A Model for the Investigation of
Reflexive Metadiscourse in Research Articles

Naouel Toumi

This paper describes an analytical model used in a comparative study of reflexive metadiscourse in research articles written in English. The model described here draws its main components from Mauranen (1992; 1993b) and Adel (2006) with some modifications. The adjustments were made in order to render the model more applicable to the research article genre. This model overcomes one of the major weaknesses of the earlier frameworks by providing clear criteria for the identification of reflexive metadiscourse. It also investigates an under-researched aspect of metadiscourse, namely reflexive metadiscourse and sets it in two broad categories ranging from reflexivity of high explicitness to reflexivity of low explicitness. Finally, this model allows for a functional analysis of reflexive metadiscourse.

1. Introduction

This paper describes a model for the investigation of reflexive metadiscourse in research articles (RAs) written in English by two groups of researchers: native English speakers and Tunisians. The present framework adopts and modifies some aspects from two leading models of reflexive metadiscourse, namely those of Mauranen (1992; 1993b) and Adel (2006). Before going into the details of this model, the term requires definition.

Metadiscourse is essentially 'text about the text' or 'talk about talk', depending on the nature of the discourse investigated, either written or oral. Basically, metadiscourse is the linguistic material of text that does not add propositional content, but rather signals the presence of the author as s/he helps the reader "organise, classify, interpret, evaluate, and react to such material" (Vande Kopple 1985: 83). More precisely, Crismore (1983) defines metadiscourse as a level of discourse: it is the author's intrusion into the ongoing discourse, and is used by the author to direct rather than inform the reader.

Metadiscourse has a considerable importance in academic writing. It carries an essential social meaning by revealing the author's personality and identity and by indicating how s/he hopes his/her readers to respond to the ideational material. The use of metadiscourse in academic rhetoric was associated with the establishment of coherence and logic (Mauranen 1993a). It is also argued that the addition of metadiscoursal features can help writers transform a dry text into a reader-friendly prose, and exhibit the ability of the author to supply sufficient cues to secure an understanding and acceptance of the propositional content (Hyland 2004). The use of metadiscourse has positive effects on readability, including: improved comprehension of texts (Crawford Camiciottoli 2003) and recall (Crismore 1989; Crismore & Vande Kopple 1997; Reitbauer 2001), stimulating learning and interest among students (Crismore 1990) and decision-making in a business setting (O'Keefe 1989).

2. Models of metadiscourse

Early studies of metadiscourse, as well as some of the recent analyses, made use of the Hallidayan distinction between textual and interpersonal macro-functions of language

(Halliday 1973) to recognise two levels to metadiscourse. The first level, called 'textual metadiscourse', contributes to the deployment of rhetorical strategies used to express a theory of experience in a coherent way. It provides a framework which clarifies the schematic structure of the text. The second level, labelled 'interpersonal metadiscourse', concerns the interactional and evaluative aspects of the author's presence in his/her discourse. It expresses the writer's individual persona. This type of metadiscourse is used to convey attitudes to propositional material and to involve the writer in more intimacy and dialogue with the reader. Interpersonal metadiscourse indicates the writers' assessment of information and their conviction in its reliability or truth, thereby projecting a strong, authoritative and credible authorial presence in the text.

2.1. The early models of metadiscourse

Williams (1981) categorises written metadiscourse into three large common types: hedges (*possibly*) and emphatics (*certainly*); sequencers (*in the next section*) and topicalizers (*with regard to*); narrators and attributors (*according to X (2007)*).

Based on the categories of both Meyers (1975, cited in Crismore 1983: 12) and Williams (1981), Crismore (1983) classified written metadiscourse into two general categories: informational and attitudinal. The first category includes goals (*the purpose of this study*), pre-plans (*this chapter is about*), post plans (*in the previous section*), and topicalizers. The second category includes saliency (*still more important*), emphatics, hedges, and evaluatives (*unfortunately*). These two categories are similar to the textual and interpersonal function of metadiscourse.

Vande Kopple (1985) categorised metadiscourse into seven types, among which the first four are textual and the remaining three are interpersonal. His textual category includes: text connectives (*however*), code glosses (*this means that*), illocution markers (*to conclude*), and narrators. The interpersonal category includes: validity markers (hedges, emphatics, and attributors), attitude markers (*surprisingly*), and commentaries (*you might not agree with that*). Crismore and Farnsworth (1990) extended the scope of metadiscourse to include a new category: scientific commentaries. Scientific commentaries include textual and typographical marks such as quantitative (*measure 19*), source (*Gould, woodruff, and Martin, (1974)*), graphics (*table 5*), captions (*converted from original data in micrometer units*), and Latin terminology (*post scriptum*)

By investigating textual and interpersonal metadiscourse, some studies take a broad approach to metadiscourse. Examples of this are Vande Kopple (1985), Crismore et al. (1993), Markkanen et al. (1993) and Hyland (1998b; 2004). Other researchers, however, considered only textual metadiscourse in their studies, and thus a narrow approach: Schiffrin (1980), Mauranen (1992; 1993a; 1993b), Bunton (1999), Dahl (2004), Valero-Garces (1996), Moreno (1997; 2004) and Peterlin (2005). To sum up, the distinctive feature separating broad and narrow approaches is the inclusion among the former of stance – or what Vande Kopple (1985) calls 'attitude' – and validity markers.

2.2. New directions in the analysis of metadiscourse

In recent years, there has been an upsurge of interest in metadiscourse albeit with little concern for standard theoretical assumptions such as the distinction between textual and interpersonal metadiscourse. Against such standard assumptions, some metadiscourse analysts argued for the reconsideration of metadiscourse in semantic and pragmatic terms. They claim that the central boundary between textual and interpersonal metadiscourse is rather fuzzy (Moreno 1998; Hyland 2004; Hyland & Tse 2005) and that all metadiscourse markers are interpersonal, in that they take account of the readers' knowledge, textual experience and processing needs as well as providing authors with rhetorical means to achieve this.

The models of reflexive metadiscourse developed by Mauranen (1992; 1993b) and Adel (2006) also fit into this new direction, in that they consider all metadiscourse as interpersonal, and equally does the model presented here. However, the latter models perceive another distinction in metadiscourse which was not considered previously. Namely this is reflexivity of the current text, writer and reader. According to this distinction, 'text connectives', 'code glosses', 'illocution markers' and 'commentaries' qualify as reflexive while 'validity' and 'attitude markers' are non-reflexive because they refer to the internal state of mind of the writer as an experiencer in the real word, or as writer of other texts. 'Narrators' also qualify as non-reflexive because they refer to writers of other texts or to the current writer but as writer of other texts.

In addition to the absence of this distinction in the early developed models of metadiscourse, there is the problem of fuzziness. Earlier models only defined metadiscourse without setting clear criteria for the identification of metadiscursive instances as distinct from other kernels. Moreover, the broad approach to metadiscourse adopted by the earlier models does not allow for a functional analysis of metadiscourse occurrences. In that, Hyland (2000) identified over 300 possible cases of metadiscourse in different disciplinary discourse. This huge number of cases hampers the feasibility of functional analyses in large corpora.

3. Reflexive metadiscourse

Following the above mentioned limitations, this paper describes a narrow approach model for the investigation of metadiscourse, focussing only on reflexive metadiscourse, an under-researched area. It primarily relies on the two previous models of Mauranen (1992; 1993b) and Adel (2006) with some modifications. These studies were selected as a point of reference in the development of the present model for two reasons. First, they are pioneers in the investigation of reflexive metadiscourse. Second, these two models proved able to overcome the problem of fuzziness associated with the study of metadiscourse. The model of Adel (2006), moreover, is perceived as advantageous for its contribution to the functional analysis of metadiscourse contrary to earlier studies which usually engage in a simple typological analysis of metadiscourse. As such the present model sets clear criteria for the identification of metadiscourse instances and distinguishes reflexive from non-reflexive metadiscourse. The present model has also been modified for more applicability to the RA genre.

Reflexive metadiscourse is the cover term for the self-reflexive expressions used by the writer to negotiate meaning in a text. It is the writer's explicit commentary on his/her own ongoing text. It marks the writer's awareness of the current text as text or as language, of him/herself as writer, and of the potential reader as reader of this text. Metadiscourse supports propositional content, but remains separate from it. It is the means by which propositional content is made coherent, legible and persuasive to the reader in accordance with the writer's intentions.

3.1. The underlying functional model of language

While Mauranen (1992; 1993b) relies on Halliday's (1973) functional model of language, Adel (2006) finds the latter inconclusive with regard to metadiscourse. More precisely, relying on the Hallidayan model, early metadiscourse studies did not include a writer-oriented category in their studies of metadiscourse, to the advantage of a writer-reader interaction category – for example commentaries in Vande Kopple (1985). This exclusion, however, is unjustified. Adel (2006) relies instead on the model of Jakobson (1998) and further develops the reflexive model of metadiscourse, initiated by Mauranen (1992; 1993b).

The Jakobsonian model attributes six functions to language: metalinguistic (code/text), expressive (addresser), directive (addressee), referential (context), poetic (message), and phatic (contact). Only three of these functions are in focus in metadiscourse expressions,

namely the metalinguistic, the expressive, and the directive. Their corresponding components of the speech event are the text/code, the writer, and the reader. With regard to metadiscourse, every metadiscursive instance focuses on one or more of these speech events.

Adel's (2006) reflexive model extends the concept of metadiscourse from the text to the writer of the text and its imagined reader. These are two other important components of the writing process whose visibility also attracts attention to the text as text.

3.2. Key features of reflexive metadiscourse

The major contribution of Mauranen (1992; 1993b) and Adel (2006) lies in the establishment of identification features of metadiscourse units, which are explicitness or self-awareness of text, contextuality, current text, and writer/reader qua writer/reader (only in Adel 2006). These features are adopted as part of the model presented here.

3.2.1. Explicitness or self-awareness
Reflexive metatext is not only an indication of the author's presence, but especially an explicit expression of a writer's awareness of the current discourse. Explicitness implies the writer's explicit commentary on his/her ongoing text. It is the writer's self-awareness of the text and its creation in the reader. Explicitness also refers to explicit wording, it is required that the reference to the world of discourse be overtly stated.

3.2.2. Contextuality
Text reflexivity is a relative concept, some parts of the text function as metatext only in relation to the rest of the text. Contextuality (term used by Mauranen 1992; 1993b) or current discourse (term used by Adel 2006) implies that context is important in deciding whether the unit is metadiscursive or not. Examples 1[1] and 2 below illustrate the way context can help decide on the metatextual nature of the unit.

(1) To do it manageably, however, I will *now* narrow my focus even further to consider only the case of Cobb Douglas production functions. (E05 EF)

(2) Further research is *now* needed. (E08WR)

In example (1), the context of the adverb of place *now* shows that it refers to the ongoing discourse, it is text internal, and thus reflexive (metatextual). However, the context of the adverb of time *now* in example (2) shows that it is a typical time adverbial which marks a temporal contrast between the past and the present in the real world outside the current text, and thus it is not reflexive (not metatextual).

3.2.3. Current text
Only those elements which refer to the current text and which show awareness of it qualify as reflexive metadiscourse, as opposed to those instances which comment on external events or texts. Accordingly, reflexivity excludes model expressions and stance from metadiscourse, because they reflect the writer's attitude and perform the truth value of the proposition, they are text-external states of affairs of the writer, and they do not show awareness of the text.

3.2.4. Writer and reader
References which point to the writer and/or reader of the current text also qualify as metadiscursive. These references, however, must neither relate to them as experiencers in the real world nor as writers or readers of another text.

---

[1] The model described was initially prepared for a PhD study that analyses the use of reflexive metadiscourse in 100 RAs written in English by native English and Tunisian researchers. All the examples provided below are extracted from this corpus, and thus coded accordingly.

4. A model of reflexive metadiscourse

The present model is used in the investigation of reflexive metadiscourse in RAs. It follows a functional approach to metadiscourse. It classifies reflexive metadiscourse units into categories, and attributes functions to them. The model involves two main categories: metatext and writer-reader oriented metadiscourse. It is worth noting here that the terms 'metatext' and 'metadiscourse' do not refer to the function of the language used, they are mere labels for the categories identified. This said, this model remains faithful to the interpersonal perception of metadiscourse explained earlier in Subsection 2.2.

Metatext includes the metalinguistic (code/text) function of language and the textual organisation. Writer/reader-oriented metadiscourse marks the writer-reader interaction. This classification relies on the model of language of Jakobson (1998) as illustrated by Figure 1:
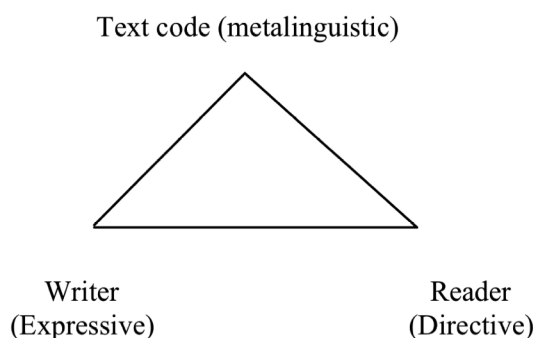
Text code (metalinguistic)

Writer   Reader
(Expressive)   (Directive)

Figure 1. The reflexive triangle (from Adel 2006: 18).

4.1. Metatext

This main category includes highly explicit reflexivity and reflexivity of low explicitness subcategories. Highly explicit reflexivity metatext includes expressions which explicitly refer to the text, its writing, its organisation and language. Reflexivity of low explicitness metatext includes expressions which organise the text and indicate the functions of its parts without explicitly referring to the text or the communication process which is taking place via the text. This category includes more vague cases, i.e., expressions which are ambiguous in their reference, as it is not easy to identify whether they refer to the text or to the content.

4.1.1. Highly explicit reflexivity

Under this subcategory, we identify three metadiscursive instances which explicitly refer to the text, its writing, and its organisation. They come in different forms and functions. They include reference to the text, discourse labels and phoric markers.

Reference to the text: writers refer to their text in the process of writing the RA through nouns such as *this paper, this section* and adverbs of place and time *here* and *now* which serve the functions of reference to the whole text (3a, 3b) or to part of it (4a, 4b, 4c).

(3a) In *this paper*, I document the stratigraphy and sedimentology of Quaternary deposits. (E12G)

(3b) Considered *here* are the effects of changes in relative commodity prices. (E07EF)

(4a) For all of the results *in this section*, significance at 99 per cent, 95 per cent and 90 percent confidence levels is denoted by X Y and Z respectively. (E08EF)

(4b) *In the remainder of this paper*, the word schedule indifferently refers to a partial schedule or a complete schedule, except where otherwise noted. (T20MA)

(4c) We have *now* seen the autarky wages in the algebra and the wages with trade in the figure. (E11EF)

Discourse labels: another highly explicit type of reflexive metadiscourse involving the use of illocutionary verbs (5), illocutionary nouns (6), adverbs of manner (7) and similar expressions to label the discourse act being performed in the immediate environment or the progression of the discourse. These illocutionary verbs sometimes occur with an adverbial comment (8) to show the manner of the verbal expression. Some other verbs are not illocutionary but show a certain relationship with the current text. This relationship is manifested in their reflexivity on a part of the text, its reader, or its writer (9). These units are thought to be helpful for the interpretation of the textual moves, and for clarifying the writer's intentions:

(5) *To summarise*, during the initial period of trade liberalization (1986–90), the degree of protection was greatly lowered for domestically oriented goods. (T05EF)

(6) *In summary*, it is interesting to focus on the business policy implications of the findings. (T02EF)

(7) *In brief*, the one-step estimator assumes homoskedastic errors... (T02EF)

(8) In this paper, we *explicitly state* that the potential difference in dividend policy is... (T09EF)

(9) The remainder of the paper *is organized* as follows... (E03EF)

Phoric markers: this class includes expressions which play the role of 'road signs' that help readers navigate through the text. These expressions usually perform the functions of 'topic shifts' (10), 'previews' (11), 'reviews' (12), and 'overviews' (expressed in overview paragraphs):

(10) *With regard to* the results obtained in this work... (T06WR)

(11) But the system is more complex for some segments and, as is discussed *later...* (E14OR)

(12) We now expand our model to test the trade considerations discussed *in the previous section*. (E03EF)

4.1.2. Reflexivity of low explicitness metatext
Reflexivity of low explicitness metatext includes expressions which organise the text and indicate the functions of its parts without explicitly referring to the text or the communication process which is taking place via the text. This category includes more vague cases, i.e., expressions which are ambiguous in their reference. It is usually difficult to identify whether these expressions refer to the text or to the content. They include internal connectors, discourse labels, reference to the text, and code glosses. While the three first subcategories are the same as in Mauranen (1992; 1993b), code glosses were added in this study. Code glosses are classified under reflexivity of low explicitness because they do not explicitly refer to the text qua text, or to its writing or reading processes.

Internal connectors: this class includes connectors used in the internal function, i.e., expressing relations between elements of the internal discourse, such as contrast (*however, nevertheless, instead, conversely*, *but*, *yet*, *while*, *whereas*), addition (*moreover*), generalising (*in general*) and sequencers (*first*). The latter type of linkers must be explicitly worded, that is to say, numerical and alphabetical sequencers (*1/2*, *a/b*) do not count as reflexive metadiscourse. Internal connector excludes connectors which reflect a conceptual process internal to the writer's mind, such as temporal, causal, and consequence connectors.

Discourse labels: these have already been discussed under highly explicit reflexivity, as illocutionary verbs or similar expressions that indicate the textual function of the text or part of the text in question. They are classified as highly reflexive when they clearly refer to the current text. However, discourse labels are also classified under reflexivity of low explicitness when ambiguous. This ambiguity implies that it is not clearly stated whether the verb or noun refers to the text in question or to the external world. This category includes ambiguous verbs, and nouns. Example 13 below illustrates a case of ambiguous verb:

(13) We *interpret* the trends in the seawater Sr- and Os-isotope compositions at the start of the Sinemurian as evidence that much of the CAMP had been removed by chemical weathering, by which time the CAMP had ceased to have a major influence on Earth's environment. (E15G)

In this example, it is ambiguous whether an *interpretation of the trends* is taking place in the current text, or it was made during the research, and is reported here in the text as a fact of the real world.

Reference to the text: as explained in Subsection 5.1.1, this type of reference clearly points to the text itself – either as a whole or n part – and can have a nominal or an adverbial form. This category, however, includes ambiguous adverbs of time and place (14) and ambiguous enumeration of text steps (15). This ambiguity implies that it is sometimes difficult to make a clear separation between reference to the text and reference to the content when using these adverbs and enumerators.

(14) The other would be represented by a case in which commodity prices fall by the full extent of the degree of cost-cutting involved in technological progress. *Here* the effect on the real wage rate is very simple to analyze. (E07EF)

(15) In this post-label situation, the composite price p p (p, pb, 1) can be substituted into equation (4) to determine the total Marshallian demand for the coffee composite and total expenditures on coffee M as in equation (7). *As a last step*, the Marshallian demand for the coffee composite equation (10) can be substituted back into the Hicksian demand for labelled coffee equation (8) and non-labelled demand in equation (9) to determine the Marshallian demands for labelled and non-labelled coffee. (E04EF)

Code glosses: these include instances which come in the following forms: *in other words, this is called, such as, namely, i.e., this means that* and serve the functions of rephrasing, explaining, elaborating, and exemplifying, and thus help the reader grasp the meaning of the ideational material to facilitate the reading of the text. Since this category does not explicitly refer to the text, it was placed under reflexivity of low explicitness in this model, as in Mauranen (1992; 1993b).

It is worth noting, however, that Mauranen did not clearly classify exemplifying, i.e., whether it falls under the subcategory internal connectors or discourse labels, she only explained the reason why it is considered as reflexive and of low explicitness. At the same time, Adel (2006) classifies exemplifying as discourse label, and elaborating and explaining as code gloss. However, all of the three categories fall under the definition of code gloss in Hyland (2005). In this study, however, the four functions rephrasing, explaining, elaborating, and exemplifying are considered code glosses. Exemplifying was added to this category because it is assumed to support the argument and to give cues to the writer's desired interpretation of elements, which is a characteristic of code glosses as defined by Vande Kopple (1985) and Hyland (2005).

4.2. Writer/reader-oriented metadiscourse

The second main category is writer/reader-oriented metadiscourse. It serves the expressive (addresser) and the directive (addressee) functions of language. It includes three subcategories: reader-oriented, writer-oriented, and participant oriented.

4.2.1. Reader-oriented metadiscourse
This category includes instances which show the writer's direct awareness with the reader of the current text as reader. Reader-oriented metadiscourse is further subcategorised into highly explicit reference and reference of low explicitness.

Highly explicit referencese: this type of reflexivity may occur in the following forms: second person pronoun (16), its possessive and oblique forms (e.g., *you* might think that), a noun (e.g., the reader), or an imperative verb (e.g., *note* that). These serve the function of

addressing the reader directly, and shifting his/her attention from propositional content to the process of reading or writing the text:

> (16) So far, *you* will note, I have definitely not found what I mentioned at the start that I expected: a gain for both factors in North as it exploits its technological advantage to raise wages for both skilled and unskilled labour. (E11EF)

Low-explicitness references: reader-oriented metadiscourse, qualifies as reference of low explicitness when it serves the function of addressing the reader less directly, i.e., without explicitly referring to him/her. At the same time, these expressions may ask the reader to remember or note things about the text-external world rather than the text *per se*. This can be rendered through concessives and questions.

Concessives mark textual organisation and at the same time show sensitivity to audience by monitoring the readers' response to discourse (e.g. *admittedly, of course, arguably, anyway, in any case*). Through concessives, the writer anticipates the readers' reaction to an argument and deliberately attributes statements to the reader as possible objections, counterarguments, or extra commentary that would help the writer gain the reader's approval. Q*uestions* also mark a writer-reader interaction. It is thought that anticipating a question that would rise in a reader's mind is a form of addressing the reader, and thus reflexive metadiscourse. This subcategory, however, excludes research questions because they are ready made outside the world of the text, and they are not meant to interact with the reader. Other instances, such as *It is noteworthy that all negative control tubes remained negative throughout the study*, also qualify as 'addressing the reader indirectly' on the basis that they indirectly – without explicitly mentioning the reader – ask him/her to remember or note things. Such instances qualify as reflexivity of low explicitness because they ask the reader to note information from the text external world.

4.2.2. Writer-oriented metadiscourse
This class serves the expressive function of language and includes instances which show the writer's explicit awareness with him/herself as a writer of the current text, rather than as an experiencer in the text external world or as a writer of other texts. This subcategory may occur in the following forms: first person pronoun (e.g., *I* mean) exclusive *we*, their possessive and oblique forms (*my*, *our*, *myself*, *ourselves*, *us*, *me*), and nouns (*writer*, *author*).

4.2.3. Participant-oriented metadiscourse
Sometimes, writer-oriented and reader-oriented metadiscourse may combine in a writer-reader interaction subcategory to serve the function of showing the writer's awareness of him/herself as writer addressing the reader of the current text as reader. This may occur in the following forms: *I/you* interaction (e.g., *you* might contradict *me* on this), and inclusive *we* (e.g., as *we* have seen in our discussion above).

5. The metadiscourse unit

This model considers keyword-based units. Contrary to Mauranen's (1992; 1993b), the present model does not tie the unit to a sentence, this, however, is thought to skew the results when the sentence includes more than one instance of metadiscourse. Following the procedure of Adel (2006), this model breaks large units such as <u>we shall</u> <u>examine</u> advisor's know-how in <u>section 2</u> into three separate units: a participant-oriented unit *we shall*, a discourse label unit *examine* (non-illocutionary verb but reflexive in context) under reflexivity of high explicitness, and reference to part of the text under reflexivity of high explicitness *in section 2*.

6. Personality

Differently from Adel (2006), the model introduced in this paper does not consider personality as a metadiscursive category rather it regards it as a characteristic of the metadiscourse unit. This modification pertains to the nature of RAs, which tend to be less personal than the students' argumentative essays analysed by Adel (2006). In this model, each unit will be classified either under reflexive personality or impersonality. Some units will automatically count as personal, namely writer-oriented, participant-oriented, and reader-oriented units when addressing the reader through an imperative or a second person pronoun. Other units that share the same clause with a personal pronoun referring to the writer or reader qua writer or reader of the current text, or to both of them, or with an imperative verb will be also considered under reflexive personality. In reflexivity, only instances referring to the writer and reader of the current discourse are considered personal. However, RAs tend to be richer with instances of personal reference to the participants as researchers or experiencers of the external world (Kuo 1999; Harwood 2005a; 2005b), and these are not considered reflexive in this model.

7. Conclusion

This paper reviewed the early models of metadiscourse which followed a broad approach of analysis, and highlighted their major weakness. Drawing on the models of Mauranen (1992; 1993b) and Adel (2006), this paper introduced a model of reflexive metadiscourse with some modifications to meet the specificities of the RA genre. The framework presented is currently being used in a comparative functional analysis of reflexive metadiscourse in RAs from the hard and soft sciences. All the RAs are written in English by native English and Tunisian researchers. While the RAs of the first cultural group are selected from renowned scholarly journals, the RAs of the second cultural group are subject to availability in English. The RAs of the native writers serve as a baseline to investigate the use of reflexive metadiscourse in Tunisian RAs. The study seeks to identify similarities and differences in the use of reflexive metadiscourse between the two cultural groups, the two types of sciences and across the RA sections. The pedagogical applications of the study consist in informing the design of academic writing teaching material in Tunisia.

References

Adel, A. (2006). *Metadiscourse in L1 and L2 English*. Amsterdam: John Benjamins.
Bunton, D. (1999). The use of higher level metatext in Ph.D. theses. *English for Specific Purposes 18*, S41-S56.
Crawford Camiciottoli, B. (2003). Metadiscourse and ESP reading comprehension: an exploratory study. *Reading in a Foreign Language* 15, 28-44.
Crismore, A. (1983). *Metadiscourse: What It Is and How It Is Used in School and Non-School Social Science Texts*. University of Illinois: Centre for the Study of Reading. Technical Report 273.
Crismore, A. (1989). *Talking with Readers: Metadiscourse as Rhetorical Act*. New York: Peter Lang.
Crismore, A. (1990). Metadiscourse and discourse processes: interactions and issues. *Discourse Processes 13*, 191-205.
Crismore, A. & Farnsworth, R. (1990). Metadiscourse in popular and professional science discourse. In Nash, W. (ed.) *The Writing Scholar: Studies in Academic Discourse.* Newbury Park, CA: SAGE, 118-136.
Crismore, A., Markkanen, R., & Steffensen, M. (1993). Metadiscourse in persuasive writing: a study of texts written by American and Finnish university students. *Written Communication 10,* 39-71.
Crismore, A. & Vande Koppel, W.J. (1997). Hedges and readers: effects on attitudes and learning. In Markkanen, S. et al. (eds) *Hedging and Discourse: Approaches to the Analysis of a Pragmatic Phenomenon in Academic Texts.* Berlin: Walter de Gruyter, 83-114.
Dahl, T. (2004). Textual metadiscourse in research articles: a marker of national culture or of academic discipline. *Journal of Pragmatics 36*, 1807-1825.
Halliday, M.A.K. (1973). *Explorations in the Functions of Language*. London: Edward Arnold.

Harwood, N. (2005a). 'Nowhere has anyone attempted... In this article I aim to do just that'. A corpus-based study of self-promotional *I* and *we* in academic writing across four disciplines. *Journal of Pragmatics 37*, 1207-1231.

Harwood, N. (2005b). 'We do not seem to have a theory... the theory I present here attempts to fill this gap': inclusive and exclusive pronouns in academic writing. *Applied Linguistics 26,* 343-375.

Hyland, K. (1998a). Exploring corporate rhetoric: metadiscourse in the CEO's letter. *Journal of Business Communication 35,* 224-245.

Hyland, K. (1998b). Persuasion and context: the pragmatics of academic metadiscourse. *Journal of Pragmatics 30*, 437-455.

Hyland, K. (2000). *Disciplinary Discourses: Social Interactions in Academic Writing*. London: Longman

Hyland, K. (2004). Disciplinary interactions: metadiscourse in L2 postgraduate writing. *Journal of Second Language Writing 13,* 133-151.

Hyland, K. (2005). *Metadiscourse*. London: Continuum

Hyland, K. and Tse, P. (2005). Hooking the reader: a corpus study of evaluative *that* in abstracts.' *English for Specific Purposes 24,* 123-139.

Jakobson, R. (1998). *On Language: Roman Jakobson*. Edited by L.R. Waugh & M. Monville-Burston. Cambridge, MA: Harvard University Press.

Kuo, C.H. (1999). The use of personal pronouns: role relationships in scientific journal articles. *English for Specific Purposes 18,* 121-138.

Markkanen, R, Steffensen, M. S., & Crismore, A. (1993). Quantitative contrastive study of metadiscourse: problems in design and analysis of data. *Papers and Studies in Contrastive Linguistics 28*, 137-151.

Mauranen, A. (1992). *Cultural Differences in Academic Rhetoric: A textlinguistic Study*. Unpublished Ph.D. thesis. Birmingham: University of Birmingham.

Mauranen, A. (1993a). Contrastive ESP rhetoric: metatext in Finnish-English economics texts. *English for Specific purposes 12*, 3-22.

Mauranen, A. (1993b). *Cultural Differences in Academic Rhetoric: A Text-Linguistic Study*. Frankfurt a.M.: Peter Lang.

Moreno, A.I. (1997). Genre constraints across languages: causal metatext in Spanish and English RAs. *English for Specific Purposes 16*, 161-179.

Moreno, A.I. (1998). The explicit signalling of premise-conclusion sequences in research articles: a contrastive framework. *Text 18*, 544-585.

Moreno, A.I. (2004). Retrospective labelling in premise-conclusion metatext: an English-Spanish contrastive study of research articles on business and economics. *Journal of English for Academic Purposes 3*, 321-339

O'Keefe, K.H. (1989). Informational and attitudinal metadiscourse as glossing: the effects upon comprehension and decision making in a business setting. *The Humanities and Social Sciences 50*, 401-418.

Peterlin, A.P. (2005). Text-organising metatext in research articles: an English-Slovene contrastive analysis. *English for Specific Purposes 24*, 307-319.

Reitbauer, M. (2001). Are you with me? Talking to readers in academic discourse: an empirical investigation into using metadiscourse as a means of improving reading comprehension. *Arbeiten aus Anglistik und Amerikanistik 26,* 199-211.

Schiffrin, D. (1980). Metatalk: organisational and evaluative brackets in discourse. Sociological inquiry. *Language and Social Interaction 50*, 199-236.

Valero Garces, C. (1996). Contrastive ESP rhetoric: metatext in Spanish-English economics texts. *English for Specific Purposes 5*, 279-294.

Vande Kopple, W. J. (1985). Some exploratory discourse on metadiscourse.' *College Composition and Communication 36*, 82-93.

Williams, J.M. (1981). *Style: Ten Lessons in Clarity and Grace*. Glenview, IL: Scott, Foresman.

Naouel Toumi, M.A., is a full-time lecturer at the Institut Supérieur des Etudes Appliquées en Humanités in Mahdia (Tunisia), where she teaches undergraduate students of English. She is currently preparing a PhD in applied linguistics on academic writing. Her research areas include ESP, EAP, metadiscourse in academic writing and cross-cultural studies. Email: n.toumi@reading.ac.uk.