Studies on Metadiscourse since the 3rd Millennium

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Abstract

Metadiscourse refer to linguistic resources that are used to refer to the act and the context of writing about some subject matter. Study of metadiscourse provides a gateway for understanding interactional features of texts or speech, looking beyond the ideational dimension of texts at how writers characterize the world and function interpersonally. The ability of writers to use metadiscourse effectively, to control the level of personality in their texts by offering a credible representation of themselves and their ideas, is seen as a defining feature of successful writing (Hyland, 2008). This paper provides a literature review of the theories in modelling metadiscourse and the studies investigating metadiscourse for the past 15 years, and propose future research directions based on the review.

Keywords: Metadiscourse, interactional features, literature review

1. Introduction

Metadiscourse is "writing about writing" (Williams, 1981, p. 40), "communication about communication" (Vande Kopple, 1985, p. 83), or "discourse about discourse" (Hyland, 1998, p. 437). Emerged as a corrective to earlier views that language is merely propositional and expository mode of representation and that the function of communication is to match words to ideas (Hyland, 2010, p. 127), metadiscourse is now an umbrella term (Hyland, 2010, p. 126) for linguistic resources used to organize a discourse towards its content and the writer's stance towards the reader (Hyland, 2000, p. 109), or the act and the context of writing about some subject matter (Williams, 1981, p. 40) such as organizing their texts, engaging readers, and signaling their attitudes to both their material and their audience (Hyland, 2005b, p. 176).

Growing out of concepts such as sequencers and topicalizers (Williams, 1981), illocution markers (Vande Kopple, 1985), evaluation (Hunston & Thompson, 2000), attitude (Halliday, 1994), epistemic modality (Hyland, 1998), appraisal (Martin & White, 2005) and stance (Biber & Finegan, 1989; Hyland & Guinda, 2012), metadiscourse 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 (Hyland & Tse, 2004, p. 156).

Study of metadiscourse provides a gateway for understanding interactional features of texts (Fu & Hyland, 2014, p. 2) or speech, looking beyond the ideational dimension of texts at how writers characterize the world and function interpersonally. This paper, by reviewing the research done on metadiscourse within the last 15 years, provides a review of the theories in modelling metadiscourse, a synthesis of the empirical studies investigating metadiscourse, and a discussion of future research directions in metadiscourse.

2. Models of metadiscourse

There are diverse conceptualizations and classifications of metadiscourse (Ädel & Mauranen, 2010). For example, early studies of metadiscourse made use of the Hallidayan distinction between textual and interpersonal macro-functions of language (Halliday, 1973), to recognize two levels of metadiscourse: textual and interpersonal. Textual metadiscourse contributes to the deployment of rhetorical strategies used to express a theory of experience in a coherent way, and interpersonal metadiscourse conveys attitudes to propositional material and to involve the writer in more intimacy and dialogue with the reader (Toumi, 2009, p. 64).

Ädel (2006) distinguishes a narrow and a broad approach to conceptualizing metadiscourse. The narrow approach delimits metadiscourse as comprising only linguistic elements that are used to achieve textual functions. The broad approach, by contrast, defines metadiscourse as covering both linguistic resources drawn on for textual organization (i.e., textual functions), and those deployed to communicate authorial attitudes (i.e., interpersonal functions). 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.

2.1 The narrow approach to metadiscourse

The narrow approach delimits metadiscourse as comprising only linguistic elements that are used to achieve textual functions, represented by Schiffrin (1980), Mauranen (1992; 1993a; 1993b), Bunton (1999), Dahl (2004), Valero-Garcés (1996), Moreno (1997; 2008), Peterlin (2005), Ädel (2006) and Toumi (2009).

The scholars in this line of research claim that the central boundary between textual and interpersonal metadiscourse is rather fuzzy (Moreno, 1998; Hyland, 2004; Hyland & Tse, 2005) which, without setting clear criteria for the identification of metadiscursive instances as distinct from other kernels, does not allow for a functional analysis of metadiscourse occurrences. They also identified another distinction in metadiscourse, i.e., 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 world, 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.

2.2 The broad approach to metadiscourse model

The narrow approach "restricts the concept of metadiscourse too severely" by leaving out writer-reader interaction (Ädel, 2006, p.180). In addition, the separation of textual from interpersonal functions by the narrow approach fails to recognize that "all metadiscourse is interpersonal in that it takes account of the reader's knowledge, textual experiences, and processing needs" (Hyland & Tse, 2004, p.161). Therefore, some scholars adopt the broad approach to metadiscourse, represented by Williams (1981), Crismore (1983), Vande Kopple (1985), Crismore et al. (1993), Markkanen et al. (1993) and Hyland (1998; 2004).

Williams (1981) categorizes 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*). Based on the categories of both Meyers (1975, cited in Crismore 1983, p. 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 functions of metadiscourse.

Vande Kopple (1985) categorized 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 quantitatives, source (*Gould et al, (1974)*), graphics (*table 5*), captions (converted from original data in micrometer units), and Latin terminology (*post scriptum*).

2.3 Hyland's model of metadiscourse

As a broad approach to metadiscourse, Hyland's metadiscourse model has been widely applied in previous studies of metadiscourse, so it will be presented in detail. According to Hyland (1998, 2004, 2005b, 2007, 2008, 2010, 2011), and Hyland and Tse (2004), there are two levels of metadiscourse: interactive and interactional. Interactive resources help to guide the reader through the text (Thompson, 2001, p. 58), by organizing discourse in accordance with the writer's anticipation of the reader's knowledge and the assessment of what the reader can recover from the text. Interactive resources include such categories as code glosses, transitional markers, frame markers, endophoric markers and evidential markers. Interactional resources involve the reader collaboratively in the development of the text (Thompson, 2001, p. 58), by commenting on and evaluating the content through modality and evaluation, and by assigning speech roles to the writer and the reader (Kuteeva, 2011). Interactional resources comprise hedges, boosters, attitude markers, engagement markers and self-mentions (Hyland, 2010). Interactive metadiscourse is more related to what Halliday called the textual metafunction (Gillaerts & Van de Velde, 2010), while interactional metadiscourse is comparable to what Halliday called the interpersonal metafunction, dealing with the expression of the opinion of the writers, and their relationship and interaction with their readers.

2.3.1 Interactive metadiscourse

Interactive metadiscourse provides guidance to the reader by ways of discourse organization based on the writer's anticipation and assessment of reader's knowledge, the details of which are shown in Table 1. The first main type of interactive metadiscourse is code glosses, which are concerned with clarification of the writer's communicative purpose (Hyland, 2007, p. 268). Code glosses are used to explain, elaborate or rework propositional meanings. Two subtypes of code glosses can be distinguished functionally: reformulation and exemplification (Hyland, 2007, pp. 269-271). Reformulation is a discourse function where the second unit is reworked for specification or elaboration (Cuenca & Bach, 2007; Hyland, 2007). Exemplification (e.g., *for*

example, *such as*) clarifies or supports the meaning through examples by a second unit. The appropriate use of code glosses can elaborate on meaning and help readers/listeners grasp propositional information.

Table 1 Types of interactive metadiscourse

Type	Function	Example
Code glosses	To help readers/listeners grasp meanings of ideational material	*namely / e.g. / such as / in other words*
Transitional markers	To express semantic relation between main clauses	*in addition / but / thus / and*
Frame markers	To refer to discourse acts, sequences, or text stages	*finally / to conclude / my purpose is*
Endophoric markers	To refer to information in other parts of the text	*noted about / see Fig / in section 2*
Evidential markers	To refer to source of information from other texts	*according to X / (Y, 1990) / Z states*

Transitional markers help create textual cohesion by signaling logical links such as additive, causative, contrastive, consequential between propositions by the use of a range of devices such as conjunctions (Halliday & Hasan, 1976; Martin & Rose, 2003), discourse connectives (Blakemore, 2002), linking adverbials (Biber et al., 1999), and logical markers (Mur Dueñas, 2009). Based on their semantic functions, transitional markers can be further classified into three subtypes: addition (e.g., *moreover*, *in addition*), comparison (e.g., *similarly*, *in comparison*) or contrast (e.g., *however*, *by contrast*), and inference (e.g., *therefore*, *consequently*). A judicious use of transitions can ease the reader's burden of making connections between preceding and subsequent propositional information (Cao & Hu, 2014).

Frame Markers indicate text boundaries or elements of schematic text structure (Hyland, 1998, p. 443), used primarily to organize texts for readers. Frame Markers are internal to the text, including items used to sequence, to label text stages, to announce discourse goals, and to indicate topic shifts. Frame markers can be further classified into four subtypes according to their functions: sequencers, topicalizers, discourse-labels, and announcers. Sequencers (e.g., *first*, *second*) are used to structure the text into sequences; topicalizers (e.g., *in regard to*, *concerning*) to signal the shift from one topic to another; discourse-labels (e.g., *in summary*, *thus far*) to mark the stages of textual development; and announcers (e.g., *aim to*, *seek to*) to indicate discursive purposes. Together, frame markers can be used to achieve the pragmatic functions of organizing a text locally/globally and reducing readers' processing effort by explicitly marking textual structures and boundaries (Aguilar, 2008).

Endophoric markers are expressions that refer to other parts of the text (Hyland, 1998, p. 443). They are described as road signs of a text, pointing to and emphasizing different parts at different times (Ädel, 2006, p. 101). There are two types of endophoric markers: the cataphoric and the anaphoric. Cataphoric markers, which have been called Announcement (Crismore et al., 1993), Advance Labelling (Tadros, 1994), and Preview (Crismore & Farnsworth, 1990), announce what is going to follow in the discourse (e.g., *as we shall see in the next chapter*), i.e., "the text to which they are referring follows the occurrence of the referring term" (Schiffrin, 1980, p. 208). Anaphoric markers, which have been called Reminder (Crismore et al., 1993), Recapitulation (Tadros, 1994), and Review (Crismore & Farnsworth, 1990), tell the reader what the writer has already done in the discourse (e.g., *as I noted earlier*), i.e., "the text to which the referring item points precedes its occurrence" (Schiffrin, 1980, p. 208).

Evidential markers present information from other texts (Hyland, 2005a), illustrating the source of textual information which originates outside the current text. Evidential markers usually appear in the form of citations (Swales, 1990) in academic texts. There are two types of evidential markers: the integral which incorporates a cited source as part of the reporting sentence, and the non-integral which places a cited source within parentheses or via a superscript number leading to a footnote, endnote or bibliography. Evidential markers advance the writer's position by demonstrating an awareness of prior research and acknowledging an allegiance to the academic community (Hyland, 1998. p. 443), by opening up or closing down a dialogic space to alternative viewpoints (Hu & Wang, 2014), "strengthening readers' assumptions of adequate documentation'' (White, 2011, p. 3347), and indicating one's membership of a particular disciplinary community (Hyland, 1999).

2.3.2 Interactional metadiscourse

Interactional metadiscourse involves the reader in the argument and consists of linguistic resources (e.g., *importantly, in our opinion, undoubtedly*) for writers to make "explicit interventions to comment on and evaluate material" (Hyland, 2005a, p.44), and to involve readers collaboratively in textual construction. Subtypes of interactional metadiscourse are presented in Table 2.

Table 2 Types of interactional metadiscourse

Type	Function	Example
Hedges	To mitigate certainty/commitment	*might / possible / perhaps / suggest*
Boosters	To increase certainty/commitment	*will / demonstrate / show*
Attitude markers	To express affective attitudes	*should / interesting / surprisingly*
Engagement markers	To refer to or build relationship with readers	*consider / note that / you can see that*
Self-mentions	To mark authorial presence in text	*I / we* (exclusive) */ me / us / my / our*

Hedges mark the writer's reluctance to present propositional information categorically (Holmes, 1988; Hyland, 1996, 2010), allowing writers to present their knowledge claims with appropriate qualification and construct the dual authorial identity of "humble servants" (Myers, 1989, p. 4) of their disciplines and originators of new knowledge. Hedges can be realized by such lexico-grammatical forms as epistemic modal verbs (e.g., *might*, *could*, *may*), lexical verbs (e.g., *suggest*, *appear*, *claim*), adjectives and adverbs (e.g., *plausible*, *probably*, *perhaps*), nouns (e.g., *likelihood*, *possibility*), and other linguistic expressions for marking qualification (e.g., *in general*, *to some extent*).

Boosters, contrary to hedges, increase certainty, express commitment and emphasize the force of propositions. "Allowing writers to close down alternatives, head off conflicting views and express their certainty in what they say" (Hyland, 2005a, p.52), boosters in written discourse can be realized by epistemic modal verbs (e.g., *must*), lexical verbs (e.g., *show*, *demonstrate*, *prove*), adjectives and adverbs (e.g., *undisputed*, *undoubtedly*), nouns (e.g., *fact*, *certainty*), and other emphatic expressions (e.g., *without a doubt*). Appropriate use of boosters in academic writing can not only accentuate writers' epistemic stance but also promote solidarity with readers (Hyland, 1998; Peacock, 2006).

Attitude markers express the writer's appraisal of propositional information, conveying surprise, obligation, agreement, importance, and so on (Hyland, 2004, p. 6). Attitude markers can help writers persuade readers by foregrounding shared attitudes and values (Cao & Hu, 2014) and can be realized by lexico-grammatical resources including deontic modals (e.g., *have to*, *should*), attitudinal adjectives (e.g., *desirable, unfortunate*), affective adverbs (e.g., *interestingly, surprisingly*), and other expressions conveying stance or evaluation (e.g., *what is important*, *it is necessary*).

Self-mentions suggest the extent of author presence in terms of first person pronouns and possessives, representing the writer's decision to stand behind assertions or to avoid such commitments (Hyland, 2004, p. 6). Using first-person pronouns (e.g., *we, I*), possessive determiners (e.g., *our*, *my*), and third-person nominal phrases (e.g., *the present author*), writers can fulfill different interpersonal functions in their writing, ranging from discourse organization to marking the writer's role in the research to negotiating knowledge claims (e.g., Harwood, 2005a, 2005b; Hyland, 2002; Lafuente-Millán, 2010).

Engagement markers explicitly address readers, by selectively focusing their attention, relating to them, anticipating their possible objections or including them as participants in the text through second person pronouns, imperatives, question forms and asides (Hyland, 2001b, 2004). Engagement markers comprise five subtypes of devices for explicitly involving readers in a virtual dialogue (Hyland, 2001a): directives which instruct readers to act or see things in a particular way, reader references which acknowledge readers' presence and address them as participants in knowledge-making, questions which refer to both rhetorical and real questions asked to engage readers overtly, appeals or references to shared knowledge which position readers within shared disciplinary understanding and bring them to agreement with writers' argument, and personal asides which interrupt the flow of text and are directly addressed to readers.

3. Studies on metadiscourse

The studies on metadiscourse has been constantly emerging since the beginning of the 3rd Millennium. A great proportion of the studies are devoted to metadiscourse in academic writing, i.e., research articles, different parts of research articles (e.g., abstract, introduction, discussion, etc.), different types of research articles (e.g., hard sciences vs. soft sciences, empirical studies vs. non-empirical studies, etc.), as well as university student essays. Metadiscourse used in other contexts such as academic lectures, newspapers, advertising or debates, is also studied.

3.1 Metadiscourse in academic writing

Metadiscourse used in academic writing has drawn much of scholars' attention. The studies indicate that the use of metadiscourse in academic writing is greatly influenced by writers' linguistic and cultural backgrounds, the publishing contexts, as well as discipline and genre.

3.1.1 Metadiscourse and linguistic/cultural/publishing backgrounds

How scholars from different linguistic, cultural and publishing backgrounds use metadiscourse has always been the focus of studies on metadiscourse, and these factors are usually studied together due to their interwoven

nature.

Writers' linguistic backgrounds, i.e., their native languages, are found to have a major influence on their use of metadiscourse. Dahl (2004) investigated writer manifestation based on 180 refereed research articles (RA) written in English, French and Norwegian, and found that English and Norwegian RAs showed very similar patterns, using much more metadiscourse than French RAs. It is concluded that English and Norwegian writers are both representatives of writer responsible cultures, while French writers represents a reader responsible culture. Differences in the use of metadiscourse are also found not just between learners and native speakers, but also between British university students and American writers. Ädel (2008) investigated reflexivity in argumentative essay writing by British university students, American university students and advanced Swedish English learners, and reported that in terms of writer/reader visibility, the learner writers are found to be at the extreme of visibility, the American writers in the middle, and the British writers at the extreme of impersonality. Four factors are identified as potentially accounting for the variation found: genre comparability, cultural conventions, register awareness and general learner strategies. Carrió-Pastor (2013) examined the variation of sentence connectors on the issue of whether language use could change depending on the linguistic background of the writer, and found that writers with different linguistic background might perceive concepts at different angles. In this study, native English writer texts are writer-oriented with the authors guiding readers when writing academic English, as demonstrated by the higher frequency of connectors found. In contrast, Spanish writers of English did not use as many connectors as native speakers. The cause of this underuse is attributed to the projection of the discourse organization of Spanish English writers: they may not consider it important to guide readers using internal connections within the discourse.

The publishing contexts, i.e., whether the research articles are published internationally, or nationally in a specific country, seem to influence the use of metadiscourse as much as the writers' linguistic background. Mur-Dueñas (2011) studied interpersonally driven features in a corpus of 24 research articles in Business Management: 12 in English by scholars based at North-American institutions and published in international journals, and another 12 in Spanish by Spanish scholars and published in national journals. Significant differences are reported on the overall frequency of metadiscourse features as well as on the particular incidence of some subcategories in the two sub-corpora. The particular linguistic/cultural contexts of publication seem to influence scholars' rhetorical choices when writing their research articles: new knowledge appears to be interpersonally negotiated in different terms in research articles in the two cultural contexts within this disciplinary domain. Similarly, Hu and Cao (2011) found that abstracts published in English-medium journals featured markedly more hedges than those published in Chinese-medium journals, in their investigation of the use of hedges and boosters in academic article abstracts of 649 abstracts collected from 8 journals of applied linguistics published in Chinese- and English medium journals. Lafuente-Millán (2012, 2014) provides a quantitative and contrastive analysis based on a corpus consisting of business management articles written in different cultures and languages (Anglophone/English vs. Spanish) and aimed at different contexts of publication (local vs. international). The results obtained indicate that context of publication and national culture as well as L1 transfer and L2 proficiency are powerful factors regulating the use of these strategies.

Li and Wharton (2012) added further support to the influence of cultural background on use of metadiscourse in their qualitative, comparative study of metadiscourse in the academic writing of two groups of undergraduate students: (1) Native speakers of Mandarin studying in China through the medium of English, and (2) Native speakers of Mandarin studying in the UK through the medium of English. Local institutional culture is found to have a noticeable influence on student writers' use of metadiscourse. Yang (2013) investigated the effect of the writers' cultural background and language, as well as the context of publication, on the way authors use hedges, across three academic writing corpora: the English scientific writing corpus, the Chinese-authored English scientific article corpus, and the Chinese scientific article corpus. This research found considerable variations in the overall number and frequency of hedges, the distribution of hedges in various sections of the research articles, and the types of hedging devices in the three corpora, which are explained in terms of native speaker–non-native speaker variation, cultural and linguistic differences between English and Chinese, as well as traditions and paradigms of scientific inquiry in the scientific communities. Lee and Casal (2014) investigates cross-linguistic variation of metadiscourse in the results and discussion chapters of engineering master's theses written in English and Spanish to examine the influence of lingua-cultural contexts of writing on student writer's employment of metadiscoursal resources. Findings of the comparative analysis reveal significant cross-linguistic differences for overall frequency of metadiscourse as well as for most sub-categories. The analysis suggests that interpersonal features of writing are inexorably linked to the specific lingua-cultural contexts in which texts are produced and consumed, even within the same discipline and genre.

3.1.2 Metadiscourse and discipline

Another widely researched area is how metadiscourse is used in academic writing in different disciplines, i.e., how the social and institutional differences that underlie production and reception of different academic genres influence the ways metadiscourse is shaped in academic communication.

Abdi (2002) compared the use of interpersonal metadiscourse through "hedges", "emphatics" and "attitude markers" based on a total of 55 academic research articles from social sciences and natural sciences. The analysis showed that the social science writers employed interpersonal metadiscourse more frequently than the natural science writers. One-to-one comparison further showed that they varied significantly in their use of hedges and attitude markers.

Hyland (2004), Hyland and Tse (2004) and Hyland (2005b) provided further support to Abdi (2002). They found that writers in the humanity and social science disciplines took far more explicitly involved and personal positions than those in the science and engineering fields, by employing more interactional (interpersonal) metadiscourse as compared to the sciences. Hedges, attitude markers, and self-mentions play a greater role in humanity and social disciplines where interpretations are typically more explicit and the criteria for establishing proof less reliable, because the writer is unable to draw to the same extent on empirical demonstration or trusted quantitative methods as the hard science disciplines: s/he must work harder to build up a relationship with readers to engage and persuade them to turn them from alternative interpretations. This difference is also found in a study on metadiscourse used in academic book reviews in (Tse & Hyland, 2006), where a total of 84 academic book reviews in three contrasting disciplines of philosophy, biology and sociology were examined in terms of the distribution of metadiscourse in these texts and interviews with journal editors and reviewers in the three disciplines In their investigation into stance nouns, Jiang and Hyland (2014) found that stance nouns referring to entities and attributes are roughly evenly distributed in the soft fields, with about half of all cases in each category, while in the hard knowledge disciplines electrical engineers are far more likely to refer to attributes (71.4% of all uses) and biologists to entities (66.0%). Hu and Cao (2015) found that applied linguistics and education articles used boosters more frequently than the psychology and that applied linguistics deployed more reader references but fewer self-mentions than psychology.

Not only are differences in use of metediscourse found between soft and hard sciences, they are also found in different disciplines within soft sciences or with hard sciences. Kuhi1 & Behnam (2010) analyzed a spectrum of academic texts (20 research articles, 20 handbook chapters, 20 scholarly textbook chapters, and 20 introductory textbook chapters) in applied linguistics and found a heavier presence of metadiscourse elements in introductory textbooks as well as variations in all categories and subcategories. Khedri et al (2013) found, in his analysis of 60 research article abstracts written in Applied Linguistics and Economics, marked variations found across the two disciplines in terms of interactive metadiscourse markers. Another effort was made to investigate hedge and stance used in one particular discipline in hard science. The most recent studies indicate a low number of hedges and attitude markers in math research articles as compared to other hard and soft disciplines, but higher than expected shared knowledge and reader references (McGrath & Kuteeva, 2012). Bruce (2014, 2016) examined the expression of criticality in the literature review that occurs in the Introduction sections of academic journal articles in two social science disciplines: applied linguistics and psychology. The findings show systematic use of three generic elements to establish this type of stance: recursive use of content-structuring moves, the metadiscourse device of attitude markers and a concessive contrast relation between propositions. There are differences between the two samples in the frequency of occurrence of the latter two elements.

3.1.3 Metadiscourse and genre

Besides different language, cultural, or disciplinary communities, metadiscourse strategies is also studied in relation to different types of academic writing, such as experimental/empirical studies and argumentation papers (Tarone et al., 1998), research articles, case reports, and review articles (Salager-Meyer, 1994), theoretical articles, review articles, data-based research articles, and shorter communications (Swales, 2004), or empirical and non-empirical research articles (Hu & Cao, 2011).

Gillaerts and Velde (2010) investigates the evolution in the distribution of three prominent interactional markers comprised in Hyland's (2005a) model, viz. hedges, boosters and attitude markers in three decades of abstract writing in the field of applied linguistics in the broad sense, and found that the distribution of hedges, boosters and attitude markers in abstracts, when compared with their distribution in research articles, supports the idea that abstracts are not just pale reflections of the full-length articles, but rather have a specific make-up, which can plausibly be linked to their function. Hu and Cao (2011) analyzed 649 academic article abstracts collected from 8 journals of applied linguistics and found that abstracts of empirical research articles used significantly more boosters than those of non-empirical academic articles.

Kawase (2015) investigates how research writers construct metadiscourse in the introductions of their PhD theses and subsequently published research articles, and found that the majority of the writers make greater use of metadiscourse in their article introductions, including greater use of phrases referring to previous research, less reference to other parts of the text, and still less use of phrases signalling authorial presence. The findings are discussed in terms of genre-specific features, i.e., PhD thesis as an educational genre and that of research articles as a professional genre in which writers need to survive severe competition to get their manuscripts published. Alyousef (2015) explores the use of metadiscourse markers in three multimodal management reports written by 10 international Masters' of Accounting students and found a high frequency of interactive and

interactional markers in the orthographic texts compared with a lack of implicit interactive markers and a high frequency of implicit interactional markers in the tables and graphs.

3.1.4 Changes in use of metadiscourse

Another area of interest in the studies of metadiscourse is changes in use of metadiscourse, which includes mainly two aspects: how writers of different language proficiencies use metadiscourse, and how academic writers change in their use of metadiscourse over time.

Hyland (2004) and Hyland and Tse (2004) compared doctoral and master dissertations by Hong Kong students, and found that Master's students used slightly more interactional metadiscourse and the doctoral writers substantially more interactive forms and far more metadiscourse overall, showing that the PhDs have a more sophisticated approach to language as these advanced students sought to craft more "academic" reader-friendly prose and make more concerted attempts to engage with their readers.

 Gillaerts and Velde (2010) investigates the evolution in the distribution of three prominent interactional markers comprised in Hyland's (2005a) model, viz. hedges, boosters and attitude markers in three decades of abstract writing in the field of applied linguistics in the broad sense, and found that the use of interactional metadiscourse in abstracts has undergone interesting changes in the course of the past 30 years. On the whole, the degree of interpersonality realized by hedges, boosters and attitude markers diminishes over time, though notable differences exist with regard to the subcategories in the interactional domain.

Aull1 and Lancaster (2014) used corpus methods to examine linguistic expressions of stance in over 4,000 argumentative essays written by first-year university students in comparison with the writing of upper-level undergraduate students and published academics. The findings reveal linguistic stance markers shared across the first-year essays despite differences in students' educational context, with greatest distinctions emerging between first year writers and all of the more advance writers. The specific features of stance that point to a developmental trajectory are approximative hedges/boosters, code glosses, and adversative/contrast connectors.

3.2 Metadiscourse used in other contexts

Metadiscourse plays a vital role both in organizing the discourse and in engaging the audience, and as an important aspect of persuasive writing, metadiscourse used in academic lectures, newspapers, advertising or debates is also studied.

Fuertes-Olivera (2001) studies the metadiscourse devices typically used by copywriters to construct their slogans and/or headlines. The analysis starts from the assumption that advertising English should be represented as a continuum of text functions fluctuating between "informing" and "manipulating" in accordance with the idea that advertising is an example of covert communication. Examples selected from a typical women's magazine show that both textual and interpersonal metadiscourse help copywriters to convey a persuasive message under an informative mask.

Thompson (2003) investigated the roles of text-structuring metadiscourse in signalling the larger-scale organization of academic talks. The occurrence of metadiscoursal signals of organization is compared in authentic undergraduate lectures and in talks appearing in EAP listening skills materials. It is argued that metadiscourse is used by academic speakers to help an audience form a coherent "mental map" of the overall talk and how its parts are interconnected. However, it appears that the models of organization in lecture discourse provided by some EAP materials may be misleading. More than ten years later, Lee and Subtirelu (2015) investigates teachers' use of metadiscourse in EAP lessons and academic lectures. Two corpora of instructor contributions to classroom discourse (18 EAP lessons from the L2CD corpus and 18 university lectures from the MICASE corpus) were compared to examine the influence of pedagogical content and context on teachers' enactment of metadiscourse in the classroom and found that the aspects of teaching and learning influence teachers' use of metadiscourse in significant ways: EAP teachers seem to be more concerned with explicitly framing the discourse primarily to set up classroom tasks and engendering greater student involvement and participation, while university instructors' priority lies in establishing relationships between ideas in the unfolding arguments of lectures.

Ilie (2003) studied metadiscourse used in parliamentary debated and believed that some of the rhetorically most effective strategies of parliamentary metadiscourse operate simultaneously on several levels of discourse, including various manifestations of the participants' cognitive and inter-relational acts aimed at controlling, evaluating, adjusting and negotiating the goals and the effects of their and of their interlocutors' ongoing talk. It is concluded that the metadiscursive levels of parliamentary discourse help to articulate particular aspects of speaker-interlocutor relations and/or speaker-audience relations, involving particularly speaker role shifts, discursive scope widening/narrowing, multiple-audience targeting, re/definition of terms and concepts, minimising/maximising accountability and merit, challenging facts and statistics. Metadiscursive statements may convey simple, double or multiple messages.

Le (2004) demonstrated how the elite newspaper, *Le Monde*, constructs active participation within its editorials' argumentation to establish its authority. This active participation is revealed through the analysis of three metadiscursive categories, evidentials, person markers and relational markers, in connection with the

editorials' argumentative structure. It appears that *Le Monde*'s editorialists present themselves as responsible and competent journalists, as representatives of public opinion, and as independent and committed intellectuals in the French tradition. These strategies attest to *Le Monde*'s persuasive abilities in playing one part of its audience (public opinion) against the other (ruling elite), or appealing to them together on a matter of foreign policy.

Dafouz-Milne (2008) carried on the research in metadiscouse in newspapers by exploring the role that metadiscourse markers play in the construction and attainment of persuasion by examining two elite newspapers, the British *The Times* and the Spanish *El Paı´s*. Findings suggest that both textual and interpersonal metadiscourse markers are present in English and Spanish newspaper columns, but that there are variations as to the distribution and composition of such markers, specifically in the case of certain textual categories (i.e. logical markers and code glosses). Regarding the persuasive effect of metadiscourse, informants were in agreement that a balanced number of both textual and interpersonal markers was necessary to render the text persuasive and reader-oriented. More recently, Fu and Hyland (2014) explore some of the ways that interaction contributes to the success of two journalistic genres: popular science and opinion articles. The analysis of 200 popular science and 200 opinion texts showed that despite the broadly similar audience and sources of these genres, authors structure their interactions very differently, contributing to the rhetorical distinctiveness of these genres and variations in communicative purposes.

4. Conclusion

This paper reviews studies on metadiscourse since the 3rd Millennium. It starts with a definition of metadiscourse, and explores how the modelling of metadiscourse has evolved over the years, especially Hyland's model of metadiscourse which has been used as the analytical model for most studies since the mid-2000s. This is followed by a comprehensive review of the studies done on metadiscourse. The most studied aspect is metadiscourse used in academic writing, i.e., research articles, different parts of research articles (For example, abstract, introduction, discussion, etc.), different types of research articles (hard sciences vs. soft sciences and empirical studies vs. non-empirical studies), as well as university student essays. Studies show that the use of metadiscourse in academic writing changes across language, cultural and disciplinary communities. Metadiscourse used in other contexts such as academic lectures, newspapers, advertising or debates, is also studied.

Future research, as revealed by this review, is needed in a number of areas. To start with, more disciplinary or genre-based studies are needed illuminating additional linguistic features contributing to sub-categories of metadisourse such as aspects of stance and evaluation in specific sections as well as how they move within the research article. In terms of linguistic and cultural factors, further studies should also be carried out in order to shed light on use of metadiscourse written by non-English-native speakers from different linguistic and cultural backgrounds. Following this line of research, future studies should also undertake the design of pedagogical materials based on data describing preferred expressions for the expression of particular evaluative acts in each discipline. Finally, researchers should investigate the best pedagogical tools to enable EAP instructors to efficiently teach these aspects to novice writers and practitioners in general. Furthermore, students' perspectives on metadiscoursal resources used in both EAP lessons and university lectures could be obtained through interview to shed light on the amount of such features that serve to increase student comprehension and involvement in the classroom. In-depth qualitative methods of inquiry such as ethnography and textography involving specialist informants could also be incorporated to investigate how insiders from specific communities of discourse practices perceive and respond to the use of these rhetorical resources, for more nuanced and situated understandings of how interactive metadiscourse contributes to the languages of legitimation in various intellectual fields.

Metadiscourse acts on the writer's evaluation of his or her readers' need for elaboration and involvement, ensuring that he or she supplies sufficient cues to secure an understanding and acceptance of propositional content (Hyland, 2010). It shows how writers engage with their topic and their readers, exploration by students of metadiscourse in their own and published writing can offer useful assistance for learning about appropriate ways to convey attitude, mark structure, and engage with readers (Hyland, 2010). Metadiscoursal analysis is therefore a valuable means of exploring any form of writing and speaking, especially academic writing and speaking, and of comparing the rhetorical preferences of different discourse communities.

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