

Metadiscourse in Academic Writing: A Reappraisal

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Metadiscourse is self-reflective linguistic material referring to the evolving text and to the writer and imagined reader of that text. It is based on a view of writing as social engagement and in academic contexts reveals the ways that writers project themselves into their discourse to signal their attitude towards both the propositional content and the audience of the text. Despite considerable interest in metadiscourse by teachers and applied linguists, however, it has failed to achieve its explanatory potential due to a lack of theoretical rigour and empirical confusion. Based on an analysis of 240 L2 postgraduate dissertations totalling 4 million words, we offer a reassessment of metadiscourse, propose what we hope is a more robust model, and use this to explore how these students used metadiscourse. Essentially our argument is that metadiscourse offers a way of understanding the interpersonal resources writers use to present propositional material and therefore a means of uncovering something of the rhetorical and social distinctiveness of disciplinary communities.

INTRODUCTION

Metadiscourse, often wrongly characterized as ‘discourse about discourse’, is a concept familiar to many engaged in research and instruction in composition, reading, and text structure. Based on a view of writing as a social and communicative engagement between writer and reader, metadiscourse focuses our attention on the ways writers project themselves into their discourse to signal their attitude towards both the content and the audience of the text. As a result, it has been taken up by researchers of both social constructionist and functional orientations to discourse and by corpus analysts attracted by the possibility of tracing patterns of interaction and cohesion across texts.

Metadiscourse is an intuitively attractive concept as it seems to offer a motivated way of collecting under one heading the range of devices writers use to explicitly organize their texts, engage readers, and signal their attitudes to both their material and their audience. This promise, however, has never been fully realized because metadiscourse remains under-theorized and empirically vague. The failure to pin the term down precisely has meant that analysts have been unable to confidently operationalize the concept in real texts, making analysis an elusive and frustrating experience.

The view of metadiscourse and the descriptive framework discussed in this paper emerges from a corpus analysis of 240 dissertations written by L2 postgraduate students from five Hong Kong universities totalling 4 million words. 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). Our purpose is to offer a reassessment of metadiscourse, present some key principles, and propose a more robust model of the concept based on our study of this corpus.

CONCEPTIONS OF METADISCOURSE

Metadiscourse is defined here as the linguistic resources used to organize a discourse or the writer's stance towards either its content or the reader (Hyland 2000: 109). It is typically used as an umbrella term to include a heterogeneous array of cohesive and interpersonal features which help relate a text to its context by assisting readers to connect, organize, and interpret material in a way preferred by the writer and with regard to the understandings and values of a particular discourse community (Hyland 1998a). While some analysts have narrowed the focus of metadiscourse to features of textual organization (Bunton 1999; Mauranen 1993a, b; Valero-Garcés 1996) or explicit illocutionary predicates (Beauvais 1989), metadiscourse is more generally seen as the author's linguistic and rhetorical manifestation in the text in order to 'bracket the discourse organisation and the expressive implications of what is being said' (Schiffrin 1980: 231).

With the judicious addition of metadiscourse, a writer is able to not only transform a dry, difficult text into coherent, reader-friendly prose, but also relate it to a given context and convey his or her personality, credibility, audience-sensitivity, and relationship to the message (Hyland 2000). Metadiscourse is, therefore, a functional category and, as shown in these extracts from our L2 postgraduate corpus, can be realized through a range of linguistic units, from exclamatory punctuation and scare quotes (1), to whole clauses (2), and even sequences of several sentences (3):

(1) I admit that the term 'error' may be an undesirable label to some teachers. (AL PhD)

The geography curriculum teaches about representative fractions, scales and ratios in Form 1 (age 12+) whilst mathematics study does not deal with this topic until Form 2! (Bio MSc)

(2) First, let us consider an oversaturated cross cut. (CS PhD)
The rest of this chapter will be divided into four sections. (PA MA)

(3) In this section, we will discuss what classifications scholars have made in the past. Based on their work, a multiple classification system will be developed to group puns under different categories. With the

help of this classification system, puns (particularly the data collected for this study) can be analysed more easily. (AL MA)

The organization of this paper will be as follows. Chapter 2 is a review of Hong Kong air cargo industry. Chapter 3 is a literature review. Chapter 4 is a model on measuring the multiplier effects brought by air cargo industry to Hong Kong labour market. Drivers and constraints for future growth of Hong Kong air cargo industry follow in Chapter 5. And the last Chapter is conclusions and recommendations. (BS PhD)

These varied realizations mean there are no simple linguistic criteria for identifying metadiscourse. Not only is it an open category to which new items can be added to fit the writer's needs, but the same items can function as metadiscourse in some parts of the text and not in others. Consequently, metadiscourse studies begin with functional classifications and analyses of texts.

These classifications embrace those ways which allow the author to intrude into the evolving text to direct readers' reception of it. Generally, metadiscoursal comments are argued to have two main functions: textual and interpersonal. The first kind helps to organize the discourse by pointing out topic shifts, signalling sequences, cross-referencing, connecting ideas, previewing material, and so on. The second kind modifies and highlights aspects of the text and gives the writer's attitude to it with hedges, boosters, self-reference, and features generally labelled as *evaluation* (Hunston and Thompson 2001) or *appraisal* (Martin 2001). Broad functions are thus subdivided into more specific functions through which the writer regulates ongoing interaction and helps make the text comprehensible to a particular readership.

While the term is not always used in the same way (for example, Swales 1990: 188), metadiscourse has been a concern in a range of recent work in text analysis. It has informed studies into the properties of texts, participant interactions, historical linguistics, cross-cultural variations, and writing pedagogy. Studies have suggested the importance of metadiscourse in casual conversation (Schiffrin 1980), school textbooks (Crismore 1989), science popularizations (Crismore and Farnsworth 1990), undergraduate textbooks (Hyland 2000), postgraduate dissertations (Bunton 1999; Swales 1990), Darwin's *Origin of the Species* (Crismore and Farnsworth 1989) and company annual reports (Hyland 1998b). It appears to be a characteristic of a range of languages and genres and has been used to investigate rhetorical differences in the texts written by different cultural groups (Mauranen 1993b; Crismore, Markkanen, and Steffensen 1993; Valero-Garces 1996). It has also been shown to be present in medieval medical writing (Taavitsainen 1999), to be a quality of scientific discourse from the late seventeenth century (Atkinson 1999), a feature of good ESL and native speaker student writing (Intraprawat and Steffensen 1995; Cheng and Steffensen 1996) and an essential element of persuasive and argumentative discourse (Crismore and Farnsworth 1990; Hyland 1998a).

In summary, metadiscourse is recognized as an important means of facilitating communication, supporting a writer's position and building a relationship with an audience. Yet despite this research interest, metadiscourse has never become a major analytical focus in the study of written discourse, nor has it produced the insights into language registers that were originally hoped for. Even in the area of academic writing, where most research is concentrated, metadiscourse studies have been suggestive rather than definitive, and analysts have turned to other concepts such as evaluation (Hunston and Thompson 2001) and engagement (Hyland 2001a) as potentially more productive ways of exploring interpersonal features of discourse. Essentially, its origins in pedagogic style guides (Williams 1981) and intuitive reflection (Vande Kopple 1985), provide an insufficiently solid theoretical foundation on which to analyse real texts or to understand how writers communicate effectively.

KEY PRINCIPLES OF METADIS COURSE

We wish to suggest a new model for metadiscourse in academic writing which builds on three key principles of metadiscourse. These are:

- 1 that metadiscourse is distinct from propositional aspects of discourse;
- 2 that the term 'metadiscourse' refers to those aspects of the text that embody writer–reader interactions;
- 3 that metadiscourse distinguishes relations which are external to the text from those that are internal.

In this section we will briefly discuss these principles, and then go on to suggest a robust framework which sees metadiscourse as a means of conceptualizing interpersonal relations in academic writing.

Propositional vs. non-propositional discourse

Definitions of metadiscourse usually make a clear distinction between metadiscourse and propositional content, often regarding the latter as 'primary'. Thus Vande Kopple (1985) defines metadiscourse as 'the linguistic material which does not add propositional information but which signals the presence of an author' and Williams (1981: 226) says it is 'whatever does not refer to the subject matter being addressed'. Similarly, Crismore, Markkanen, and Steffensen (1993) state that metadiscourse is:

Linguistic material in texts, written or spoken, which does not add anything to the propositional content but that is intended to help the listener or reader organize, interpret and evaluate the information given. (Crismore *et al.* 1993: 40)

What is understood by the term 'proposition' is often left vague, but it is generally used to refer to all that which concerns thoughts, actors, or states of affairs in the world outside the text. Halliday (1994: 70), for example, states

that propositional material is something that can be argued about, affirmed, denied, doubted, insisted upon, qualified, tempered, regretted, and so on.

Unfortunately however, this idea of propositional content does not rule out much of what is typically considered as metadiscourse. In fact, it is sometimes difficult to distinguish what is content from what is not and the traditional philosophical test of falsifiability is often of little assistance. In formal semantics, the term 'proposition' refers to the logico-semantic unit capable of being assigned a truth value, but both propositional and metadiscoursal aspects of texts are subject to similar infelicities or misfires. Mao (1993: 267) points out, for example, the explicit act of hypothesizing fails if what is hypothesized is a well-acknowledged fact. The picture is further clouded by inconsistencies in the metadiscourse literature itself. Crismore (1989; Crismore and Farnsworth 1990), for instance, includes 'referential, informational metadiscourse' in her classification, apparently referring to Halliday's ideational function of language or the ways writers express their ideas and experiences, and thus reintroduces propositional material back into metadiscourse.

In contrast, other writers have drawn the line between metadiscourse and propositional matter more firmly. Vande Kopple (2002), for instance, talks of different *levels of meaning*:

On one level we expand ideational material. On the levels of metadiscourse, we do not expand ideational material but help our readers connect, organise, interpret, evaluate, and develop attitudes towards that material. (Vande Kopple 2002: 93)

It is difficult to see, however, how metadiscourse can constitute a different level of meaning. It is certainly possible, even commonplace, to distinguish the propositional content of a text from the particular way it is expressed, for even the most idiosyncratic readings are constrained by the text and the conventions of a community of readers. Such content can be rewritten, summarized, paraphrased, and reformulated in different ways and, indeed, academic texts often undergo transformations of this kind, from their original appearance in research articles to new forms in popularizations, textbooks, grant proposals, abstracts, and undergraduate essays (for example Myers 1990). However, it is axiomatic that the meaning of a text depends on the integration of its component elements, and these cannot be separated into independent 'meanings'. Such retextualizations for different genres, purposes, and audiences will have different meanings, but a recognizable identity of content.

The point that we are making here is that a propositional content-metadiscourse distinction is required as a starting point for exploring metadiscourse in academic writing, but it is unwise to push this distinction too far. It is true that academic texts are usually concerned with issues other than themselves. They seek to inform readers of activities, objects, or people in the world, to persuade them to some action or thought, or seek to promote

the writer's scholarly claims and credentials. Equally though, a large proportion of every text is not concerned with the world, but with its internal argument and its readers. Further, this is not somehow 'secondary' to the meaning of the text, simply supporting propositional content, but the means by which propositional content is made coherent, intelligible, and persuasive to a particular audience.

Both propositional and metadiscoursal elements occur together in texts, often in the same sentences, and we should not be surprised that a stretch of discourse may have both functions. Such integration is common, with each element expressing its own content: one concerned with the world and the other with the text and its reception. Like propositional discourse, metadiscourse is able to convey the writer's intended meaning in a given situation; it is part of the message, not an entirely different one.

A rigid conceptual separation between proposition and metadiscourse relegates the latter to a commentary on the main informational purpose of the text rather than seeing it as an integral process of communicating meaning. Metadiscourse is not simply the 'glue' that holds the more important parts of the text together, but is itself a crucial element of its meaning—that which helps relate a text to its context, taking readers' needs, understandings, existing knowledge, prior experiences with texts, and relative status into account. In other words, we blur the unhelpful distinction between 'primary' propositional discourse and 'secondary' metadiscourse and seek to recover the link between the ways writers intrude into their texts to organize and comment on it so that it is appropriate for a particular rhetorical context.

Writer–reader interactions

A second principle of our model sees metadiscourse as embodying the interactions necessary for successful communication. As such, it rejects the strict duality of textual and interpersonal functions found in much of the metadiscourse literature (for example Crismore and Farnsworth 1990; Crismore *et al.* 1993; Hyland 1998a, 2000; Vande Kopple 1985). We suggest instead that 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.

The textual–interpersonal categorization ostensibly draws on Halliday's (1994) tripartite conception of metafunctions which distinguishes between the ideational elements of a text, the ways we encode our experiences of the world, and its textual and interpersonal functions. But while Halliday's terminology lends a certain theoretical respectability to the idea of metadiscourse, the concept plays no part in his thinking, and metadiscourse researchers do not necessarily subscribe to a functional grammar or to Halliday's assertion that all three functions are realized simultaneously. Instead, they separate those aspects which help to organize material as coherent discourse and those which convey the writer's attitudes to the text.

Thus, Vande Kopple (1985: 87) believes that *textual metadiscourse* ‘shows how we link and relate individual propositions so that they form a cohesive and coherent text and how individual elements of those propositions make sense in conjunction with other elements of the text’. Interpersonal metadiscourse, on the other hand ‘can help us express our personalities and our reactions to the propositional content of our texts and characterise the interaction we would like to have with our readers about that content’.

In practice there are serious difficulties with this attempt to identify two single, discrete functions of metadiscourse. Most importantly this is because textual resources do not constitute a neatly separable set which can be clearly distinguished from either propositional or interpersonal aspects. Most textual metadiscourse signals are realized by conjuncts (*so, because, and*) and adverbials (*subsequently, first, therefore*), together with their respective metaphorical or paraphrasing expressions (*as a result, on the other hand, needless to say*), but these do not *only* create textual links. Unlike propositional and interpersonal meanings, which orient to extra-linguistic phenomena, the textual function is intrinsic to language and exists to construe both propositional and interpersonal aspects into a linear and coherent whole. Textual elements thus have an *enabling* role (Halliday 1994), facilitating the creation of discourse by allowing writers to generate texts which make sense within their context. Their role is crucial to expressing propositional and interpersonal functions, not something they do independently of them.

For Halliday, and those working in a systemic linguistics tradition, the textual function is principally realized by cohesive devices and by the choices a writer makes in giving prominence to information as ‘given’ or ‘new’ by locating it at either the beginning or the end of the clause. Theme choices help illustrate the simultaneity of functions as they not only provide for the development of a text, but also what the writer sees as key elements. The theme helps to signpost what writers have in mind as a starting point, the frame they have chosen for their message, and so also highlights the particular ideational or interpersonal information that best reflects their intentions and assessments of reader needs in developing the message. In other words, we should see text as a process in which writers are simultaneously creating propositional content, interpersonal engagement, and the flow of text as they write, which means that their linguistic choices often perform more than one function.

Two clear examples of this overlap are the roles of conjunctions and modal adjuncts in thematic position. Conjunctions, for instance, function textually to relate a clause to the preceding text, but they also function ideationally to signal the writer’s understanding of the logical relationships between ideas. They therefore not only glue the text together, but extend, elaborate, or enhance propositional meanings (4). Similarly, by exercising the option to thematize modal or comment adjuncts, writers both signal a textual relationship to preceding discourse and indicate an interpersonal relationship to the reader or the position being taken (5):

(4) The author accepted the shortcomings of the study due to the fact that it was a non-random sample. *Nevertheless*, the study did highlight that ageism is not confined to Western countries alone. (SA PhD)
 A parametric estimation technique using global optimization is introduced for the output space partition. *But we first discuss* the optimization technology in the next section. (EE PhD)

(5) *Probably* the most interesting and significant category of lexical errors is ‘word class’ since it is the major type of error made by the subjects. (AL PhD)

Undoubtedly, there are limitations to the findings of this thesis. (Bio MSc)

I believe the following aspects should be seriously considered and reviewed by the SAR government if they want to maintain the prospect of this industry. (Bus MA)

Distinguishing a purely textual role for metadiscourse is therefore rather more problematic than many metadiscourse writers acknowledge, and this is also the case when considering cohesive markers. For those working in metadiscourse, conjunctive relations (called ‘text connectives’ by Vande Kopple (1985) and ‘logical connectives’ by Crismore *et al.* (1993)), are treated as ‘straightforward and unproblematic’ textual markers (Crismore *et al.* 1993: 48). But like other features of ‘textual metadiscourse’, the transitions that conjunctions mark between clauses can be oriented either towards the experiential or the interactional, referring to either propositional or interpersonal meanings. Our tendency to see conjunctions as expressing connections between ideas is perhaps a result of our primarily ideational orientation to the world. But while we expect academic texts to favour ideational meanings, we can also see conjunctions as interactionally motivated, contributing to the creation and maintenance of shifting interpersonal orientations.

The interpersonal orientation of conjunctions is perhaps most apparent in the use of concessive forms, as these both mark what the writer anticipates will be unexpected and also monitor the reader’s response to the discourse (for example Martin and Rose 2003). In academic writing, tracking readers’ expectations in this way is a vital interpersonal strategy. Concessives rhetorically acknowledge voices other than the writer’s own by demonstrating a sensitivity to audience understandings and explicitly attempting to engage with these. In the following examples, for instance, writers are clearly doing more than creating a textually cohesive text; they are manoeuvring themselves into line with community expectations and shaping the reader’s role to gain a more sympathetic hearing for their own views:

(6) *Even if* we assume that interlanguage is a viable research resource, exactly what constitutes input and output in relation to oral task performance is a definitional question which has no easy answers. (AL PhD)

Admittedly, the data collection of the present study may be classified as

'opportunistic', rendering the representativeness of the research findings very limited. (PA PhD)

The use of contrastive connectives is particularly important when writers seek to respond to potentially detracting information or competing interpretations. This is why they are often used to mitigate counterclaims (Barton 1995), introducing an alternative statement in a two part structure:

(7) The multi-database language approach bypasses the schema integration problem. It extends the standard query facilities in a database model to cover the functions that are available in the query language for the other database model. One such example is MSQL. This approach, *however*, requires end-users to learn new data manipulation language, and new standard features. (CS PhD)

Of course, these survey findings provided a more objective and independent perspective on police performance, *but* the findings are relevant to the service as a whole and cannot be reduced to individual and team performance. (PA MA)

The markers in (7) are doing interpersonal work here, allowing the writer to display disciplinary membership and familiarity with community knowledge by expressing what he or she hopes will be a shared response to a claim. Concessive connectives are also commonly used to foreground a shared emphasis when making claims in support of the main thesis.

(8) We should, *however*, identify and assess the high risk factors first so that they become predictable. (CS MSc)

In contrast, our sub-problem at the lower level is to minimize query cost with maintenance cost under different controls. (BS MA)

Marking a contrast with prior knowledge in such cases as those in (8) helps to appeal to academic ideologies which value contrast in creating knowledge, and so direct the reader to a positive response.

In sum, because it overlooks the ways that meanings can overlap and contribute to academic arguments in different ways, the distinction between textual and interpersonal metadiscourse is unhelpful and misleading. Rather, textuality is a general property of the realization of discourse, perhaps analogous to syntax. The explicit signalling of connections and relationships between elements in an argument is related to the writer's awareness of self and of the reader when writing. By making reference to the text, the audience, or the message, the writer indicates his or her sensitivity to the context of the discourse and makes predictions about what the audience is likely to know and how they are likely to respond. What is commonly referred to as *textual metadiscourse* is therefore actually the result of decisions by the writer to highlight certain relationships and aspects of organization to accommodate readers' understandings, guide their reading, and make them aware of the writer's preferred interpretations. It therefore contributes to the interpersonal features of a text.

Internal vs. External relations

If we accept that many so-called textual items can realize either interpersonal or propositional functions depending on their context, then we need a means of distinguishing their primary function in the discourse. This brings us to the third key feature of metadiscourse: the distinction between 'internal' and 'external' reference.

Connective items offer the clearest example of this division as they can function to either connect steps in an exposition (internal), organizing the discourse as an argument, or connect activities in the world outside the text (external), representing *experiences* as a series of events (Martin 1992). An internal relation thus connects the situations described by the propositions and is solely communicative, while an external relation refers to those situations themselves. Halliday (1994) provides an unambiguous statement of this difference when discussing temporal connectors:

Many temporal conjunctives have an 'internal' as well as an 'external' interpretation; that is, the time they refer to is the temporal unfolding of the discourse itself, not the temporal sequence of the processes referred to. In terms of the functional components of semantics, it is interpersonal not experiential time. (Halliday 1994: 325)

An example of the distinction is shown below. The connectors in (9) set up relations between propositions and express metadiscoursal functions, while those in (10) express a relation between processes and so are experientially oriented

(9) 93 questionnaires were received with 84 valid responses. *Therefore* the response rate for the questionnaire is 37 per cent. (CS MSc)
In contrast, these findings were not found among the low collectivists. (PA PhD)

In this paper, we investigate the effort allocation to construction under the BOT trend to check whether this kind of approach can improve the misallocation of the effort, *and furthermore*, we compare the allocation of the effort level under different ownership structures. (BS MA)

(10) Though there are three psychogeriatric wards in Kwai Chung Hospital, the bed occupancy is only up to 41 for both long-stay and acute elderly patients. *Therefore*, both Lai Chi Kwok and Kowloon Hospital Psychiatric Units have been used to provide additional beds for the long-stay and elderly patients over the last ten years, so as to ease the burden faced by the two main mental hospitals. (PA PhD)
However, *in contrast* to Western culture, Asian societies put emphasis on interdependent view of self and collectivism (SA PhD)
Initially, $r(O)$ is set to 1.0 so that the normalized autocorrelation lags $\{r(i), \text{ for } 1 < i < 10\}$ can be computed by applying Equation 5.3.3, 5.3.4 and 5.3.2 recursively. (EE PhD)

This relationship can also be seen in the use of sequencing devices, which can be used to refer to either the linguistic interaction which is unfolding in the

discourse itself (11), or to the steps involved in the particular research process being described (12):

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

Firstly, the importance of complete images in compression is described in section one. *Secondly*, predictors used for lossless image coding is introduced. *Thirdly*, the results and analysis are used to show the performance of the proposed compression. (EE PhD)

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

Firstly, numbers of observation in first segment (N_j) and in second segment (N_2) are combined. A 'pooled' regression is conducted, which is equation (LL-1). *Secondly*, individual regressions of the two periods have been done as well. . . . Then, F test is applied . . . (BS PhD)

In assigning either propositional or metadiscoursal values to items, the distinction between internal and external reference differentiates two writer roles, reflecting Bunton's (1999: S47) view of *research acts* and *writer acts*. The former concerns events which occurred as part of the research in a laboratory, library, or office, relating to the theoretical modelling or experimentation which form part of the subject matter of the text. In contrast, writer acts refer to how these are eventually written up, the decisions the writer makes in fashioning an argument for a particular readership.

The internal/external distinction is analogous to that made in modal logic between *de re* and *de dicto* modality, concerning the roles of linguistic items in referring to the reality denoted by propositions or the propositions themselves. While modality is an interpersonal feature in our model, signalling the writer's assessments of possibilities and his or her commitment to the truth of a proposition, this meaning needs to be carefully distinguished from uses where writers are referring to external circumstances which can affect the outcome of the proposition (Coates 1983: 113; Hyland 1998c: 110). Thus hedges and boosters are metadiscourse markers which express the writer's logical inference about the likelihood of something, while alternative modal meanings concern the role of enabling conditions and external constraints on its occurrence in the real world.

Palmer (1990: 185) recognizes this distinction as epistemic and dynamic modality, the latter 'concerned with the ability or volition of the subject of the sentence, rather than the opinions of the writer' (1990: 36). The determining feature is therefore the objectivity of the event, and the clearest cases are those where such objective enabling conditions are made explicit. Thus, we

recognize (13) as an example of metadiscourse as it comments on the writer's estimation of possibilities, and (14) as propositional as it represents that an outcome depends on external enabling or disabling circumstances.

(13) The diverse insect fauna reported from the reedbeds in Mai Po suggests that the reedbeds *could potentially* be an important habitat for a wide variety of animal taxa. (Bio PhD)

A possible explanation for this phenomenon *may be* that due to the standing orders of floor traders . . . (BS MA)

(14) This statement obviously exploits the Maxim of Quantity at the expense of the Maxim of Quality because the salesperson *could have* simply said: 'This company is also very famous in Taiwan.' (AL PhD)
Using this scale makes it *possible* to compare results of the present study with those of previous socialization studies. (BS PhD)

In some cases the co-text allows for both an epistemic and a dynamic reading, referring to either the writer's assessment of possibility or the appropriate circumstances, but coding is rarely problematic.

This distinction between external and internal relations, or more precisely between matters in the world and those in the discourse, is not always observed in the work on metadiscourse. It is, however, clearly crucial to determining the interpersonal (or metadiscoursal) from the ideational (or propositional). Obviously, if metadiscourse is to have any coherence as a means of conceptualizing and understanding the ways writers create meanings and negotiate their claims in academic texts, then the distinction between internal and external reference needs to be central.

A MODEL OF ACADEMIC METADISCOURSE

We believe, therefore, that there are good reasons for distinguishing metadiscourse from the propositional content of a text and for conceptualizing it more broadly as an interpersonal feature of communication. In contrast to writers such as Crismore, Kopple, and Williams, we suggest that the textual features they see in texts are actually contributing towards either propositional or interpersonal functions. In contrast to writers such as Mauranen and Bunton who explore 'metatext' as the writer's self-awareness of *text*, we suggest that metadiscourse represents the writer's awareness of the unfolding text as *discourse*: how writers situate their language use to include a text, a writer, and a reader. Metadiscourse thus provides us with a broad perspective on the way that academic writers engage their readers; shaping their propositions to create convincing, coherent text by making language choices in social contexts peopled by readers, prior experiences, and other texts.

In practical terms, metadiscourse is identified as the writer's reference to the text, the writer, or the reader and enables the analyst to see how the writer chooses to handle interpretive processes as opposed to statements relating to the world. At a finer degree of delicacy the distinction between external and

internal aspects of discourse provides a principled means of recognizing how the interpersonal dimension of language can draw on both organizational and evaluative features (Hyland 2001a), or what Thompson (2001) calls *interactive* and *interactional* resources. Thompson uses the term *interactive* to refer to the writer's management of the information flow to guide readers through the text (compare Hoey 1988), and *interactional* to refer to his or her explicit interventions to comment on and evaluate material. While our model takes a slightly wider focus than Thompson's by including both stance and engagement features of interaction (Hyland 2001a) and by building on earlier models of metadiscourse (Hyland 1998a, 2000), it owes a great deal to his clear conception of these two dimensions. Table 1 offers a model of metadiscourse developed from these views of language use in academic writing.

Interactive resources, as noted above, refer to features which set out an argument to explicitly establish the writer's preferred interpretations. They are concerned with ways of organizing discourse, rather than experience, 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. These resources include *transitions*, mainly conjunctions, which comprise the rich set of internal devices 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* refer to other parts of the text and so make additional material salient and available to the reader in recovering the writer's intentions. *Evidentials* perform a similar role by indicating the source of textual information which originates outside the current text. *Code glosses* signal the restatement of ideational information in other ways.

Interactional resources, on the other hand, involve readers in the argument by alerting them to the author's perspective towards both propositional information and readers themselves. Metadiscourse here is essentially evaluative and engaging, influencing the degree of intimacy, the expression of attitude, epistemic judgements, and commitments, and the degree of reader involvement. This aspect thus relates to the *tenor* of the discourse, concerned with controlling the level of personality in a text. *Hedges* mark the writer's reluctance to present propositional information categorically while *Boosters* imply certainty and emphasize the force of propositions. The shifting balance of these epistemic categories conveys the extent of the writer's commitment to propositions and signals rhetorical respect for colleagues' views (Hyland 1998c). *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.

Table 1: A model of metadiscourse in academic texts.

Category	Function	Examples
Interactive resources	Help to guide reader through the text	
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 here is to
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 functions of ideational material	namely/e.g./such as/in other words
Interactional resources	Involve the reader in the argument	
Hedges	withhold writer's full commitment to proposition	might/perhaps/possible/about
Boosters	emphasize force or writer's certainty in proposition	in fact/definitely/it is clear that
Attitude markers	express writer's attitude to proposition	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

(Hyland 2001a). Finally *Self-mentions* reflect the degree of author presence in terms of the incidence of first person pronouns and possessives.

An orientation to the reader is crucial in securing rhetorical objectives in research writing. Readers always have the option of re-interpreting propositional information and rejecting the writer's viewpoint, which means that writers have to anticipate and respond to the potential negation of their claims. Metadiscourse is the way they do this: drawing on the rhetorical resources it provides to galvanize support, express collegiality, resolve difficulties, and avoid disputes. Choices of interactive devices address readers' expectations that an argument will conform to conventional text patterns and predictable directions, enabling them to process the text by encoding relationships and ordering material in ways that they will find appropriate and convincing. Interactional choices focus more directly on the participants of the interaction, with the writer adopting a professionally acceptable persona and a tenor consistent with the norms of the disciplinary community. This mainly involves establishing a judicious, discipline-defined balance of tentativeness and assertion, and a suitable relationship to one's data, arguments, and audience.

METADIS COURSE IN POSTGRADUATE WRITING

To illustrate the model and show how these resources are used to facilitate effective, disciplinary specific, interpersonal relationships in academic writing, we briefly describe some of the results of our study of graduate research writing.¹ Analysis of the corpus indicates the importance of metadiscourse in this genre, with 184,000 cases, or one signal every 21 words.² Table 2 shows that writers used slightly more interactive than interactional forms, and that hedges and transitions were the most frequent devices followed by engagement markers and evidentials.³

The high use of transitions, representing internal connections in the discourse, is clearly an important feature of academic argument. Transitions represent over a fifth of all metadiscourse in the corpus, demonstrating writers' concerns that the reader is able to recover their reasoning

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

Category	Master	Doctoral	All	Category	Master	Doctoral	All
Transitions	75.8	95.6	89.0	Hedges	86.1	95.6	92.4
Evidentials	40.0	76.2	64.1	Engagement mkrs	39.7	51.9	47.8
Code glosses	27.4	40.6	36.2	Boosters	31.7	35.3	34.1
Frame mkrs	20.7	30.3	27.1	Attitude mrkrs	20.4	18.5	19.2
Endophorics	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

unambiguously. The most frequent sub-category, however, is hedges which constitute 41 per cent of all interactional uses, reflecting the critical importance of distinguishing fact from opinion in academic writing and the need for writers to evaluate their assertions in ways that are likely to be persuasive. In fact, *may*, *could*, and *would*, used epistemically to present claims with both appropriate caution and deference to the views of reader/examiners, were among the highest frequency items in the corpus. In general, then, these students' use of metadiscourse demonstrates a principal concern with expressing arguments explicitly and with due circumspection.

Because metadiscourse is a rhetorical activity whose use and meaning is relevant to particular socio-rhetorical situations, it is not surprising that it varied considerably across the two groups of dissertations we examined. The Master's theses were balanced overall between interactive and interactional metadiscourse, with slightly more interactional uses, while the doctoral texts, in contrast, contained 10 per cent more interactive forms. Hedges dominated interactional categories (40 per cent in the PhDs and 44 per cent in the masters theses) and transition markers the interactive group (36 per cent and 41 per cent respectively), with evidentials and code glosses the next most frequent interactive devices and engagement markers representing a fifth of both masters and doctoral interactional devices. The PhD dissertations, however, contained far more metadiscourse, with 73 per cent of all cases in the study and 35 per cent more when normed for text length.

The variations in metadiscourse frequencies are partly due to the fact that the PhD corpus is twice as long as the masters corpus, making it necessary for writers to employ more interactive devices to structure more discursively elaborated arguments. However, the higher frequencies in the PhDs also represent more concerted and sophisticated attempts to engage with readers and present their authors as competent and credible academics immersed in the ideologies and practices of their disciplines.

In the interactive categories, for instance, doctoral writers made far more use of evidentials, with over four times the number of intertextual references. Citation is central to the social context of persuasion, as it helps provide justification for arguments and demonstrates the novelty of the writer's position, but it also allows students to display an allegiance to a particular community and establish a credible writer identity, displaying familiarity with the texts and with an ethos that values a disciplinary research tradition. The writers of masters' theses, on the other hand, are unlikely to be so concerned about establishing their academic credentials. Not only are their texts much shorter, but they are also completed fairly quickly and in addition to substantial coursework, while their writers are normally studying part-time and are looking forward to returning to their professional workplaces rather than taking up a career in academia. Consequently their reading of the literature, and their desire to demonstrate their familiarity with it, may be less pressing.

Similarly, doctoral students employed far more interactional metadiscourse

markers, with much higher use of engagement markers and self-mentions. Self-mention is a key way through which writers are able to promote a competent scholarly identity and gain accreditation for their research claims. While many students are taught to shun the use of first person, it plays a crucial interactional role in mediating the relationship between writers' arguments and their discourse communities, allowing writers to create an identity as both disciplinary servant and creative originator (Hyland 2001b). The points at which writers choose to metadiscoursally announce their presence in the discourse tend to be those where they are best able to promote themselves and their individual contributions. Engagement features, particularly imperatives and obligation modals which direct the reader to some thought or action, are important in bringing readers into their text as participants in an unfolding dialogue.

There were also substantial variations in the use of metadiscourse across disciplinary communities. Table 3 shows that the more 'soft knowledge' humanities and social science disciplines employed more metadiscourse overall (56 per cent of the normed count) and over 60 per cent of the interactional features. The interactive figures were more balanced across disciplines, but generally formed a much higher proportion of the metadiscourse in the science dissertations.

These distributions across broad interactive and interactional fields closely reflect those in university textbooks (Hyland 2000) and research articles (Hyland 1998a), where interactional forms also tend to be much higher in the

Table 3: Metadiscourse in postgraduate dissertations by discipline per 10,000 words

Category	Applied Linguistics	Public Admin	Business Studies	Computer Science	Electronic Engineering	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
Interactive	265.9	240.5	224.7	199.0	195.5	267.6
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
Engagement mrkrss	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
Interactional	285.7	239.8	211.1	190.0	150.9	149.2
Totals	551.6	474.9	435.8	389.0	346.5	416.8

soft knowledge disciplines. Although boosters and engagement features were fairly evenly distributed across fields, hedges were well over twice as common in the soft fields and self-mentions almost four times more frequent (before norming for text length). These figures generally reflect the greater role of explicit personal interpretation of research in the humanities and social sciences and the fact that dealing with human subjects and data is altogether more uncertain and allows for more variable outcomes. The writer is unable to draw to the same extent on convincing proofs, empirical demonstration, or trusted quantitative methods as in the hard fields, and must work harder to build up a relationship with readers, positioning them, persuading them, and including them in the argument to turn them from alternative interpretations.

Evaluative judgements and hedges are found in all academic writing, for instance, but are particularly important in the more discursive soft fields where interpretations are typically more explicit and the criteria for establishing proof less reliable. Applied linguistics, business, and social studies all rely on the careful interpretation of qualitative analyses or statistical probabilities to construct and represent knowledge, requiring more elaborated exposition and greater tentativeness in expressing claims. Self-mention also plays a far more visible role in the soft disciplines. Students are often exhorted by style guides and supervisors to present their own 'voice' and display a personal perspective, suitably supported with data and intertextual evidence, towards the issues they discuss, weaving different kinds of support into a coherent and individual argument. In the hard fields, and particularly in the more 'pure' sciences as represented by biology in our corpus, the community tends to value competence in research practices rather than those who conduct them, and so a personal voice is subsumed by community knowledge and routines.

Computer Science tended to differ from this general picture of impersonality in scientific discourse, displaying relatively high frequencies of self-mentions and engagement markers. While essentially a hard field dealing with impersonal computational calculations, computer science is also very much an applied discipline, practical in its orientation and concerned with its relevance to operations in a range of disciplines, including internet marketing, machine translation, and e-business. Thus, unlike the other two hard fields in our corpus, where emphasis is often directed to the development of discipline-internal theories, techniques, and applications, research in computer science tends more to the everyday world and as a result its metadiscourse has evolved, like those in the soft applied fields, to speak to both academics within the discipline and to practitioners outside it.

The findings for interactive metadiscourse in this study represented less stark contrasts between hard and soft fields and greater variation between disciplines within these categories. Transitions tended to be more carefully marked in the soft fields, perhaps reflecting the more discursive nature of these disciplines, and the hard disciplines employed a relatively higher number of endophorics, especially in engineering, thus emphasizing their

greater reliance on multi-modality and arguments which require frequent reference to tables, figures, photographs, examples, and so on.

Perhaps the greatest surprise here is the extremely high use of evidentials in the biology dissertations. Evidentials are metadiscoursal features which provide intertextual support for the writer's position, a frame within which new arguments can be both anchored and projected, and as such they tend to play a more visible role in the soft disciplines where issues are more detached from immediately prior developments and less dependent on a single line of development (Becher 1989). The fact that new knowledge follows more varied routes means there are less assured guarantees of shared understandings and less clear-cut criteria for establishing claims than in the sciences. Because of this, writers often have to pay greater attention to elaborating a context through citation, reconstructing the literature in order to provide a discursive framework for their arguments and demonstrate a plausible basis for their claims.

But although it is a 'hard' science, biology has the greatest density of citations in the corpus, a finding which mirrors their use in a study of research articles across a similar range of disciplines (Hyland 2000). The evidence from both these corpora suggests that significant recognition is given to the ownership of ideas in Biology, making it unusual among other hard disciplines in giving greater weight to *who* originally stated the prior work. The biology style guides make it clear that it is important for writers to show how their current research relates to, and builds on, the preceding work of other authors (for example Council of Biology Editors 1994; Davis and Schmidt 1995; McMillan 1997) and this suggests both a considerable emphasis on proprietary rights to claims and an interest in how particular research contributes to a bigger scientific picture.

This brief description of metadiscourse use in postgraduate dissertations clearly shows that disciplines are not only distinguished by their objects of study. The fact that academics actively engage in knowledge construction as members of professional groups means that their decisions concerning how propositional information should be presented are crucial. It is these decisions which socially ground their discourses, connecting them to the broad inquiry patterns and knowledge structures of their disciplines and revealing something of the ways academic communities understand the things they investigate and conceptualize appropriate writer-reader interactions. In other words, their use of metadiscourse, how they choose to frame, scaffold, and present their arguments and research findings, is as important as the information they present.

CONCLUSIONS

While there is often an unfortunate tendency in the metadiscourse literature to focus on surface forms and the effects created by writers, especially in pedagogic materials and college essays, metadiscourse should not be seen as

an independent stylistic device which authors can vary at will. The importance of metadiscourse lies in its underlying rhetorical dynamics which relate it to the contexts in which it occurs. It is intimately linked to the norms and expectations of particular cultural and professional communities through the writer's need to supply as many cues as are needed to secure the reader's understanding and acceptance of the propositional content. Central to our conception of metadiscourse, then, is the view that it must be located in the settings which influence its use and give it meaning.

The framework we have suggested offers a comprehensive and pragmatically grounded means of investigating the interpersonal resources academics deploy in securing their claims. But while we believe this provides both a theoretically more robust model and a more principled means of identifying actual instances, we recognize that no taxonomy can do more than partially represent a fuzzy reality. The imposition of discrete categories on the fluidity of actual language use inevitably conceals its multifunctionality. Pragmatic overlap is a general feature of discourse motivated by the need to accomplish several objectives simultaneously. Writing effectively means anticipating the needs of readers, both to follow an exposition and to participate in a dialogue, and occasionally devices are used to perform both functions at once. A classification schema nevertheless performs a valuable role. Not only does it help reveal the functions that writers perform, but it also provides a means of comparing generic practices and exploring the rhetorical preferences of different discourse communities.

Metadiscourse is thus an aspect of language which provides a link between texts and disciplinary cultures, helping to define the rhetorical context by revealing some of the expectations and understandings of the audience for whom a text was written. Differences in metadiscourse patterns can offer an important means of distinguishing discourse communities and accounting for the ways writers specify the inferences they would like their readers to make. Put simply, the significance of metadiscourse lies in its role in explicating a context for interpretation, and suggesting one way in which acts of communication define and maintain social groups.

NOTES

- 1 A more detailed discussion of the findings of this study can be found in Hyland (2004).
- 2 The fact that metadiscourse often has clause or sentence length realization means that our standardized 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.
- 3 Because a corpus of this size generates thousands of instances of high frequency items such as modals and conjunctions, we

counted all the returns of these high frequency items and then generated fifty example sentences of each one in each discipline and degree corpus. We then carefully analysed each of these fifty randomised cases in turn to identify, in context, which items were functioning as metadiscourse. With this figure from fifty, we then extrapolated the number of metadiscourse functions of each item as a percentage of the total number of cases of that item overall to give a proportion of metadiscourse uses. We then

added all the figures in that functional category (e.g. all transition markers) and normed them to occurrences per 10,000

words to facilitate comparison across corpora of different sizes.

REFERENCES

- Atkinson, D. 1999. *Scientific Discourse in Socio-historical Context*. Mahwah, NJ: Lawrence Erlbaum.
- Barton, E. 1995. 'Contrastive and non-contrastive connectives,' *Written Communication* 12/2: 219–39.
- Beauvais, P. 1989. 'A speech-act theory of metadiscourse,' *Written Communication* 61: 11–30.
- Becher, T. 1989. *Academic Tribes and Territories: Intellectual Inquiry and the Cultures of Disciplines*. Milton Keynes: SRHE/OUP.
- Bunton, D. 1999. 'The use of higher level metatext in PhD theses,' *English for Specific Purposes* 18: S41–S56.
- Cheng, X. and M. Steffensen. 1996. 'Metadiscourse: A technique for improving student writing,' *Research in the Teaching of English* 30/2: 149–81.
- Coates, J. 1983. *The Semantics of the Modal Auxiliaries*. Beckenham: Croom Helm.
- Council of Biology Editors. 1994. *Scientific Style and Format: the CBE manual for authors, editors, and publishers* 6th edn. Cambridge: Cambridge University Press.
- Crismore, A. 1989. *Talking with Readers: Metadiscourse as Rhetorical Act*. New York: Peter Lang.
- Crismore, A. and R. Farnsworth. 1989. 'Mr. Darwin and his readers: Exploring interpersonal metadiscourse as a dimension of ethos,' *Rhetoric Review* 8/1: 91–112.
- Crismore, A. and R. Farnsworth. 1990. 'Metadiscourse in popular and professional science discourse' in W. Nash, (ed.): *The Writing Scholar. Studies in Academic Discourse*. Newbury Park, CA: Sage, pp. 119–36.
- Crismore, A., R. Markkanen, and M. Steffensen. 1993. 'Metadiscourse in persuasive writing: A study of texts written by American and Finnish university students,' *Written Communication* 10/1: 39–71.
- Davis, E. and D. Schmidt. 1995. *Using the Biological Literature: A Practical Guide* 2nd edn. New York: Dekker.
- Halliday, M. A. K. 1994. *An Introduction to Functional Grammar* 2nd edn. London: Edward Arnold.
- Hoey, M. 1988. 'Writing to meet the reader's needs: Text patterning and reading strategies', *Trondheim Papers in Applied Linguistics* 4: 51–73.
- Hunston, S. and G. Thompson. (eds) 2001. *Evaluation in Text*. Oxford: Oxford University Press.
- Hyland, K. 1998a. 'Persuasion and context: The pragmatics of academic metadiscourse,' *Journal of Pragmatics* 30: 437–55.
- Hyland, K. 1998b. 'Exploring corporate rhetoric: Metadiscourse in the CEO's letter,' *Journal of Business Communication* 35/2: 224–45.
- Hyland, K. 1998c. *Hedging in Scientific Research Articles*. Amsterdam: John Benjamins.
- Hyland, K. 2000. *Disciplinary Discourses: Social Interactions in Academic Writing*. London: Longman.
- Hyland, K. 2001a. 'Bringing in the reader: Addressee features in academic articles,' *Written Communication* 18/4: 549–74.
- Hyland, K. 2001b. 'Humble servants of the discipline? Self-mention in research articles,' *English for Specific Purposes* 20: 207–26.
- Hyland, K. 2004. 'Disciplinary interactions: Metadiscourse in L2 postgraduate writing,' *Journal of Second Language Writing*.
- Intraprawat, P. and M. Steffensen. 1995. 'The use of metadiscourse in good and poor ESL essays,' *Journal of Second Language Writing* 4/3: 253–72.
- McMillan, V. 1997. *Writing Papers in the Biological Sciences* 2nd edn. Boston: Bedford Books.
- Mao, L. R. 1993. 'I conclude not: Toward a pragmatic account of metadiscourse,' *Rhetoric Review* 11/2: 265–89.
- Martin, J. R. 1992. *English Text: System and Structure*. Amsterdam: Benjamins.
- Martin, J. R. 2001. 'Beyond exchange: APPRAISAL systems in English' in S. Hunston and G. Thompson (eds): *Evaluation in Text*. Oxford: Oxford University Press, pp. 142–75.
- Martin, J. R. and D. Rose. 2003. *Working with Discourse: Meaning beyond the clause*. London: Continuum.
- Mauranen, A. 1993a. 'Contrastive ESP rhet-

- oric: Metatext in Finnish–English Economics texts,' *English for Specific Purposes* 12: 3–22.
- Mauranen, A.** 1993b. *Cultural Differences in Academic Rhetoric*. Frankfort: Peter Lang.
- Myers, G.** 1990. *Writing Biology*. Madison, WI: University of Wisconsin Press.
- Palmer, F.** 1990. *Modality and the English Modals*. 2nd edn. London: Longman.
- Schiffrin, D.** 1980. 'Metatalk: Organisational and evaluative brackets in discourse,' *Sociological Inquiry: Language and social interaction* 50: 199–236.
- Swales, J.** 1990. *Genre Analysis: English in Academic and Research Settings*. Cambridge: Cambridge University Press.
- Taavitsainen, I.** 1999. 'Metadiscursive practices and the evolution of early English medical writing (1375–1550)' in J. M. Kirk (ed.): *Corpora Galore: Analyses and Techniques in Describing English*. Amsterdam: Rodopi, pp. 191–207.
- Thompson, G.** 2001. 'Interaction in academic writing: Learning to argue with the reader,' *Applied Linguistics* 22/1: 58–78.
- Valero-Garcés, C.** 1996. 'Contrastive ESP rhetoric: Metatext in Spanish–English Economics texts,' *English for Specific Purposes* 15/4: 279–94.
- Vande Kopple, W.** 1985. 'Some exploratory discourse on metadiscourse,' *College Composition and Communication* 36: 82–93.
- Vande Kopple, W.** 2002. 'Metadiscourse, discourse, and issues in composition and rhetoric' in E. Barton and G. Stygall (eds): *Discourse Studies in Composition*. Cresskill, NJ: Hampton Press, pp. 91–113.
- Williams, J.** 1981. *Style: Ten Lessons in Clarity and Grace*. Boston: Scott Foresman.