of this paper. Suffice it to say here that the presence of more connectors in a text does not necessarily create a more cohesive text.

Another aspect of connectives to consider is the rhetorical weight attached to any particular marker. In Example 3 below, *therefore* seems to function at a significant juncture of closure to a point of argument. The first sentence (S4) is the writer's main point (that television does not affect children) and the last sentence (S27) confirms this idea with evidence that watching television may indeed result in certain reactions (imitation of aggression, arousal) that could be construed as an effect, in spite of counter evidence.

Example 3: Rhetorical use of *therefore* (extract from Essay 4A)

S4 It may be said that television do have some effects on children but the evidence is not very strong.
S16 Freedman further states that aggression may be due to initial anger.
S17 However, the research has not done that part. The inconsistent results are concluded because such research has not concern the prior anger.
S19 Secondly, some studies consider anger but some do not.
S20 Thirdly, if anger is the cause of aggression then there is no direct relationship between television violence and aggressive behavior because it may due to arousal.
S23 Freedman focus on a few studies with slight or no effect but he has not considered that there are many other studies produce positive effects.
S25 In fact, social scientists have examined parental influence before making conclusion.
S26 To answer to Freedman's arousal factor aggression is defined as stimulated behavior.
S27 Therefore, imitation of aggression, arousal and reduced inhibition of aggression are all possible results of watching television violence.

In Example 4, however, *therefore* plays quite a different role. The marker is used twice in this paragraph, but in neither case is there a sense of summative argumentation. In the first instance *but* or *however* would have served better to construct a connection between the contrasted ideas. In the second instance, no linking word is required, because *since* is already in operation to show how these ideas are related.

Example 4: Incorrect use of *therefore* (extract from Essay 42A)

> <p>It seems to be true that laboratory experiment is relevant just in a certain circumstances since everything is undercontrolled. To explain this statement, we need to know what is laboratory experiment first. It is to ask children to watch a violent program in a laboratory room and then to compare their behaviour before and after watching that program. "This study show that violence can produce a momentary increase in scores on measures of aggression in the laboratory" (Freedman, 1988). <u>Therefore</u>, some psychologist suggested that laboratory measures of aggression have "field validity." On the other hand, this measurement can't reflect the long-term effect. Since the researchers can't observe the children after they getting out from the laboratory, <u>therefore</u>, some psychologists critize that the laboratory experiments are less consistent than they are usually thought to be. In an attempt to be more accurate to measure the effect to children, another experiment has applied, which is generalising measure the effect from laboratory research.

This section has examined the frequency, placement, rhetorical weight and incorrect use of linking words in the learner corpus and subcorpora. As connectives are the largest group of metadiscoursal markers, extended attention has been given to this category. The next three sections will briefly discuss other markers that appear in the learner corpus. These are frame markers, code glosses and self-mentions.

6.4 Frame markers

Very few frame markers were found in the learner corpus, although a few were used to good effect: *finally, first*, second*, last*, then, conclud*, conclusion*. The low frequency of frame markers in the corpus seemed to indicate that students were either avoiding the typical framing sequencers (*First…; Second…; Third…*) that they had been warned against overusing, did not understand how to use frame markers effectively or were employing other strategies to organise their texts.

In terms of expert writing, fewer frame markers may indicate a level of sophistication in text organization. As Hyland (2000:190) notes, "where texts are for specialist audiences, we find fewer textual devices" because the writer will rely on the reader's understanding of lexical relations. To demonstrate text organisation that does not rely on metadiscourse markers, I have compared two texts on the same topic but from different genres as seen in Teaching Example 1. The text on the left is an extract from a journal of social psychology, and on the right is an extract from an undergraduate level textbook on child psychology. While the second relies on sequencing labels (*in a number of ways; first; second; third*), as is typical of a pedagogical genre, the first depends on more subtle conceptual labels, that take the form of abstract nouns (e.g. *several kinds of influence; passive form; active form*). Here we see differences in organisation dependent on the target audience.

Teaching Example 1: Same topic but different genre

Social psychology journal	Early childhood textbook
Television might <u>have several kinds of influence</u> on the child. For example, a more <u>passive form</u> of learning may occur simply by exposure, involving the inherent human tendency to categorize even fleeting or incidental experience. A more <u>active form</u> of learning may also involve the child's attempting to form schemas or categories and to organize ultimate action scripts based on the kinds of experiences encountered with the television medium. (…) <u>With respect to content</u>, heavy exposure to the medium also means heavy exposure to an inordinate amount of aggressive behavior carried out by both "good guys" and "bad guys". As children actively seek to organize scripts about human actions, either through direct imitation or through the formation of ongoing cognitive structures, they must inevitably – if…heavy TV viewers – begin to see violence as the major form of problem solution (Singer & Singer 1988:169)	Television may influence children's aggressiveness <u>in a number of ways</u> (Liebert and Sprafkin, 1988). <u>First</u>, some children may directly imitate; they simply copy what they see on television. Obviously other factors are involved, as most children do not imitate such behavior. Aggressive children, though, may learn different ways to aggress by watching television. <u>Second</u>, televised violence disinhibits aggression. People have certain inhibitions against violence, and witnessing aggression may reduce these inhibitors. <u>Third,</u> television violence may lead to antisocial attitudes and encourage children to accept violence as a way of dealing with problems. Children become desensitized to violence on television and come to accept it as a normal part of life, not taking it seriously (Cole & Didge, 1998). (Kaplan 2000:455)

Lexical relations are highly valued in scholarly writing. The target audience for student essays is the academic who marks them, thus the target register is more closely aligned to scholarly rather than pedagogical genres. To begin with, learner writers of undergraduate essays would be wise to create an explicit organisational framework, but as they become more advanced writers they should be encouraged to rely more and more on implicit lexical cohesion in order to more closely approximate scholarly texts.

6.5 Code glosses

Code glosses were rarely used by learners but appeared slightly more in High Distinction than in Pass essays as indicated in Table 6.

Table 6. Frequency of Code Glosses in the subcorpora

Marker	**HD Essays**	**P Essays**
such as	24	18
in fact	7	0
for example	5	7
DEFINE	1	3

The most frequently used code gloss in the subcorpora was *such as*, followed by *for example* and *in fact*. These markers are useful for defining new terms, giving examples, and reworking a complex idea into a simpler form. It is therefore interesting that students rarely used them, and further research may reveal a lack of topical development as the cause. Where ideas in sentences are touched on but not developed, there would be little need to give examples or elaborate on complexity.

6.6 Self-mentions

The last category of explicit metadiscourse markers to be discussed is self-mentions. Within this category, a plethora of discourse functions are possible. In this section the markers *I*, *my* and *we* will be discussed in terms of examples from concordances and individual high and low scoring essays. When the first person pronoun *I* is used it clearly refers to the writer of the text, as does the possessive pronoun *my*.[7] The other

[7] Unless these terms are used in quoted material in which case they are not metadiscoursal.

constituent in this category, *we*, is, however, more difficult to identify. Only those cases where *we* is used reflexively as well as including the reader, can be considered to be metadiscoursal. Most instances in the corpus refer to ideas and events external to the text, as seen in Example 5 below.

> Example 5: Also as adults, <u>we</u> have responsibility for our children (Essay 9A)

With each of these terms, care needs to be taken to ensure that the persona referred to by *I* and *we* are indeed the writer or the writer and reader. Thus an example can only qualify as metadiscourse if the actor (the writer for example) is carrying out a task "within the world of discourse" according to Ädel (2003:91), and as seen in Example 6.

> Example 6: Here <u>I</u> would like to point out some shortcomings about the study (Essay 43B)

Learner writers, particularly non-native English speakers, often find it difficult to know when it is appropriate to use *I* in academic writing. In his study of learner writing, Myers (2001) found that students were, for the most part, confused about how to present personal views for two reasons: (a) expressions of opinion can have different functions in text and (b) expressions of opinion have different constraints in different genres (Myers 2001:77). The students who wrote the essays collected in the learner corpus for the current study were warned by their teachers against using *I*-statements, which may explain why there are so few examples in the corpus.

The use of the self-mention *my* was also avoided by the student writers. Concordancing showed that several tokens belong to the same text. It seems that some students felt at ease using their personal voice (Leki 2001) even though most did not.

The self-mention marker *we* is widely represented in the learner corpus. In order to determine which occurrences are metadiscoursal, two principles were applied. Firstly, the metadiscoursal meaning of *we* should be inclusive, as in 'you and me' because it refers to the writer and reader. Employment of this term as a powerful argumentative device often used by expert writers may be lost on learner writers. Thus a test was applied to determine whether each use of *we* could be replaced by the term ‘people’. In other words, does *we* in this case mean ‘it could be anyone’, ‘society in general’ or does it mean ‘you and me’?

Concordance Extract 2: *we* from the learner corpus

```
1)    Milavsky concludes that we should concentrate more on real world
2)   y. That's the reason why we should look and study closely about
3)    e connection. Therefore we should take seriously about this issu
4)  t is questionable whether we should believe his thesis or not sinc
5)   aggression. In addition, we should regard TV programs which have
6)  nts send the message that we should buy a product and documentaries
7)  e or not to children. <p> We should be concentrated on children's
8)   aggression. In addition, we should regard TV programs which have
9)  ods without it. Actually, we should objectively accept that a rise
10) r our children, therefore we should set rules about TV and  show
11) seems to be obvious that  we should believe what have been found
12) an is very logical, since we sometimes met someone expectation jus
13) ence to show the linking, we still need more studies in different
14) is inconclusive. Finally, we suggest that parents teach their chil
15) nderlined critically when we think children in the world who spend
16) ult to do so.  Therefore, we will discuss every experiments done
17) elevision. In this essay  we will discuss, what kind of effects
18) y used for research. Then we will compare the major laboratory exp
19) hey support the evidence, we will briefly compare what the authors
20) out the situation in USA, we would easily to realize the people in
```

For example, in Concordance Extract 2, sentence fragment 1 (Milarsky concludes that we should concentrate more on real word issues (30B)) could be reworked as: Milarsky concludes that people should concentrate more on real world issues (30B adapted). However, sentence fragment 18 (Then we will compare the major laboratory experiment (13A)) could not be changed to: Then people will compare the major laboratory experiments (13A adapted).

A related term to *we* is *people*; an overly general term for the register of academic writing. For example in Essay 34B the marker *people* is used 13 times where, in most cases, the writer could have identified the types of people mentioned by their specific roles. For example, in *Williams and her group were the <u>people</u> who did this experiment*, *people* could be replaced with *researchers*. This example is not metadiscoursal because it is a reference to people outside the world of the text, but perhaps the last line, *However, by the research results from Singer and Singer, <u>people</u> still can conclude that violence television program does affect most of the children behavior becomes aggressive*, would benefit by changing from *people* to *we* as by this point in the essay (the conclusion) the writer would hope to have persuaded the reader to his or her stated point of view.

As seen in Ädel's (2003) study of personal metadiscourse, there is much potential scope for writer-reader interaction. Possible discourse functions she identifies are: anticipating the reader's reaction, clarifying, persuading the reader, imagining scenarios, hypothesising about the reader, and appealing to the reader (2003:147; see also Ädel, this volume, and Pérez-Llantada, this volume). Thus self-mentions are identified as important to writer-reader interaction, yet in the learner corpus were poorly applied or avoided possibly because of confusion about the constraints of using expressions of opinion in academic writing. These results highlight the need for more explicit attention to be paid to the teaching of self-mentions to learner writers.

7. Conclusion

This study of metadiscoursal markers has examined internal text structuring and reflexivity in a learner corpus focusing on connectives, frame markers, code glosses and self-mention use by learner student writers. As predicted, the corpus analysis recorded a high frequency of connectives used by the learners within the main learner corpus as compared to other markers.

The finer text analysis between high and low scoring essays was possible through the use of subcorpora extracted from the main corpus. The results showed clear differences between high and low scoring essays. High scoring essays used a higher frequency and range of metadiscoursal markers. Low scoring essays tended to rely more heavily on markers common in spoken English (rather than written English texts) making these essays more casual in register. In addition, close text analysis of two essays revealed that the way markers are used to structure texts can differ markedly resulting in narrative rather than analytical structuring.

Students' lack of knowledge, confidence or instruction in applying certain devices was indicated by the lack of attempts to use frame markers, code glosses and self-mentions in the learner corpus. It was noted that sequencing labels commonly used in student writing (*firstly; secondly*, etc.) do not necessarily mark good writing and in fact high scoring essays showed more use of lexical cohesion. Students also seemed to avoid self-mentions perhaps heeding warnings about the use of first person, or lacking confidence in the use of their own voices in academic writing.

In terms of methods applied in this study, analysis of the whole corpus, subcorpora of high and low scoring texts and close manual text analysis of two essays proved to be complementary, with each method adding to the overall picture of student use of metadiscoursal use.

While the debate over how to define metadiscourse wages on, from an analyst's perspective, the sheer volume of data generated by this topic has warranted focusing on a narrower definition than Vande Kopple's original taxonomy. But more importantly, this distinction provides useful in teaching, as students need to learn to manage text organisation, reflexivity and the evaluation of ideas.

7.1 Implications for teaching

The intention of this study has been to demonstrate the value of localised classroom-based corpus research using computational and manual methods of text analysis. Computer-assisted concordancing provides more direct evidence of how language is used than grammar books or dictionaries (Murison-Bowie 1993). If teachers are able to identify competence levels of metadiscoursal use by students through the analysis of their texts, a local corpus is an excellent starting point from which to build up and apply targeted development their students' academic argumentation. A learner corpus is not only useful to examine the use of rhetorical devices in student essays, but also to create a database appropriate to the local context of the course from which to draw pedagogical materials for current and future class work. Interrogation of a local learner corpus is fertile ground for class discussion, given the anonymity of computer assisted concordanced sentence fragments when file specifications have been removed.

Other strategies complementary to the study of a local corpus are found in the literature. For some time, teachers have been encouraged to find relevant examples of markers used in real texts. Even more powerful, though, is the use of a concordancing program with a corpus of authentic texts (either a learner or expert corpus). Concordancing authentic texts provide teachers and students with the tools to analyse texts, manipulate texts, and understand different audiences and registers (Hyland 2005). Another strategy is cognitive mapping to help students improve the quality of their ideas through adequate elaboration (Crismore 1989) which would help to address the paucity of code gloss markers used by student writers. Also, as argued in this paper, the delineation of functions into metadiscourse, evaluation and intertextuality through the use of clear modeling (Mauranen 1993; Ädel 2003) is likely to enhance pedagogical practices.

Finally, it is not this researcher's intention that the results found in this small, localised study should be generalised, as this would miss the point. Rather other educators are encouraged to do as this study has shown is possible; to examine learner writing for evidence of metadiscoursal use and target teaching from that point of departure. Also it is possible to engage students themselves in uncovering patterns and features in writing using a variety of analytical tools such as corpus analysis to enhance comparison, and to encourage discussion of authentic texts, thereby addressing authentic student needs and interests.

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Hedging devices in Slovene-English Translation: A Corpus-Based Study

Agnes Pisanski Peterlin, University of Ljubljana, Slovenia

Abstract

Translating research articles into English is fairly common practice in certain disciplines; however, the translated articles are generally not perceived as translations by the reader. Consequently, the translation of the research article is often invisible. Relatively little data is available on issues arising in this type of translation. The present paper aims to explore one of the issues which arise in translating research articles, namely, the question how hedging devices are translated. The importance of hedging in academic discourse has been established by a number of studies; in addition, considerable cross-cultural variation has been observed in the use of hedging. This raises the question of the effect of this variation on translation. In order to explore this question, a corpus of 90 research articles in geography—30 original Slovene articles, 30 English translations of Slovene articles and 30 comparable original English articles—is analysed. The frequency and form of hedging devices used in translated and original English texts are compared in order to identify the ways in which Slovene-English translations differ from comparable English language originals. The results show considerable differences between the two comparable corpora: only half as many hedging devices are used in the translated texts as in the originals and the variety of hedging devices is considerably more limited in the translations.

1. Introduction

The use of hedging in academic discourse has been extensively studied in recent decades and various theoretical models and definitions of this phenomenon have been proposed (e.g., Markkanen & Schröder 1989; Hyland 1996; Markkanen & Schröder 1997; Mauranen 1997; Hyland 1998; Burrough-Boenisch 2005). In this paper, I follow Hyland's (1998) conceptualisation of hedging; Hyland (1998: 5) states that "hedges are the means by which writers can present a proposition as an opinion rather than a fact: items are only hedges in their epistemic sense, and only when they mark uncertainty." The concept of hedging is presented in more detail in Section 3.

Contrastive studies have established considerable differences between various languages in the frequency, distribution, and function of hedging devices (e.g., Vassileva 2000; Dafouz-Milne 2008). Moreover, ESL/EFL-oriented research has identified important differences between L1 and L2 writers in their use of hedging (e.g., Hyland & Milton 1997; Hinkel 2005): researchers have shown that L2 writers use hedging in a way that is different from the use of hedging found in L1 writing.

An interesting question that arises in intercultural communication is what happens to hedging in the translation of academic discourse. In the context of research into metadiscourse, the issue of hedging in translation was first addressed by Markkanen and Schröder (1989). Their findings about changes to hedging in self-translation, which is a very specific type of translation, raise new questions about what happens to hedging in situations in which the source text is not translated by its author. In most cases, the translator and the author are two separate individuals involved in the process of text formation, and the presence of the translator creates another variable in the already complicated equation of intercultural communication. In comparison with the L2 writer, the translator may be more proficient linguistically, but may still face problems with hedging because he or she is constrained by the source text.

This paper examines how academic texts translated into English differ from comparable English originals in the use of hedging; for this purpose, a corpus of geography research articles composed of two parts – translations and originals – is analysed with regard to the use of hedging devices. To examine specific differences, the use of *may* and *might* is compared in detail, in terms of frequency and patterns in which the occur. *May* and *might* have been chosen because, as Hyland (1998: 116) points out, they are "often considered to be prototypical hedges". The strategies used in translation are examined by comparing the corpus of translations with the source-language texts.

The corpus of translations consists of geography research articles translated into English from Slovene. Translations from Slovene were chosen for two reasons. The first is that Slovene discourse, including academic writing, has traditionally been heavily influenced by German academic writing. Studies contrastive rhetoric (e.g., Clyne 1987) have established considerable differences between German and Anglo-American rhetorical conventions (for a comprehensive overview of the importance of rhetorical conventions and contrastive rhetoric in general, cf. Connor 1996). Previous research into English and Slovene rhetorical conventions has already established considerable cross-cultural differences between Slovene and English academic writing conventions (cf. Pisanski Peterlin 2005): Slovene writing seems to be more reader-responsible than English. The second reason is related to systemic differences between the two languages: as a Slavic language, Slovene has a relatively different system of modality from English and consequently uses different types of hedging devices than English. It therefore seems reasonable to expect that problems in translation of hedging may arise due to these two factors.

2. Hedging and the translation of research articles

The translation of research articles is generally a type of 'covert' translation, defined by House (2002: 100) as "translation which enjoys the status of an original text in the receiving culture. The translation is covert because it is not marked pragmatically as a translation at all, but may, conceivably, have been created in its own right." Because of this, cross-cultural issues require specific treatment in covert translations. House (2002: 100) points out that "the translator must re-create an equivalent speech event" and that this type of translation "often results in a very real cultural distance from the original text, since the original is transmuted in varying degrees." As a result, researchers whose work focuses on the translation of academic texts (e.g., Williams 2004; Siepmann 2006), have argued strongly in favour of adherence to the norms of the target language in translation of academic discourse – or, to use Toury's (1995) basic opposition between 'adequacy' (defined as adherence to the norms of the source culture) and 'acceptability' (defined as adherence to the norms of the target culture), they have highlighted the importance of acceptability.

However, even assuming that acceptability is a basic priority in academic translation, translating hedging devices creates specific problems. Although hedging does not change the content of the text, it conveys the author's position on a given issue, and it seems possible that the translator may feel reluctant to interfere with the writer's commitment to the content by inserting or deleting hedging devices. Markkanen and Schröder (1989) examined translations carried out by writers who translated their own work. In their study, they found that the writers-translators made adjustments to their hedges in the process of translation. This led Markkanen and Schröder (1989: 177) to the observation that the authors whose work they examined were able to make adjustments to the conventions of the target culture in their translation of hedges (e.g., hedges were omitted or added in the translations, the type of hedging used in the originals differed from the type of hedging used in the corresponding translations) because they knew exactly what their intentions were. However, they questioned whether a "normal" translator would "increase or decrease the amount of hedging used in the original if the conventions of the target culture seem to require this."

In her study of the effects of language editing on hedging, Mauranen (1997) found that the text editors in her study did not make many changes to hedges and "presented this as a deliberate and motivated choice": they felt that hedging was the writer's domain. Mauranen (1997: 131) observes that the editors "seemed willing to maintain the author's voice as far as possible."

Finally, another aspect of hedging and cross-linguistic differences must also be considered: different languages use different linguistic means to express epistemic modality. The issue of translating epistemic modality has been addressed from a contrastive angle by Aijmer (1999), whose study focused on translating epistemic possibility from an English-Swedish contrastive perspective. Aijmer (1999) compared source texts with their corresponding translations to examine the extent to which the epistemic possibility modals found in the source texts were rendered as epistemic modals in the translations. She observes differences between translations from English into Swedish and translations from Swedish into English, where she reports a preference for epistemic modals in translations.

3. Hedging

Hedging is a collective term used to refer to those linguistic elements that express possibility, probability, and uncertainty, thus reducing the degree of the author's commitment to the content of a statement, or as Hyland (1998: 1) defines it in his study "any linguistics means used to indicade either a) a lack of complete commitment to the truth value of the accompanying proposition, or b) a desire not to express that commitment categorically". Various studies have established the importance of hedging in academic discourse. Although hedging is often considered to be a category of metadiscourse (e.g., Hyland 2005; Crismore &

Farnsworth 1990; Vande Kopple 1985), not all researchers use this type of classification. In her model of text reflexivity or metatext, Mauranen's (1993a; 1993b; this volume) narrows the concept to elements of text organisation, thus excluding hedging all together. Ädel's (2006; this volume) model of metadiscourse also excludes hedging; although it recognises certain functional similarities between metadiscourse and what she refers to as "stance" (using the term in the sense of the definition suggested by Biber et al. (1999: 966), i.e. expressing "personal feelings attitudes, value judgements or assessments"), the two categories do not share all functions: Ädel (2006: 40) points out that "unlike metadiscourse, stance is not self-reflexive language" and it does not involve the metalinguistic function.

The present study used Hyland's (1998) model of hedging as the starting point for the analysis. On the basis of Hyland's (1998: 103–155) analysis of the formal aspects of hedging, I included the following categories of hedging devices:

1. Lexical verbs with an epistemic meaning: this category encompasses verbs expressing what Hyland (1998: 120) refers to as "epistemic judgement"; that is, verbs of speculation (e.g., *suggest, believe*) and deduction (e.g., *conclude, infer*), as well as verbs expressing "evidentiary justification" (Hyland 1998: 124–6); that is, quotative verbs, used to report the findings of others and at the same time expressing the degree of the author's commitment to these findings (e.g., *X showed, Y claimed*), verbs of perception (e.g., *seem, appear*), and narrators, (e.g., *seek*, *attempt*), i.e., verbs which contrast the goal of the study with the results achieved; they contribute "to the construction of an identity and a narrative, while relating to evidence by hinting at the fallibility of knowing" (Hyland 1998: 125);

2. Modal verbs used epistemically (e.g., *may*, *might*, *must, should*);

3. Modal adverbs (e.g., *probably, possibly, potentially, apparently*), including so-called "downtoners" (e.g., *quite, fairly*) (cf. Hyland 2005: 135);

4. Modal adjectives (e.g., possible, potential, likely, unlikely, apparent) and nouns (e.g., possibility).

4. Corpus and procedure

The corpus used in this analysis contains approximately 500,000 words. It comprises 90 research articles published between 1999 and 2006. The corpus contains a parallel[1] corpus of Slovene source texts, SlovC, and their corresponding translations, TransC, as well as a comparable corpus of English originals, OrigC. SlovC, TransC and Orig C comprise 30 texts each. The texts of the parallel corpus (SlovC and TransC) were published in *Acta Geographica Slovenica,* a Slovene geography journal dedicated mainly to Slovene geography. Most of the translated texts were translated by native English speakers, although a few texts were translated by native Slovene speakers. The texts of the comparable OrigC corpus were published in *Applied Geography,* an international geography journal "devoted to the publication of research which uses geographical theory and methodology to resolve those human problems that have a geographical dimension" (Applied Geography home). All of the original English texts were written by native English speakers. As the analysis focused mainly on the differences between original and translated English texts, it was carried out on the TransC and OrigC corpora, while the SlovC corpus was only analysed where it was necessary to examine some of the source-text hedging devices in order to gain a better understanding of the translation strategies used.

The first part of the study was to perform a quantitative analysis of the corpus. The corpus was searched electronically using WordSmith Tools 4.0 (Scott 1996); for the electronic search, a list of hedging devices was compiled based on Hyland's (1998: 103–155) discussion of surface features of hedging. The hedging devices were divided into five categories: modal verbs, modal adjectives, modal adverbs, modal nouns, and lexical verbs. These categories are described in more detail in section 3. The electronic search was followed by a manual examination of the output: all the instances in which the expressions were not used as hedging devices were removed. The mean values per article for the individual categories in the translated and original texts were compared with Student's *t*-test.

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[1] The terms 'parallel corpus' and 'comparable corpus' are used here in the research tradition of translation studies (cf. Malmkjaer 1998; Granger 2003).

In the second part, the focus of the study was narrowed down to two hedging devices, *may* and *might*, to gain a better understanding of the differences between the two comparable corpora and the reasons for their emergence: a detailed comparison of all the occurrences of *may* and *might* in the two English-language corpora was used to determine whether any specific features of translations can be observed. Finally, the occurrences of *may* and *might* in the translated texts were compared to the corresponding passages in the source texts to determine which hedging devices were used in the originals and what had occurred in the process of translation.

5. Results

Table 1 presents the results of the first part of analysis: the frequency of hedging is compared in the translated texts (TransC) and in comparable English originals (OrigC).

Table 1. Frequency of hedging in translated and original texts

	TransC			**OrigC**		
	F^1 (F^2)	%[3]	Mean/ ± SD[4]	F^1 (F^2)	%[3]	Mean/ ± SD[4]
Lexical verbs	237 (16)	29%	7.9/ 5.4	861 (43)	36%	28.7/ 14.6
Modal verbs	150 (10)	19%	5.0/ 5.1	824 (41)	35%	27.5/ 18.2
Modal adverbs	324 (22)	40%	10.8/ 5.5	411 (21)	17%	13.7/ 5.6
M. adj.+ nouns	95 (6)	12%	3.2/ 3.4	283 (14)	12%	9.4/ 6.9
Total	**806 (54)**	**100%**		**2,379 (119)**	**100%**	

1 F^1: Raw frequency (30 texts)
2 F^2: Frequency per 10,000 words (30 texts)
3 Percentage of the individual categories
4 Mean value per article/standard deviation per article

The hedging devices are classified into five categories (modal verbs, modal adjectives, modal adverbs, modal nouns, and lexical verbs). In addition to the raw number of items in the first column, the results are also presented as the number of occurrences per 10,000 words in the second column, while the third column presents the ratio for each category relative to the total number of items identified. To provide information on dispersion, the results are also presented in terms of the mean value per article and standard deviation (± SD), in the fourth and fifth columns.

Table 2 presents quantitative results which formed the basis for the second part of the analysis: the frequency of *may* and *might* used as hedging devices is compared in the translated texts (TransC) and in comparable English originals (OrigC).

Table 2. Frequency of *may* and *might* used as hedging devices in translated and original texts

	TransC			**OrigC**		
	F[1] (F[2])	%[3]	Mean/ ± SD[4]	F[1] (F[2])	%[3]	Mean/ ± SD[4]
may	22 (1.5)	2.8%	0.7/ 1.6	287 (14.4)	12.1%	9.6 / 7.8
might	2 (0.1)	0.2%	0.1 / 0.3	36 (1.8)	1.5%	1.2 / 1.4
may* + *might	**24 (1.6)**	**3.0%**		**323 (16.2)**	**13.6%**	

1 F[1]: Raw frequency (30 texts)
2 F[2]: Frequency per 10,000 words (30 texts)
3 Percentage of the individual categories
4 Mean value per article/standard deviation per article

The frequencies of the individual categories in the translated and original texts were compared with Student's *t*-test. The two data sets were characterised by their mean values, standard deviations and the number of data points (30), and the *t*-test was used to determine whether the means of the two data sets were distinct for each of the categories. Using a significance level $P < 0.01$, Student's *t*-test showed a statistically significant difference between the translations and the originals for lexical verbs ($P = 8.5\times10^{-10}$), modal verbs ($P = 1.9\times10^{-8}$), adjectives + nouns ($P = 4.5\times10^{-5}$), *may* ($P = 8.3\times10^{-8}$) and *might* ($P = 6.7\times10^{-5}$), whereas the difference was not significant for adverbs ($P = 0.048$).

6. Discussion

The results of the analysis presented in Section 5 are examined in more detail below, both in terms of the overall frequency of hedging devices and the frequency of various subcategories and specific expressions used as hedging devices. Finally, the use of *may* and *might* is discussed.

6.1 Differences in overall frequency

The results in Table 1 show that there are considerable differences in the frequency of hedging between the two comparable corpora. Whereas 119.1 hedging devices per 10,000 words are used in the English originals, only half as many, or 53.7 per 10,000 words, are found in the translations: this suggests that the ideas in the original English research articles tend to be expressed more tentatively, while the translated texts favour more categorical statements and place less emphasis on expressing the degree of possibility. It is possible to draw a parallel between the results of the present analysis and the findings of studies of the use of hedging in L1 and L2 writing: thus, for instance, Hyland and Milton (1997) observed a similar difference in student essays in English: L2 students used hedges considerably less frequently than L1 students and consequently expressed stronger commitment than L1 writers.

To further explore the reasons for the difference in the overall frequency of hedging between the two English-language corpora, the differences in the frequency of the individual lexico-grammatical categories of hedging devices are presented in the next section.

6.2 Differences in the frequency of subcategories and expressions

When the relative frequencies of individual subcategories of hedging devices in Table 1 are compared, it becomes apparent that the types of hedging devices used most frequently in the two comparable corpora differ considerably. Whereas the original English texts rely heavily on verbal hedges, the translated texts employ adverbial hedges above all.

6.2.1 Lexical verbs

Lexical verbs with an epistemic meaning are the most frequently used grammatical category of hedging devices in the original English texts, constituting 36.2% of all the hedging devices in the OrigC corpus. Proportionally, they are used somewhat less frequently in the translations, constituting 29.4% of all the hedging devices in the TransC corpus. The difference in terms of frequency per 10,000 words is quite pronounced, with 43.1 lexical verbs occurring in the originals and only 15.8 in the translations; Student's *t*-test has furthermore confirmed the statistical significance of the difference between the mean values per article between the two sets of data.

If we compare the lexical verbs used as hedging devices in the two English-language corpora, we observe that whereas the verbs *assume, suggest, propose, seem, appear, report, note, seek, indicate*, and *attempt* used in the function of hedging devices occur quite frequently in the original texts[2], they are all used much less frequently in the corpus of translations (none of the verbs occur more than 11 times).

An overview of the collocates shows that in the original English texts, most of the verbs were used in a greater variety of patterns (e.g., *X appears, this appears to be, this appears to have been, it appears that,* and so on) than in the translations, which, in general, showed less flexibility and contained more variations of similar patterns (e.g., *it appears that, X appears*). It must be noted that the patterns which prevailed in the translated texts are fairly literal translations of the grammatical patterns from the source language (e.g., *zdi se, da, X se zdi*). Similar observations with regard to the features which are found in the target language but not in the source language have already been made by researchers focusing on the characteristics of translated language (e.g., Mauranen 2000; Eskola 2004). On the basis of her study of three non-finite structures in translated and untranslated Finnish, Eskola (2004: 96) observes that "there are choices, but the variance in the way they are taken advantage of is smaller in translations than in original texts", concluding that "/t/ranslations tend to under-represent target-language-specific, unique linguistic features and over-represent features that have straightforward translation equivalents which are frequently used in the source language (functioning as some kind of stimuli in the source text)." In the context of the present study, this means that the preference for similar patterns of the lexical verbs with an epistemic meaning in the translations seems to be directly related to the lack of stimulus in the

[2] There are considerable differences in the number of occurrences for the individual verbs, but they all occur with a frequency in a range of 20 and 140 times.

source texts (resulting, of course, from the fact that only a limited number of patterns with these verbs exists the source language).

The limited uses of lexical verbs with an epistemic meaning in the translations may also partly reflect the fact that the range of similar verbs is more restricted in the source language (and consequently also in the source texts), with a single Slovene verb often corresponding to two or more English verbs; for example, *zdeti se*, which may be translated as *seem* or *appear*. Furthermore, a few English lexical verbs with a speculative meaning (e.g., *suggest*, *propose*) have no single corresponding lexical verb in Slovene in this sense (although translation equivalents exist for their other meanings). Thus a phrase such as *this suggests that…* has no direct equivalent in Slovene and could best be translated as *iz tega bi lahko sklepali, da…* 'from this we might conclude that…', in which the equivalent of a verb of speculation is a phrase with a verb of deduction. Examples (1) and (2) below illustrate this type of usage in the two comparable corpora.

(1) From this we can <u>conclude</u> that 65 cm of sediment represents a time span of at least about 6000 years, and that the last 14–16 cm correspond to the last hundred years. (TransC)

(2) These results <u>suggest</u> that the method presented here would be applicable to other forest types, although further studies in hardwood stands dominated by species other than aspen and in conifer stands are needed to confirm this. (OrigC)

The limited selection of speculative verbs in the source texts (which is a consequence of the more limited selection of speculative verbs available in the source language) may result in a strong reliance on verbs of deduction (i.e., *conclude, infer,* and *deduce*) in the translations: the results show that verbs of deduction are in fact the only category of lexical verbs with an epistemic meaning that occur more frequently in the translations (35 cases) than in the originals (17 cases).

Once again, it is possible to draw a parallel with Eskola's (2004) observations about the absence of a source-language stimulus reducing the likelihood of using certain constructions in translation while the existence of such a stimulus raises this likelihood. Tirkkonen-Condit (2004) suggests that the under-representation of unique items in translated language can be explained by the translation process. In her analysis of two types of unique items (verbs of sufficiency and clitic pragmatic particles) in the Corpus of Translated Finnish, Tirkkonen-

Condit (2004) found that the items in question were under-represented in translated language. She suggests that translators failed to use the items because of the Unique Items Hypothesis, i.e., because the items are "not obvious equivalents for any particular items in the source text" (Tirkkonen-Condit 2004: 180). She claims that "/t/he reason why the linguistic phenomena tend to be under-represented in translated language may be found in a (potentially universal) tendency of the translating process to proceed literally to a certain extent. This means that the translator picks out lexical items, syntactic patterns and idiomatic expressions from his bilingual mental dictionary, and this is what happens" (Tirkkonen-Condit 2004: 181).

6.2.2 Modal verbs

In the translation, modal verbs are used relatively infrequently as compared to the originals: 41.2 modal verbs are used as hedging devices per 10,000 words in the originals, whereas only 10 modal verbs per 10,000 words were identified in the translations. The fact that the difference is significant has also been confirmed by Student's *t*-test. Furthermore, comparing the relative frequencies of different types of hedging devices shows that modal verbs constitute 34.6% of all the hedging devices in the OrigC corpus, but only 18.6% of the hedging devices in the TransC corpus.

In both English-language corpora, the most frequent modal verbs used as hedging devices are *may*, *would* and *could*; the use of *might*, on the other hand, is more restricted. It is interesting that *should* and *must* in the epistemic sense occur only in a few cases, but they are found in both comparable corpora. This is similar to the findings of Hyland's (1998) study in which he established that *must*, the modal of inferential certainty, was used very infrequently to express hedging in his RA corpus. Hyland proposes that "/t/he relative infrequency of must in scientific research discourse, where there is often a need to make deductions from known facts, may suggest writers are reluctant to express even weak convictions concerning the truth of their propositions." (Hyland 1998: 108-9). The use of *must* in the epistemic sense is illustrated by examples (3) and (4):

> (3) The average size of scar was small (Table 1) and most of the sheep scars except for the larger ones, most if not all the bare patches in heather, as well as the hoof prints and dead tussocks <u>must</u> have become overgrown. (OrigC)

(4) For red-brown clay to occur, a very large amount of rock must have been dissolved. (TransC)

The pronounced difference between the two English-language corpora in terms of the frequency of use of modal verbs in the function of hedging is quite likely to be directly related to the fact that the range of epistemic modal verbs in Slovene is limited to two verbs – *utegniti* corresponding to 'could' and 'might', and *moči*, which may only be used in the negative form in the sense of 'cannot' – whereas the necessity modal verb *morati* 'must' can also used in the epistemic sense (cf. Roeder & Hansen 2007). The difference between the two comparable corpora suggests that there may also be a considerable difference between the source language and the target language in the frequency with which modal verbs are used as hedges, although a contrastive study of epistemic modality would be needed to confirm this hypothesis.

Because epistemic modal verbs are among the most central hedging devices in English, a detailed analysis of *may* and *might*, often considered "the prototypical hedges" (Hyland 1998: 116), is presented in section 6.3.

6.2.3 Modal adverbs

Unlike the two verbal categories of hedges discussed above, modal adverbs show a different tendency: in terms of frequency per 10,000 words, the difference between the use modal adverbs in the originals and in the translations is negligible and Student's *t*-test reveals that the difference between two sets of data is not statistically significant. In relative terms, however, the difference between the two sets of data is quite pronounced: modal are play a far more important role in the TransC corpus, where they amount to 40.2% of all the hedging devices, than in the OrigC corpus, where they amount to only 17.3% of the hedging devices. Considering the much more limited use of hedging in the translations, this means that modal adverbs are the most frequently used hedging devices in the translated texts.

Focusing on the category of modal adverbs, it is interesting to observe that the range of adverbs is quite limited in the translations, where a single modal adverb, *probably*, is used very frequently (e.g., (5) below), whereas only single instances of other modal adverbs are found. In the originals, a variety of adverbs (*perhaps*, *probably*, *potentially*, *evidently,* and *essentially*). However, in this case, the restricted range cannot be attributed to the source language. In fact, a wide range of modal adverbs, such as *morda, mogoče, nemara, morebiti, možno, lahko*, *domnevno*, *verjetno,* and so on, is used in Slovene to convey the various nuances of epistemic possibility in various grammatical patterns in fairly formal contexts. Numerous instances of each of the modal adverbs listed above were found in the source texts. The fact that, by contrast, a single adverb, *probably*, prevailed in the translations seems to point to a tendency towards a type of simplification[3], in which subcategories tend to have fewer members or one highly prominent member. The choice of a single English translation equivalent for epistemic modal adverbs also suggests that *probably* may be considered what Gellerstam (1986: 92) has labelled a "standard – or 'press-the-button' translation". According to Gellerstam (1986), a standard translation is found in wordlists and dictionaries and taught at school and is therefore considered to be the 'right' way of translating an expression.

> (5) One of the reasons for its formation is <u>probably</u> the presence of underlying flysch rocks, which lie rather close to the surface. (TransC)

For downtoners, a type of subjuncts which "have a generally lowering effect on the force of the verb of predication" (Quirk et al. 1992: 597), e.g. *quite*, no important differences between the two English-language corpora emerged in terms of frequencies, variety, and usage.

6.2.4 Modal adjectives and nouns

In terms of overall frequency, there is an important difference between the originals and the translations with respect to modal adjectives and nouns: whereas 14.2 modal adjectives and nouns per 10,000 words occur in the OrigC corpus, only 6.3 instances per 10,000 words are identified in the TransC corpus; Student's *t*-test has shown that the difference between the mean values per article between the two sets of data is statistically significant. However, in terms of relative frequency, the results for the two comparable corpora are very similar: modal adjectives and nouns

[3] Simplification has been suggested as a potential translation universal; however, the simplification hypothesis has not been generally supported or refuted (cf. Mauranen 2007: 39–40).

constitute 11.9% of all the hedging devices in the OrigC corpus, and 11.8% of hedging devices in the TransC corpus.

In the corpus examined here, modal nouns are used very infrequently to convey hedging; it is impossible to draw any noteworthy conclusions on the basis of the few examples found in the two English-language corpora. It must be pointed out here, that other researchers also report relatively low frequencies of modal nouns (e.g., Hyland 1998: 104; Aijmer 1999: 302).

Modal adjectives also occur relatively rarely; however, the number of occurrences is high enough in both comparable corpora to allow a comparison. In the original texts, the variety of modal adjectives used as hedging devices is greater than in the translations which once again points to a type of simplification. The scope of hedging expressed by modal adjectives varies: they may hedge the proposition (e.g., *it is possible that…*) or only the NP, when used attributively (e.g., *a possible explanation*); however, no important differences between the two English-language corpora emerged in terms of this variation.

6.3 May *and* might

While the quantitative results for the individual subcategories have shown a significant difference between the use of hedging devices in OrigC and TransC, a step beyond the formal aspects of hedging is necessary to gain a better understanding of these differences. For this purpose, two relatively central hedging devices, *may* and *might*, are analysed below in more detail.

The results in Table 2 show that there are considerable differences between the two comparable corpora in the frequency of use of *may* and *might*. In the original English texts, the two modal verbs are used more than ten times as frequently as hedging devices compared to the translated English texts; in the originals they amount to 13.6% of all the hedging devices, whereas they only constitute 3% of the hedging devices in the translated texts. This difference is far more pronounced than the difference in the overall frequencies for modal verbs.

An analysis of *may* and *might* in OrigC and TransC revealed important differences when the patterns in which the two modal verbs occurred were compared. Two particularly strong differences in the patterns were identified: the first one is the use of *may* and *might* in negative sentences, and the second the use of *may* and *might* with the perfective aspect. Both patterns occur quite regularly in the originals but are not found in the translations.

The *may/might* + *not* pattern is used in approximately 10% of the instances of *may* and *might* identified as hedging devices in the OrigC corpus; example (6) below illustrates this. The fact that no such occurrences were found in the translations may be a direct consequence of the fact that one of the two modal verbs of possibility in Slovene, *utegniti*, is generally not used in the negative form in the function of hedging, while the use of the other modal verb of possibility, *moči*, in the sense of hedging is quite restricted. Hedging is, however, typically expressed by modal adverbs in Slovene: this issue is examined in more detail below.

> (6) One confounding factor is that the per capita measures rely on population census data that <u>may not</u> be concurrent in time or correspond to the same geographic units as the LU/LCC data. (OrigC)

May and *might* with the perfective aspect (this type of usage is illustrated by example (7) below) also occur in approximately 10% of the cases of *may* and *might* in the original English texts. Although this pattern never occurs with *may* and *might* in the translations, sporadic cases of other modal verbs with the perfective aspect do occur in the TransC corpus (such patterns occur in approximately 5% of the instances of hedging expressed by modal verbs).

> (7) Due partly to the proximity of the cereal cultivation to the channel, this <u>may have increased</u> the likelihood of surface runoff production that is able to contribute to channel flow. (OrigC)

The next part of the of analysis involved comparing the instances of *may* and *might* identified as hedging devices in the TransC corpus with the corresponding passages in the source texts to identify which hedging devices were used in the original Slovene texts and to shed more light on the translation process. For each instance of *may* and *might* found in the translated English texts, the corresponding Slovene source texts were scanned manually for potential matching forms of hedging.

The comparison showed that, although two epistemic modal verbs, *utegniti* and *moči*, exist in Slovene, none of the instances of *may* and *might* were translations of these two modal verbs. In fact, in two-thirds of the cases, *may* and *might* were translations of Slovene modal adverbs, in most cases, the polyfunctional modal adverb *lahko*[4] (12), but also *morda* (2), *nemara* (1) and *mogoče* (1).

In the remaining one-third of cases, no hedging device was used in the corresponding passage in the source texts: the translators had inserted a hedging device in the form of *may* and *might* in the English translation. An instance of such an insertion is example (8a); the corresponding sentence from the source text (8b) contains no hedging device.

> (8a) …and depending on the type of soil and the circumstances, some remediation measures <u>may</u> be necessary. (TransC)
> (8b) … in je v določenih primerih tudi potrebno ukrepanje (sprememba rabe, remediacija). '…and in certain cases measures are also necessary (change of use, remediation).' (SlovC)

The relatively large proportion of insertions of *may* and *might* found in several texts suggests that several translators felt it was necessary to tone down the categorical assertions found in the source texts by explicitly modifying the degree of commitment. In doing so, they may have attempted to improve the acceptability of the article and apparently felt that they were not jeopardizing its adequacy. However, the overall differences between the translations and the comparable target-language originals in terms of the frequency of use of hedging devices clearly show that the impact of insertions was negligible.

The insertions of hedging devices also suggest that at least some of the translators may have felt that the source texts contained considerably less hedging than comparable target-language originals. It must be pointed out, however, that because the present study focuses on the differences between the use of hedging in translations and comparable target-language originals, it does not cover contrastive aspects. Therefore, a study carried out on a representative comparable corpus of original Slovene and English research articles from various disciplines comparing the use of hedging in the two languages would be necessary

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[4] The importance of the Slovene adverb *lahko* in expressing various modal meanings, including epistemic modality, has been recognised by Roeder and Hansen (2007), who even suggest that it could be considered an auxiliary (an intermediate stage between a content word and a grammatical inflection).

to assess whether this is a general difference between the rhetorical conventions in the two languages.

7. Conclusion

The study presented in this paper examined how the use of hedging in research articles translated into English differs from that of comparable English originals. Important differences emerged in the frequency of hedging devices: the results showed that only half as many hedging devices were used in the translated texts as in the originals. As a consequence, the translations conveyed stronger commitment and less tentativeness than the comparable target-language originals. This is similar to the findings reported in studies of hedging in L2 writing (e.g., Hyland & Milton 1997). Considerable differences in the form of hedging devices between the two English-language corpora were also observed: a strong reliance on the use of modal adverbs was particularly noticeable in the translations. Furthermore, there were significant differences in the range of hedging expressions used. The variety of hedging expressions was considerably more limited in the translations: forms of hedging devices which exist in the target language but not in the source language were generally under-represented in the translations. This is similar to the observations about under-representation of unique items in translated language made by Tirkkonen-Condit (2004) and Eskola (2004).

The reliance on the source text may indicate that perhaps not all of the translators were sufficiently familiar with cross-cultural differences in rhetorical conventions. On the other hand, it is also possible that the translators were reluctant to make changes to hedging, possibly because of a lack of understanding of the function of hedging in academic discourse or because they did not wish to interefere with the author's voice (cf. Mauranen 1997).

A further consideration that needs to be taken into account is the fact that some of the translators did attempt to improve the acceptability of the translations. The comparison between the cases of *may* and *might* in the translated texts and the corresponding passages in the source texts revealed that hedges were inserted in 30% of the cases. This suggests that the translators in question may have been intuitively[5] aware of the rhetorical differences between Slovene and English; nevertheless, the effect of their attempts to make the target text more acceptable—in terms of its adherence to Anglo-American rhetorical conventions—was negligible.

Although it has been argued that acceptability should be viewed as a priority in the translation of academic discourse (e.g., Williams 2004), the findings of this study have shown that the translations analysed did not adhere to the target-language conventions in terms of hedging. Further research focusing on the process of translation (e.g., thinking-aloud, retrospection) would be necessary to gain a better understanding of the underlying causes for the differences between the translated texts and the comparable originals.

Finally, we must consider some limitation of the present study. The corpus used was relatively limited in size due to the small number of translated texts available for analysis. Furthermore, the corpus consists of texts from a single discipline (once again because of the limited availability of translations of this genre): as research has shown important differences in the use of hedging among various disciplines (cf. Hyland 2005: 144–147), this certainly limits the scope of the present findings. Finally, potential differences between the two journals from which the texts were taken must also be considered. Both journals are peer-reviewed and indexed in relevant international databases; nevertheless, their scopes and audiences inevitably differ to some extent.

The results of the analysis presented here have identified a need for raising the awareness of rhetorical conventions, including the impact of hedging, among translators engaged in translation of academic discourse. In the context of translator training, this means that sufficient attention should be dedicated to issues such as rhetorical conventions, including metadiscourse and hedging, in LSP courses offered to trainee translators.

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[5] So far, no cross-cultural contrastive study of English and Slovene has focused hedging. In fact, the issue of hedging in Slovene has received very little attention, with the notable exception of Mikolič (2007), who examined the role of hedging in the context of argumentation in academic texts.

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A Review of Recent Metadiscourse Studies: The Iranian Context

Avon Crismore, Indiana University-Purdue University Fort Wayne, USA

Esmaeel Abdollehzadeh, Iran University of Science and Technology, Tehran, Iran

Abstract
While studies of metadiscourse in a European or US context have been conducted since the 1980s and have reached a relatively wide audience, studies of metadiscourse outside of these areas have a more recent history (if any) and have not attracted much attention. One country in which research into metadiscourse has gained ground in the past decade is Iran. The first author has helped to bring this about and the second author is one of the active researchers into various aspects of metadiscourse in Iran. The purpose of this paper is to provide a review of studies of metadiscourse that have taken place in the Iranian context. These have been carried out by master's and doctoral-level students in the past decade. A close observation of these studies reveals three areas of metadiscourse-related studies: metadiscourse use in writing in English, cross-linguistic comparison of metadiscourse in English and Persian, and metadiscourse in EFL reading comprehension. Studies related to each area will be reviewed and evaluative summaries at the end of each section will be presented. The implications for metadiscourse research and instruction will also be discussed.

1. Introduction

Metadiscourse is discourse about discourse, intended to direct rather than inform readers (Williams 1981). Metadiscourse includes linguistic elements which do not refer to aspects of external reality (as propositional or referential elements do) but to the organization of the discourse itself and to aspects of the relationship that develops between the author and the reader (Crismore 1989; Vande Kopple 2002). What Vande Kopple labels 'referential' meaning is equivalent to what Halliday (1978) calls 'ideational' meaning. Vande Kopple (1985), using the broad definition of metadiscourse, suggests that metadiscourse conveys interpersonal and/or textual meanings. Interpersonal metadiscourse "helps writers express their personalities, their evaluations of and attitudes toward ideational material, shows what role in the communication situation they are choosing, and indicates how they hope readers will respond to the ideational material" (Vande Kopple 2002: 2-3). Textual metadiscourse helps writers relate and connect bits of ideational material within a text and helps the text make sense in a particular situation for readers. Crismore, Markkanen & Steffensen (1993) point out that interpersonal and textual functions are important from the point of view of teaching composition, and they use the term metadiscourse to refer to linguistic items that explicitly serve the interpersonal and textual functions of language.

In the broad definition, metadiscourse is based on a view of writing as social engagement in which writers project themselves into their discourse to signal their attitudes and commitments (cf. Hyland 2005). Metadiscourse elements are rhetorical tools that make a text reader-friendly and as such enable the writer to reach the audience. Research over the past two decades has shown that the use of metadiscourse in writing may vary from one language and culture to another and that the conventions followed in its use may be different in different cultures (Abdollahzadeh 2003; Crismore et al. 1993; Mauranen 1993). There is also burgeoning research on both the role of metadiscourse presence in text comprehension and its instructional impact on reading and writing (see Section 4 below).

This paper provides an overview of the research on metadiscourse that has been undertaken in the Iranian context. In what follows, the studies of metadiscourse carried out by master's and doctoral-level graduate students in Iran during the last decade will be examined and discussed. The graduate students who designed and carried out these studies have all been in contact with the first author concerning their work through e-mail correspondence and conferences. The studies are categorized into three areas depending on their approach and topics: metadiscourse in writing in English; cross-linguistic comparison of metadiscourse in English and Persian; and metadiscourse in EFL (English as a Foreign Language) reading comprehension. We present evaluative summaries and relevant discussions related to each area and discuss pedagogical and research implications.

Table 1 summarizes the studies carried out on the use of metadiscourse in writing in English, for which both professional writers and student writers have been in focus.

Table 1. Metadiscourse (MD) use in writing in English: professional and student writers

Author	**Subjects/texts**	**Dependent measures**	**Results**
Abdi (2000)	Research articles: 30 discussion sections per discipline (natural and social sciences)	Analysis of interpersonal metadiscourse: hedges, emphatics, and attitude markers	Hedges used almost as frequently as emphatics; emphatics used to reveal limitations and express humility
Beig-mohammadi (2003)	Research articles: a total of 75 intro-ductions from three domains: social sciences (SS), hard sciences (HS), ELT	Quantitative and qualitative analysis of intensity markers	SS used twice as many intensity markers as HS and ELT
Simin (2004)	Argumentative writing by students: 90 Iranian EFL learners in three proficiency groups	Analysis of textual and interpersonal MD, plus evaluation of appropriate use	Language proficiency affects the use of MD; textual MD used more than interpersonal MD by all groups

Table 2 summarizes the studies that have been carried out on the use of metadiscourse in both English and Persian texts, involving a comparison of the two languages.

Table 2. Cross-linguistic comparison of metadiscourse (MD) in English and Persian

Author	**Subjects/ texts**	**Dependent measures**	**Results**
Marandi (2002)	Introduction and discussion sections of 30 Master's theses (1,000 words each) by British, native-Iranian, and EFL Iranian graduates	Interpersonal and textual MD	Textual MD used more in the introductions, and interpersonal MD in discussion sections
Azizi (2001)	University student writing: 24 papers in English and 24 in Persian on a single topic	Interpersonal and textual MD; evaluation of appropriate use	More textual MD in Persian and more interpersonal MD in English; attitude markers used more in English, while hedges and emphatics were more common in writing in Persian
Abdollahzadeh (2003)	Research articles: 65 discussion and conclusion sections by Iranian and Anglo-American applied linguistics (ELT) writers	Interpersonal MD	Anglo-Americans used significantly more certainty and attitude markers than Iranians
Abdollahzadeh (2001)	Research articles: introduction sections of 73 applied linguistics papers by Iranian and English academic writers	Textual MD: text connectives, code glosses, illocution markers	Anglo-Americans used significantly more illocution markers and code glosses than Iranians
Rahimpour (2006)	Research articles: 90 discussion sections in applied linguistics in English and Persian	Interpersonal and textual MD	English writers used more textual MD than Iranians; hedges and transitions were most frequently used
Abdollahzadeh (2007)	53 newspaper editorials published in 2003 in English and Persian	MD subtypes: hedges, assertions, attitudinals, person markers, transitions and code glosses	Anglo-American editorials used more hedges and code glosses; Persian editorials used more emphatics

Further, Table 3 summarizes the experimental studies that have been carried out on metadiscourse related to reading comprehension or the impact of instruction on metadiscourse.

Table 3. Metadiscourse (MD) and reading comprehension and the impact of MD instruction

Author	**Topic**	**Subjects/ texts**	**Dependent measures**	**Results**
Dastgoshadeh (2001)	The impact of MD use in texts on reading comprehension	High and low-proficiency TEFL learners	Original and MD-added reading passages	MD in modified texts helped students get the intended meaning more easily than in original texts
Daftary Fard (2002)	MD relation with the reading comprehension constructs	650 EFL students of varying reading abilities	Reading tests measuring reading constructs including MD construct	MD knowledge was shown to be a significant part of the multi-dimensional reading skill model
Khorvash (2008)	MD awareness-raising and reading comprehension	Four groups of intermediate EFL learners	Pre/post reading comprehension tests	Not all MD types affect reading comprehension similarly
Jalilifar & Alipour (2007)	The impact of the presence of MD on reading compre-hension	Three groups of similar language proficiency levels	Three versions of the same texts, original, modified, and unmodified MD-free texts	Performances were similar on original and modified texts; positive influence of MD instruction

Parvaresh (2008)	The impact of proficiency level and MD presence in comprehending English and Persian texts	High and low-level learners	English texts with MD present/ absent and their translated equivalents in Persian	Lower-proficiency groups benefited more from the MD-present Persian/English texts
Amiri (2007)	The impact of MD instruction on L2 writing	60 senior university EFL students	Performance on pre/post-tests	Experimental group essays received significantly higher grades than those in control group

The ensuing sections will be organized according to Tables 1 to 3 above.

2. Metadiscourse use in writing in English

In the area of representing the use of metadiscourse in texts in English, a study by Abdi (2000) examines interpersonal metadiscourse following Vande Kopple (1985). The interpersonal metadiscourse categories in the discussion sections of sixty research articles in English from social science and natural science journals published in 1999 are examined. His corpus was approximately 80,000 words in total—half the words from the social sciences and half the words from the natural sciences. The interpersonal metadiscourse categories of hedges (modal verbs such as *might* and *would* and words such as *likely*, *suggest*, *possibly*), emphatics (words such as *strongly*, *definitely*, *clearly*, *truly*), and attitude markers (such as *unfortunately*, *surprisingly*, *it is noteworthy*) were examined. His quantitative and qualitative analysis demonstrated that some metadiscourse expressions have different functions depending on the context. One of the main results was that writers used emphatics not to show arrogance, as suggested in some literature (Vande Kopple 1985), but to reveal their limitations and show humility, as in this example: "*Quite clearly*, this single study is not sufficient to demonstrate that...". Hedges were used by these writers to discuss their findings and what the findings denoted and implied. Abdi also found that emphatics were used almost as frequently as hedges, the most frequently used of the three types of interpersonal metadiscourse he studied.

Beighmohammadi (2003) examined the extent to which the use of intensity markers varies across three domains: the hard sciences, social sciences, and TEFL. Seventy-five randomly-selected introductions from prestigious journals were selected. He employed the Quirk et al. (1985) model for intensity markers. He found that social science writers used twice as many intensity markers as hard science writers. The TEFL writers' performance was similar to that of hard science writers. He argued that social science writers depend more on discursive and rhetorical strategies in presenting their findings rather than on the mere reporting of facts.

To examine the impact of metadiscourse knowledge and use on student writing, Simin (2004) investigated the metadiscourse used in the writing of ninety undergraduate Iranian EFL learners. The students were divided into upper-intermediate, intermediate, and lower intermediate proficiency levels. For a period of one semester, their sample essays, written on argumentative topics assigned to them, were collected and analyzed using Vande Kopple's (1985) model. The proportion of appropriate uses of metadiscourse was counted across the given tasks. Significant differences were found in metadiscourse use across different levels of proficiency. Proficiency level was found to affect the use of metadiscourse; the more proficient the learners were, the more they used metadiscourse in their writing. All students in the three proficiency groups used both textual and interpersonal metadiscourse in their argumentative writing. The upper-intermediate group used far more metadiscourse than the intermediate and lower-intermediate groups. However, Simin noted that the three groups were similar regarding the variety of metadiscourse types used. All groups used more textual than interpersonal metadiscourse, and text (logical) connectives were the most frequently used textual metadiscourse subtype. Another finding from this study was that there was some improvement in the use of metadiscourse during this one-term period of writing instruction. Thus, Simin concludes tentatively that writing instruction had a positive effect on the use of metadiscourse represented in her data.

Simin's study is interesting as it looks into the use of metadiscourse markers in more persuasive discourse genres such as in argumentation. Simin's findings confirm the predictions of Williams (1981) that argumentative writing lends itself well to the use of metadiscourse but disconfirmed his predictions about the use of the interpersonal type, which allows writers to make their ethical, logical and emotional appeals. On the other hand, Simin's results may indicate a distinction between the way novice and professional writers project themselves into texts to establish more interactional persona with their readers. We see more interpersonal metadiscourse in professional writing. Consequently, it is important to analyze the texts of professional writers from various countries, comparing their metadiscourse use to those of inexperienced writers.

One misconception with reference to the use of metadiscourse may be 'the more metadiscourse use, the better'. Overuse or misuse of such markers can make the text long-winded and clumsy, which may be a sign of poor writing. Excessive use of metadiscourse can be as disadvantageous as a limited use or no use of such expressions since they may interfere with the reading process and may look imposing and condescending (Rahman 2004). Like many other rhetorical devices, metadiscourse can be used both effectively and ineffectively. Therefore, pedagogically speaking, we need to teach all types of metadiscourse rhetorically not as a panacea (Crismore et al. 1993). The increased use of metadiscourse by learners cannot by itself be a sign of language development.

One of the main issues with the metadiscourse studies reported here is that researchers have adopted different models of metadiscourse (e.g., Hyland 2004; Vande Kopple 1985) as their point of departure. The advantage of this situation is that we can get a more elaborate spectrum of these meta-communicative markers. However, the different models make the comparability of the results more difficult, especially when we compare data from different genres, registers, cultures and disciplines. This problem is prevalent in most available published research on metadiscourse.

Another potential problem in the study of metadiscourse is that most comparative studies dealing with native vs. non-native writing conventions consider US and British conventions as similar in terms of their argumentation patterns and rhetorical conventions. However, recent corpus-based studies demonstrate that cultural conventions may differ even within the English-speaking world. For instance, Ädel's (2006) comparison of the argumentative writings of American and British writers demonstrated significant differences in terms of personal metadiscourse use. Similarly, Precht's (2003) study of stance differences between American and British English conversations showed less frequent uses of emphatics and emotive, affective markers by British than US speakers. These results have serious implications for second language writing, especially ESL/EFL composition courses. The pedagogical implication is that we need to make decisions as to which English 'norm' for metadiscourse use we should adopt and teach in L2 composition courses for non-native speakers of English. Research in this area, focusing more on intercultural than intracultural differences, is in its infancy however and further research is needed.

In addition to intracultural rhetorical differences in written discourses, it is important to note such differences within disciplines. Applied linguistics as a discipline has grown substantially in terms of its domain, subdisciplines, and research frontiers. Therefore, experts practicing in subdisciplines such as computational linguistics, discourse analysis, language testing, pragmatics, TESOL, etc. may have different priorities and rhetorical norms which could vary depending on the size of their discourse community, the gatekeepers in that community, and how 'conventionalized' the generic practice is (Swales 1990). Therefore, corpus-based studies in general and metadiscourse studies in particular need to take into account these intradisciplinary variations in rhetorical practice that may affect the results of studies and comparisons. Thus, selecting an applied linguistics corpus (as in Rahimpour's study for instance) without controlling for such intradisciplinary variations may confound the validity of the results and comparisons. Careful corpus selection in this regard is needed.

3. Cross-linguistic comparison of metadiscourse in English and Persian

The first study in this section is by Marandi (2002) who investigated the use of metadiscourse in the introduction and discussion sections of 30 master's theses written after 1990 by Persian-speaking and English-speaking graduate students. She compared three sets of texts: (a) texts by British English writers, (b) texts written in Persian by Iranians, and (c) texts written in English by Iranians. Marandi analyzed the first 1,000 words in each introduction and discussion section of the master's theses to determine the amounts and the subtypes of metadiscourse that the graduate students used. She used her own model of metadiscourse developed from different established models. She found that textual metadiscourse subtypes were used significantly more in the introductions but that interpersonal metadiscourse subtypes were used more in the discussion sections. In addition, the results showed that, of all groups, the native speakers of Persian used text/logical connectors the most while the native speakers of English used them the least.

Using a model of metadiscourse from Crismore et al. (1993), Azizi (2001) looked at the use of interpersonal and textual metadiscourse in the English and Persian writings of Iranian university students. A set topic ("What should be done to increase the quality of education?") was rated by 106 upper-level EFL students as the most popular topic from among several given topics, and then the students were asked to write at least 150 words on the topic both in English and in Persian. Forty-eight papers (24 in English and 24 in Persian) were selected through various judgment procedures and reviewed for metadiscourse use by independent raters. The corpus amounted to 6,000 words. Participants used more textual markers in Persian and more interpersonal markers in English. Attitude and commentary markers were used significantly more in their English writings while the use of hedges, emphatics and text connectives were significantly higher in their Persian essays. Azizi argues that these participants' English language learning experience and their awareness of rhetorical preferences of the foreign language compelled them to produce more interpersonal markers while writing in English. Thus, their English learning probably impacted their English thinking process and thus helped them to develop a second identity while writing in a second language.

Abdollahzadeh (2003) investigated whether there was any significant difference between Iranian and English academic writers in their use of interpersonal metadiscourse and its relevant subcategories in the discussion and conclusion sections of ELT papers. Applying a model from Vande Kopple (2002), his purpose was to find the extent to which academic writers project themselves into texts to assert their personal involvement and how they accomplished this projecting. The materials randomly selected for the study were 65 articles (32 articles by native speakers of English and 33 by Iranian academics writing in English) published during the years 2000-2002 in the field of English Language Teaching (ELT). The research focused on the subcategories of hedges, emphatics, and attitude markers in these materials as it was assumed that the discussion and conclusion sections have a greater possibility of using interpersonal metadiscourse and author projection in them. The results showed a statistically significant difference between native and non-native writers in their use of interpersonal metadiscourse. Anglo-American writers used more (56%). There was no significant difference in the use of hedges, but Iranian academics used more (65%). On the other hand, the Anglo-American writers used more certainty and attitude markers than the Iranian academics.

In a similar study, Abdollahzadeh (2001) examined the use of textual metadiscourse in the introduction sections of ELT papers by Iranian and Anglo-American academic writers. The subtypes of text connectives (including logical connectives and sequencers), code glosses (the subtype which helps readers understand the meaning of discourse elements, e.g., *what I meant to say*, or *in other words*) and illocution markers (elements which make explicit for readers what specific action the writer is performing in the text, e.g. *to sum up*, *we claim that*, *I argue that*) were examined in these papers. He selected 73 introductions (37 articles written by native English writers and 36 by Iranians). For purposes of rater consistency a panel of raters (MA and Ph.D. graduates) with native-like proficiency and sufficient knowledge about the function of each metadiscourse instance reviewed the corpus. Abdollahzadeh found that the native Anglo-American writers used significantly more textual metadiscourse (54%) than their Iranian academic counterparts (46%). Thus the Anglo-American texts provided more guidance to readers. Both groups used more text connectives than code glosses and more code glosses than illocution markers. The non-native writers used a few more text connectors than the native writers, who used more code glosses and illocution markers than the non-native writers.

A study by Rahimpour (2006) focused on metadiscourse use in the discussion sections of 90 (British and US) English and Persian applied linguistics research articles. Her assumption was that, due to differences in cultural values, the metadiscourse use in these two languages would be different. The discussion sections of the articles were selected from three groups: those written in English by Iranians as non-native speakers of English; those in Persian written by Iranians; and those written by native speakers of English. The researcher selected 30 discussion sections by each group of applied linguistics writers published between 1998 and 2005. The study used metadiscourse sub-types adopted from Hyland's (2004) model which consists of textual metadiscourse (the subtypes include transitions, frame markers, endophoric markers, evidentials, code glosses) and interpersonal metadiscourse (the subtypes include hedges, boosters, attitude markers, engagement markers, and self-mentions). Also see Hyland (this volume) for further details. Rahimpour found that writers of all three groups of applied linguistic discussion sections used all sub-types of metadiscourse. Transitions and hedges were the most frequently used subtypes. Native speakers of English used significantly more textual metadiscourse than the two groups of Iranian writers did. Furthermore, textual metadiscourse was used significantly more than interpersonal metadiscourse by all groups. She argues that teachers must teach students how to identify metadiscourse and then use it for different audiences and genres. She also argues that teachers themselves must learn more about metadiscourse use in different disciplines and contexts.

Abdollahzadeh (2007) studied the use of metadiscourse in 53 Persian and English (British and US) newspaper editorials in order to see how writers in different languages and cultures tone down and organize their writings in their attempt to gain solidarity and community acceptance. Based on Vande Kopple (1985), he examined instances of hedges, emphatics, attitude markers, person markers (*I, my, our, we*, etc.), text connectives and code glosses, to ascertain if there were significant differences in the use of these subtypes of metadiscourse. Twenty-six editorials (16,144 words) by Persian-speaking editors and columnists and 27 editorals by English-speaking editors (16,190 words) were examined qualitatively and quantitatively. The newspapers were selected randomly from March to June 2003 issues from Iran, the United States and Britain. The results demonstrated no significant difference between Persian and English editorials for the metadiscourse subtypes of text connectives, attitude markers, and person markers. However, significant differences were found for the subtypes code glosses (more were used in English editorials), hedges (English editorials used more) and for emphatics (Persian editorials used more). According to Abdollahzadeh, the heavy use of emphatics by the Persian editorial writers was due to an Iranian tradition of valuing and abiding by the rules of those in power without questioning them or without expressing doubt or uncertainty about social and, specifically, religious issues. The heavy use of hedges by the English editorial writers was ascribed to their being more considerate and polite to their readers. The significant use of code glosses by the English editorial writers was believed to show a reader-oriented attitude. It is concluded that not all cultures sanction the same degree of author projection and author presence in order to be persuasive and that metadiscourse use is influenced by personal, interpersonal, institutional, and socio-cultural factors.

An important finding of the studies in this section is that Iranian writers and academics tend to use more textual than interpersonal markers, while their Anglo-American counterparts tend to use more interpersonal markers. Further, the significantly more frequent use of textual glossing and illocution markers by Anglo-American writers can imply a more writer-responsible tradition among these writers in comparison to the apparently more propositional-oriented, reader-responsible Iranian writers (see Hinds 1987 for the origin of this distinction).

The Iranian corpus-based studies of metadiscourse have mainly analyzed academic research articles. None the less, analysis of metadiscourse in other genres such as books, manuscripts, and non-academic promotional genres from a cross-cultural perspective would broaden our knowledge of the extent and role of this rhetorical device. One of the strengths in Iranian research is the examining of metadiscourse use in theses and dissertations. Theses and dissertations are less competitive than research articles and may be less analyzed and less studied regarding metadiscourse use. It would be interesting to compare the more competitive and promotional genres with the less competitive ones such as theses and dissertations with respect to the use of a rhetorical device such as metadiscourse.

Awareness of audience and purpose pushes writers to be rhetorically more effective, particularly so for authors publishing in leading journals, given the high-stakes nature of article publication and the critical stance of the readers. Therefore, it seems that Anglo-American writers publishing in leading international journals need to create more forcefully a research space for themselves in order to persuade an expert audience of a new interpretation or need to anticipate the consequences of being proved wrong. These situations may account for the significant use of interpersonal metadiscourse found in Anglo-American writing. On the other hand, writers publishing in local journals may not need to compete for a research space because of the much smaller size of the discourse community and the decreased possibility of audience rejection. Consequently, the status of the journals (local vs. international) can be another reason for the significant use of interpersonal language in order to gain community acceptance and solidarity with their audience by English writers.

4. Metadiscourse effects on students' reading comprehension

The third area of metadiscourse studies undertaken in Iran has to do with the role of metadiscourse presence in texts and its explicit instruction in reading comprehension. Dastgoshadeh (2001) investigated the question of whether there were positive effects of metadiscourse use on the reading comprehension of EFL university students with high and low levels of English language proficiency. He selected his subjects from different genders, ages, and religions. In appropriate places, he inserted a variety of different subtypes of metadiscourse into a reading passage, on an unfamiliar topic. Dastgoshadeh found that students at both high and low levels of English language proficiency used metadiscourse to comprehend the passage more effectively. English language proficiency was a powerful factor regarding the degree of comprehension achievement. An interesting implication of studies of this kind is the need for further research to examine the percentage contributions of textual and interpersonal types to reading comprehension across different language proficiency levels.

In a similar study, Daftary Fard (2002), taking account of all the theoretical views on 24 different reading skills, tried to find if there were any implicational relationships among those skills. Among them were skills relevant to metadiscourse: guessing; interpreting cohesive devices; understanding the source of the text; understanding the opinion of the author; text organization; and choosing the main idea of the text. She gave several reading tests to 650 Iranian students of varying reading abilities. She used expository, descriptive, and instructional texts in order to come up with a model of reading comprehension. She noted that recognizing and understanding metadiscourse is one skill among many others that a reader should have in order to be called an effective reader. She found that reading comprehension is not a general reading ability but a multidimensional construct and that metadiscourse knowledge and use is part of this multidimensional reading skill model advocated.

Another study is by Khorvash (2008) who investigated the differential impact of explicit instruction of types of metadiscourse on

Iranian EFL learners' achievement in reading comprehension. She used four groups of Persian learners of English (three experimental groups and one control group) as the participants in her study. All 80 students (20 in each group) were at the intermediate level of English in a language institute. The first experimental group received instruction in both textual and interpersonal metadiscourse; the second, instruction in only textual metadiscourse; and the third, instruction in only interpersonal metadiscourse. The comparison group received no instruction in metadiscourse, only relevant exercises for reading in general. Analyses of the post-tests revealed a positive effect for instruction in metadiscourse. The findings clearly showed that the types of metadiscourse do not similarly affect learners' reading comprehension. The first experimental group (the one that received instructions in both textual and interpersonal metadiscourse) did much better than the other three groups on the post-test. The second experimental group performed better on the post-test than the third experimental group, and the third experimental group preformed better than the control group, which scored the lowest on the test.

Along the same lines, Jalilifar & Alipour (2007) examined the impact of metadiscourse presence and instruction on TOEFL reading passages for three groups of students with pre- to intermediate reading proficiency. One group received the original passages; the second, the same passages with metadiscourse removed (otherwise unmodified), and the third group received the more coherent, modified metadiscourse-free version. The significant result was that "the omission of metadiscourse markers from a text does not hinder the comprehensibility of the propositional content presented in the text, once that enough structural modifications are made in the text" (Jalilifar & Alipour 2007: 43). On the other hand, performance on the original texts was significantly higher than that on unmodified texts (i.e. the ones from which metadiscourse ties were removed without making any other changes to the text). Meanwhile, the group which had received the modified texts was explicitly instructed about metadiscourse, and this group outperformed the other two groups on the post-test. The explicit metadiscourse instruction was argued to have helped participants 'notice' and become aware of these language forms and their functions while reading. The removal of these markers broke the propositional chains in the texts and thus made them confusing.

Similarly, Parvaresh (2008, later published under Nemati & Parvaresh, 2008) investigated the effect of metadiscourse on the comprehension of texts in both English and Persian. Hyland's (2005) model of metadiscourse was used. The research attempted to find whether there was a significant difference between the comprehension performance of Iranian EFL learners on the English texts and their translated Persian versions with and without metadiscourse in them. Parvaresh also tried to examine the participants' awareness of the metadiscourse used and their interactions with those texts in both languages by using a follow-up questionnaire. Based on an original English text, a set of true/false questions were given about both the English text and the translated Persian text. The EFL learners were limited to higher and lower intermediate learners in language institutes. The results indicated that both higher and lower level EFL learners performed significantly better on the texts with all the metadiscourse items left in than on the texts with removed metadiscourse items. Thus, lower proficiency EFL learners might benefit more from the presence of metadiscourse in texts. His questionnaire results also suggested that when Iranian EFL learners have problems understanding a text (whether English or Persian), it is the presence of metadiscourse which can help them both comprehend and remember the propositional content of the text more effectively.

Amiri (2007) examined whether metadiscourse consciousness-raising had any significant effect on Iranian EFL learners' improvement of writing skill. Sixty senior university students majoring in English literature served as subjects. The subjects were enrolled in two classes and, at the outset of the study, were given a TOEFL test to determine whether they were homogeneous. In the second class session, all students (the experimental and control classes) as a pretest wrote an essay about knowledge and power. For seven weeks the teacher used sample texts (e.g. from Vande Kopple's 1985 study), lectures, and exercises to make the experimental group aware of the role and function of metadiscourse in writing. The control group read and did assignments from a textbook on general composition during the seven weeks. The experimental group wrote essays for each class at home, some of which the teacher discussed in class. At the end of the seven weeks, a post-test was given to both groups, using the same topic as in the pretest. The results showed that the experimental group benefited from the metadiscourse consciousness-raising and produced essays that received significantly higher grades than those in the control group. In the experimental group, the essays appropriately used metadiscourse, which made the texts more accommodating for readers. Amiri argues that metadiscourse is an effective rhetorical device for writing because it combines a reader-centered approach with a text-centered approach by giving adequate attention to the text.

The above-mentioned findings on the role of metadiscourse in reading comprehension reflect the significant impact of the presence of metadiscourse markers and instruction of these markers on reading comprehension for different language proficiency groups. However, determining language proficiency levels is a major problem in most such studies as there are few standardized tests available to determine proficiency levels. Further, these studies have employed different language proficiency tests, such as the TOEFL test, the Oxford Placement Test, and the Comprehensive English Language Test, which makes comparison of the results of such studies somewhat difficult, especially when we make cross-level comparisons. Generally, all of these metadiscourse studies represent a broad picture of the cumulative impacts of these markers or lack of them on reading performance. What seems to be missing in these studies is the impact of each of the subtypes of these markers (e.g. textual and interpersonal subtypes) on reading comprehension. That is, what these researchers consider as textual or interpersonal metadiscourse, or their subtypes, is not fully clarified: for instance, whether they included visual metadiscourse, capitalization, and circled words as instances of metalanguage is not sufficiently dealt with. Furthermore, the percentage contribution of each of the subtypes of metadiscourse to reading comprehension could have been examined by using more rigorous research designs and procedures.

A significant finding of the studies in this section, however, is the relationship between text manipulation through inserting or removing metadiscourse markers and reading performance. It appears that the removal of metatextual markers with proper modifications such that the text's coherence is not ruined, as shown in Jalilifar & Alipour's study (2007), will not significantly affect reading comprehension. This finding can have significant implications in terms of the relationship between metadiscourse use and textual coherence. To what extent metadiscourse manipulation can affect (in the readers' minds) textual coherence on the one hand and cognitive coherence on the other hand, is yet an open question. More research is needed to find out, through different tasks (free recall, written recall, summary, etc), in what way coherent or minimally coherent texts with or without metadiscourse affect the comprehension of readers with little knowledge of the domain of the text, or vice versa. In addition, research is needed to discover to what extent this coherence manipulation would affect the text-based or situational understanding of readers.

A related issue is the relationship between readability and metadiscourse. Dictionary definitions of readability define 'readable' as 'interesting', 'easy to read', and 'legible' (Neufeldt & Guralnick 1991). None of the above studies have examined the impact of metadiscourse insertion and/or removal on the readability of the texts and consequently its relation to reading comprehension. Readability formulas provide a quick, easy, and practical way of estimating the difficulty of a text, focusing on word difficulty and sentence length. The goal of readability measures is to find out the best match between readers and texts. Nonetheless, the point is that metadiscourse signaling makes sentences longer and consequently affects readability scores. However, metadiscourse signaling can ease the difficulty of a text for readers. Readability formulas seem to ignore the degree of vividness, exposition, organization, and writer presence in the text and the interactions of these factors with the reader (de Beaugrande & Dressler 1981; Meyer 2003). Therefore, a comprehensive readability formula, among other things, needs to consider metadiscourse variables and their impact on text difficulty.

5. Conclusion

We have reviewed fifteen studies of metadiscourse by Iranian graduate students. No doubt more metadiscourse studies in Iran are in progress at the time of writing. These studies demonstrate differences in methodology (experimental vs. descriptive), approach (contrastive, causal-comparative, etc.), and research questions. These differences, of course, make generalizations somewhat difficult. However, when we relate the results to the broader picture of metadiscourse research, we can offer more constructive comments, especially from a cross-cultural rhetorical perspective.

All of the studies reported here, save for Abdi's (2000) and Beighmohammadi's (2003) studies, fall within the domain of contrastive rhetoric, i.e.they focus on cultural differences in textual preferences. They deal with texts from so-called 'soft' sciences such as applied linguistics, social sciences, political sciences, ELT, etc., and have been mainly concerned with academic writing at the undergraduate, graduate, and professional levels. In their quest for new knowledge, they have employed both quantitative (frequency counts) and qualitative (functional-contextual analysis) approaches to text analysis which, in fact, adds more value to such studies. Nonetheless, one main consideration of these research studies is the extent to which the functional contextual analyses that were done are reliable. When dealing with cross-cultural analysis of such data, consistent coding is extremely important. This requires multiple raters and analysis over time (Crismore et al. 1993). In most of the reports, the main researchers and some graduate students that the researchers trained did the coding of the metadiscourse items. It would be easy to say that they might have coded the way that they did in order to see what they wanted to see. Therefore, it is recommended that future studies of this kind take into account more seriously multiple ratings and rating over time. The views of different raters need to be solicited and the degree of consistency in their analyses need to be reported. This is especially important given the multifunctionality and elusiveness of some metadiscourse items having more than one function at a time and different functions in different contexts.

Another consideration in these studies is the reference made to cultural values (British, American, and Iranian) and the differences these values make in the use of rhetorical devices in the texts. Cultural preferences will undoubtedly affect the style of discourse organization and the degree of rhetorical uncertainty or assertiveness of the writers and the degree of their reader-oriented or writer-oriented discourse (Ädel 2006; Hyland 2004). On the other hand, some of the studies refer to the important role of schooling as well as second language learning experiences. Azizi (2003), for instance, refers to the important role of the extent of second language learning experience and the significant impact it has on learners' adopting a second language identity and having thoughts different from those thoughts in the native language. This second language identity can distinguish the rhetorical practices of the same learners' written productions in English from that of their Persian writings. Further, the possible similarities between Iranian and British/American professional writers in the use of certain rhetorical devices can be attributed to the degree of training and familiarity with the rhetorical norms and preferences of their disciplines. In other words, although they come from different 'national cultures' (Iranian, British/US English), they belong to the same 'disciplinary culture' (Mauranen 1993), or to particular knowledge disciplines. Thus, the implication would be that we need to examine the written practices of novice and professional writers at different levels of proficiency and expertise, who are from different cultures and disciplines to see if there is any developmental pattern of effective pragmatic development in their use of rhetorical devices like metadiscourse.

In addition to cultural differences, the impact of gender on the use of rhetorical devices is yet another significant factor which was not an issue for these researchers yet, although "[…] the gender of the writer could influence how much or what type of metadiscourse is used" (Ädel 2006: 198). The reviewed studies were mainly concerned with the overall picture of similarities and differences between writers in the use of the types or subtypes of metadiscourse. However, the corpora selected for analysis were from both male and female writers and students. Crismore et al. (1993) found gender and cultural differences between Finnish and American male and female writers. Finnish females used the most hedges and US males the least. Finnish females also used more hedges than US females. Moreover, some research shows that males employ more emphatics than females and demonstrate a more confident writing style (Francis, Robson & Read 2001; Tse & Hyland 2008). Research in this area is scant. Consequently, future cross-cultural research should reveal more about possible gender-specific rhetorical practices. If consistent gender differences appear in many studies across different text types, cultures, and contexts, this finding can suggest that there might even be causal connections to social or biological gender and the propensity to use metadiscourse. If so, these causes may have considerable effects in the foreign language classroom and may also affect the individual teacher's syllabus and teaching methodology.

The reviewed studies show that learners at different language proficiency levels benefit from effective metadiscourse instruction and awareness-raising in their comprehension and written production. As was found in the Dastgoshadeh and Parvarseh studies, it seems that metadiscourse knowledge and use can compensate for learners' inadequate pragmalinguistic competence and can boost their comprehension and memory of the propositional content of the text. However, whether these findings are appropriate for learning strategies in both LI and in L2 classes is yet to be closely examined though the use of questionnaires and think-aloud protocols. Of course, we need to also examine the correlation for metadiscourse use between the written productions of EFL learners and their written fluency. Lack of background knowledge may lead to overuse of metadiscourse to disguise the learners' gaps in knowledge. Therefore, examining the proportion of appropriate metadiscourse use in easy, moderately challenging, and difficult tasks can shed more light on the extent to which L2 learners at different proficiency levels use their metadiscoursal rhetorical awareness to overcome their inadequate knowledge of form. This awareness might also help L2 learners to perform illocutionary acts in a more effective manner. From such studies, we can explore non-native EFL learners' use, misuse, and overuse patterns of metadiscourse.

We know that the choice of metadiscourse expression is highly dictated by the overall structure of the discourse, communicative purpose, and the level of tentativeness or universality of our claims as writers (Salager-Meyer 1994). In addition to the genre, learner level and task familiarity, the contribution of these metadiscourse markers is also a function of the language skill we practice, the text type we produce (e.g. argumentative, narrative, etc.), and the constraints of the communicative situation. In the reviewed studies we have noticed the cumulative effects of these markers in improving discourse comprehension in the reading and writing practices of experimental and control groups. However, to establish a pedagogical theory of metadiscourse, we need to further our knowledge of the percentage contribution of each of the categories or individual types of metadiscourse in different genres, disciplines, text types, and skills among different populations (e.g. native and non-native speakers). Future studies in line with that of Daftary Fard can be instrumental in demonstrating the psycholinguistic validity of metadiscourse as a significant construct in different language skills.

Our final point relates to the design problems with corpus-based studies of metadiscourse in general and the studies reviewed here. In brief, future research would need to make sure of the comparability of corpora for research and comparison purposes (cf. Ädel 2006:201ff). That is, researchers working on metadiscourse need to make sure that their data are comparable in terms of length, purpose, setting, writer groups, the status of the journals examined, journal prestige, competitiveness of the context leading to the particular discourse production, and the level of research space required from writers.

The continuing interest in metadiscourse by students and researchers worldwide is evidence that metadiscourse "is a distinctive characteristic of language, ubiquitous in our speech, and it deserves close attention from linguists." (Mauranen, this volume). It is strongly expected that future studies of metadiscourse will add to our knowledge of effective rhetorical strategies for various cultures and contexts.

Acknowledgements: We are very thankful to the NJES editors and reviewers for their valuable comments and critiques on the earlier versions of this paper.

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About the Authors

Esmaeel Abdollahzadeh

Esmaeel Abdollahzadeh has a PhD in TEFL and applied linguistics. He is an assistant professor teaching applied linguistics, ESP, and advanced writing courses at the Department of Foreign Languages of Iran University of Science and Technology. He has presented and published nationally and internationally on issues in second language academic reading and writing, discourse and ESP, as well as language learning strategies.

Annelie Ädel

Annelie Ädel is currently a research fellow in the Department of English at Stockholm University, Sweden. Her research interests include discourse and text analysis, applied linguistics (particularly English for Academic Purposes), corpus linguistics and translation. She has held a position as a post-doctoral fellow and as Director of the Applied Corpus Linguistics Unit at the University of Michigan's English Language Institute, which involved managing and developing the corpus-linguistic projects of the institute, such as MICASE (the Michigan Corpus of Academic Spoken English) and MICUSP (the Michigan Corpus of Upper-level Student Papers). She has published a monograph on *Metadiscourse in L1 and L2 English* (2006) and several articles on various aspects of metadiscourse.

Marina Bondi

Marina Bondi is Professor of English Language at the University of Modena and Reggio Emilia, Italy, where she is currently Director of the Department of studies on Language, Text and Translation. She has published on various aspects of discourse analysis and EAP, with particular reference to the argumentative features of academic discourse and to the role of metadiscourse and evaluative language. Her recent work centres on language variation across genres, disciplines and cultures through the analysis of small specialized corpora, with an emphasis on the humanities and social sciences. On language variation in specialized discourse she has published a number of articles and co-edited a number of volumes: most recently, *Academic discourse across disciplines* with Ken Hyland and *Managing interaction in professional discourse: intercultural and interdiscoursal perspectives* with Julia Bamford. Recent interests also include work on phraseology.

Avon Crismore

After attending Carthage College, Indiana University and Saint Francis College, Avon Crismore received her Bachelor's of Arts degree from Saint Francis College and later, her Master's Degree. She did her doctoral work at the National Center for Study of Reading at the University of Illinois where she began her research on metadiscourse, reading, writing and cross-cultural communication. She also taught in Special Education English Department at the University of Illinois and was the Acting Director of the Educational Opportunity Rhetoric Program. At the University of Illinois she assisted Alan Purves and Sauli Takala with the development of writing tasks used in the IEA International Writing Project. She taught reading in the context area courses and was the assistant Director of the Learning Skills Center at Indiana University Bloomington. She taught university level writing courses in Malaysia for two years and continued her metadiscourse work with Raija Markkanen from Finland and William Vande Kopple from Michigan. She maintains a research interest in metadiscourse and has continued her cross-cultural studies of metadiscourse with studies focused on Iranian students.

Ken Hyland

Ken Hyland is Professor of Applied Linguistics and director of the Centre for Applied English Studies at the University of Hong Kong. He has taught applied linguistics and EAP for many years, working in Sudan, Saudi Arabia, Malaysia, Papua New Guinea, New Zealand and, most recently, at the Institute of Education of the University of London. He has published over 130 articles and 14 books on language teaching and academic writing. Recent books are *Genre and second language writing* (University of Michigan Press, 2004), *Metadiscourse* (Continuum, 2005), *English for Academic Purposes* (Routledge, 2006), *Feedback in Second language writing* (edited with Fiona Hyland, CUP, 2006) and *Academic Discourse* (Continuum, 2009). He is currently writing a book on disciplinary identity and a second edition of *Teaching and researching writing* (Longman) is due out later this year. He was founding co-editor of the *Journal of English for Academic Purposes* and is co-editor of *Applied Linguistics*.

Anna Mauranen

Anna Mauranen is Professor of English at the University of Helsinki. Her current major research interests are English as a lingua franca, corpus linguistics, and modelling spoken language. Her publications focus on spoken language, corpus linguistics, contrastive rhetoric, translation, and academic discourses. She is director of the ELFA project, which has compiled a 1-million word corpus of academic ELF. Publications include: 2006 (with Sinclair) *Linear Unit Grammar*; 2004 (with Kujamäki) Translation Universals – Do They Exist?; 1996 (with Ventola) *Academic Writing. Intercultural and Textual Issues;* 1993 *Cultural Differences in Academic Rhetoric*.

Wendy Noble

Wendy Noble (PhD) is Academic Research and Skills Advisor at Crawford School of Economics and Government at the Australian National University. She has taught English for academic purposes in Asia, North America in at four Australian universities. Her experience in genre analysis applied to specific contexts includes work as a consultant to industry, and in research grant writing. She also conducts thesis writing workshops at universities around Australia. Her research interests include rhetorical variation across academic disciplines as indicated by macrostructure, metadiscourse, and stance. Her current research project, ‘Money talks,’ on comparative corpus analysis of academic writing in economics, accounting and business is being conducted in collaboration with Macquarie University, Sydney. She is also currently preparing her recently completed PhD thesis, a corpus analysis of argument in learner academic writing, for publication.

Carmen Pérez-Llantada

Carmen Pérez-Llantada (PhD) is a Senior Lecturer at the Department of English studies at the University of Zaragoza (Spain). She teaches English grammar and applied linguistics in the Degree of English Studies and is also in charge of the academic writing course of the Master of Textual and Cultural Studies in English at the University of Zaragoza. She has published articles, book chapters and monographs on academic written and spoken rhetoric from the perspectives of discourse analysis, pragmatics, sociolinguistics and genre theory. She is particularly interested in issues of intercultural research on academic scholarly writing in the disciplines of science, medicine and business and, with a more pedagogically-oriented slant, in the use of linguistic corpora for teaching academic English to multilingual undergraduate and graduate students. She is currently engaged in text-linguistic and ethnographic analyses of published academic writing across cultural contexts and languages.

Agnes Pisanski Peterlin

Agnes Pisanski Peterlin is an assistant professor at the Department of Translation, Faculty of Arts, University of Ljubljana, Slovenia. She received her PhD in Linguistics from the University of Ljubljana in 2006. Her research interests include contrastive rhetoric, contrastive linguistics, translation of texts for specific purposes, pragmatics and discourse analysis. She teaches a variety of courses, including English-Slovene scientific and technical translation. She has published several papers on English-Slovene contrastive analysis of rhetorical strategies.