A CONTRASTIVE STUDY OF METADISCOURSE IN ENGLISH AND ARABIC LINGUISTICS RESEARCH ARTICLES

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Summary: The present paper analyzes metadiscourse expressions to understand the cultural differences between English and Arabic-speaking researchers. It uses a contrastive corpus of seventy discussion sections of linguistics research articles written by native speakers of English and Arabic. Within metadiscourse there appear to be two types: interactive and interactional. Chi-square tests are carried out to clarify the probable differences between both groups.

1. Introduction

In the literature related to academic discourse, there are two perspectives. The first, and the traditional one, perceives it as a mere account of scientific facts expressed through an impersonal and objective piece of writing. Discourse comprises facts that solely add up to the truth. The second perspective, which is the most fashionable and widespread, sees academic discourse as a form of social engagement, involving interaction between writers and readers. [Widdowson 1984; Crismore, Farnsworth 1990; Hyland 1994, 2000, 2005] among many others represent the second perspective. [Widdowson 1984: 220], for example, claims that academic genre, on the one hand, is like any other form of writing in requesting writers to consider the expected audience and anticipate their background knowledge, processing problems, and reaction to the text. The readers of an academic text, on the other hand and at the same time, try to predict lines of thought, interrogate authors on their positions, and evaluate work for its usefulness and importance to their own research [Hyland 1994: 239].

Crismore and Farnsworth [Crismore, Farnsworth 1990: 118] are also among those who have first warned about the fact that scientific writing is more than a mere account of scientific facts expressed through a piece of writing. They embrace the belief that academic writing is a social perspective, involving interaction between writers and readers. Accordingly, writers and readers negotiate their meanings, and use interpersonal resources to organize texts coherently and convey their personality, credibility, reader sensitivity and relationship to the message (See [Hyland 2005]).

In a more serious vein, [Hyland 2000] argues that writers do more than just producing texts in which they present an external reality. They also negotiate the status of their claims, present their work most persuasively, and balance facts with evaluation and certainty with caution. It is noteworthy that [Mauranen 1993] suggests that the concept of academic discourse involves an apparent paradox. Academic writing is both universal (because it originates in the universality of science) and simultaneously variable (because it reflects cultural variation). Studies in contrastive rhetoric and translation studies have revealed substantial differences in the conventions of academic writing across languages.

Although much remains to be understood about different aspects of discourse, it generally appears that the academic discourse functions on two levels. On the first level, there is the primary discourse which comprises facts that add up to the truth. On the second level, there is the secondary discourse, often called metadiscourse, which helps readers understand what is said and what is meant in the primary discourse.

The main research goal in the present paper is to establish points of similarities and differences between English and Arabic languages and cultures. The paper is organized as follows: In section 2, the term metadiscourse, its emergence, nature and models are summarized. In section 3, research questions investigated in this paper are presented. In section 4, the corpus, model and procedure adopted in this research are made clear. In section 5, two null hypotheses are run and the main findings are discussed. Finally, conclusions are made in sections 6.

2. Metadiscourse in academic texts

The term 'metadiscourse' was first coined by Zellig S.Harris [Harris 1959] to describe text elements which comment on the main information of a text, but which themselves contain only unessential information. Metadiscourse was neglected during the 1960s and 1970s. Later in the 1980s, it was adopted in discourse studies by some scholars (e.g. [Williams 1981; Vande Kopple 1985; Crismore 1989]) who were interested in writing instructions. By the early 1990s, linguists reacted against the strong emphasis on propositional meaning in text analysis. This movement led to a range of new perspectives on text, among which the studies of metadiscourse gained prominence [Vande Kopple 2002].

Metadiscourse is not a well-defined concept and consequently several definitions have been proposed [Vande Kopple 1985, 2002; Crismore, Fansworth 1990; Markkanen et al. 1993; Luuka 1994; Bunton 1999; Hyland 2000, 2005; Hyland, Tse 2004; Dafouz 2003]. [Crismore 1984: 280] believes that the aim of metadiscourse is to 'direct rather than inform the readers.' [Vande Kopple 1985: 83; 1997: 2] defines metadiscourse as 'discourse that people use not to expand referential material, but to help the readers connect, organize, interpret, evaluate, and develop attitudes towards that material.' [Crismore 1983] defines metadiscourse as a level of discourse where the author intrudes into the ongoing discourse to direct rather than inform the reader. Similarly, [Hyland 2005: 3] believes that 'metadiscourse embodies the idea that communication is more than just the exchange of information, goods or services, but also involves the personalities, attitudes and assumptions of those who are communicating', and hence 'the writer is not simply presenting information about the suggested route, by just listing changes of direction, but taking the trouble to see the walk from the reader's perspective.' Metadiscourse is taken to be 'the cover term for the self-reflective expressions used to negotiate interactional meanings in a text, assisting the writer (or speaker) to express a viewpoint and engage with readers as members of a particular community' [ibid: 46].

Metadiscourse is an abstract and fuzzy term and can be realized by various linguistic forms. It is also a 'pragmatic construct' and performs some 'rhetorical actions'. According to [Hyland 2005], 'the significance of metadiscourse lies in

its role in explicating a context for interpretation and indicating one way which acts of communication define and maintain social groups.' Metadiscourse plays an integral role in academic discourse. It carries an important social meaning by revealing the author's personality and identity and by indicating how he expects his readers to respond to his propositions [Toumi 2009: 64]. [Mauranen 1993] associates the use of metadiscourse in academic rhetoric with the establishment of coherence and logic.

Hyland [Hyland 2000, 2005] has provided the probably most comprehensive framework for the study of metadiscourse. He groups metadiscourse expressions into two macro-categories: interactive and interactional. Interactive expressions are used to organize propositional information in ways that a projected target audience is likely to find coherent and convincing. The interactional dimension concerns the ways writers conduct interaction by intruding and commenting on their message. These two macro-categories were previously referred to as textual and interpersonal by Halliday in the systemic functional grammar. The change of labels was put forward by [Hyland 2004, 2005], who claims that all metadiscourse is interpersonal 'in that it takes account of reader's knowledge, textual experiences, and processing needs <…>' [Hyland, Tse 2004: 161].

Metadiscourse has been investigated in different genres: textbooks [Crismore 1984; Hyland 1999, 2000], dissertations [Bunton 1999], student writings [Markkanen et al. 1993; Crismore et al. 1993], science popularizations [Crismore, Fansworth 1990; De Oliveira, Pagano 2006], advertisements [Fuertes-Olivera et al. 2001], research articles [Myers 1989; Mauranen 1993; Salager-Meyer 1994; Luuka 1994; Valero-Garcés 1996; Moreno 1997, 1998; Swales 1990; Hyland 1998, 1999, 2000, 2001; Mur Dueñas 2007; Faghih, Rahimpour 2009], university textbooks [Hyland 1994, 1999, 2000]; casual conversation [Schiffrin 1980] and newspaper discourse [Le 2004; Dafouz-Milne 2008]. It has also been investigated cross-culturally between English and Finnish [Markkanen et al. 1993; Mauranen 1993] and between English and Spanish [Valero Garcés 1996].

A number of taxonomies on metadiscourse markers have been proposed since interest arose some decades ago (See [Vande Kopple 1985; Crismore et al. 1993; Beauvais 1989; Hyland 1998, 2005; Dafouz 2003], inter alia). Most of these classifications (with the exception of [Beauvais 1989] generally organize the linguistic units under the functional headings of textual and interpersonal metadiscourse. Textual metadiscourse refers to the organization of discourse, while interpersonal metadiscourse reflects the writer's stance towards both the content in the text and the potential reader. Recently, [Hyland 2005] and [Hyland, Tse 2004] have put forth another interpersonal view on metadiscourse, claiming that all metadiscourse categories are essentially interpersonal since they need to take into account the readers' knowledge, textual experiences and processing needs. They have adopted Thompson's [Thompson 2001] label of interactive (instead of textual) and interactional (instead of interpersonal) metadiscourse. Although the present study aligns with the principle that metadiscourse categories are intrinsically interpersonal and ultimately aim to persuade

the reader, we prefer to continue using the functional distinction of textual and interpersonal metadiscourse markers.

3. Research Objectives
The research in the present paper has the following objectives:

1. To investigate the similarities and/or differences between Arabic and English in relation to the interactive metadiscourse markers in linguistics research articles (LRAs).

2. To investigate the similarities and/or differences between Arabic and English in relation to the interactional metadiscourse markers in linguistics research articles (LRAs).

3. To examine the two languages in relation to the writer-reader relationship and writer/reader responsibility.

4. To investigate the influence of Arabic cultural background, if any, on Arabic-speaking learners reading and writing in English and Arabic.

4. Research Method
4.1. Corpus
Material in this study is taken from the international academic journals, consisting of 70 discussion sections of research articles, written by different contemporary linguists in English and Arabic within the field of linguistics. The corpus is restricted to an eight-year period between 2002 and 2009. Due to the lack of space, the articles of the corpus will not be listed in this paper. A copy of the corpus references is available from the author on request. All the articles are selected from recent issues of high-impact refereed international journals. The Arabic corpus and the English corpus are approximate in word count. Articles whose authors are native speakers of English and Arabic are selected for the analysis. Translated articles are discarded. Arabic articles are carefully selected from the University of Jordan's periodical *Dirasat*. English articles are selected from *IPra Pragmatics*, *Journal of Pragmatics*, *Working Papers in Linguistics*, *Discourse Studies* and *Text*. The following table shows the number of articles in each language and their average number of words.

Table 1: Size of the corpus

	Arabic	*English*
Number of articles	36	34
Total number of words	25,552	23,903
Average number of words per article	7,097,7	7,030,2

4.2. Model of Analysis

This present study uses Hyland's [Hyland 2004] taxonomy of metadiscourse markers as a model of analysis. Hyland (ibid.) divides these markers into two broad categories, each one with a set of subcategories.

I. Interactive Markers: They enable the writer to manage the information flow so as to provide his preferred interpretations. They include the following subtypes:

1. Transitions: These markers mainly indicate: additive, contrastive, and consequential steps in the discourse. Some examples are: *in addition*, *but*, *thus*, *and*, etc.

2. Frame markers: They indicate text boundaries or elements of schematic text structure, like: *my purpose here is to*, *finally*, *to conclude*, etc.

3. Endophoric markers: They refer to information in other parts of the text and make the additional material available to the readers. Some examples are: *in section*, *see figure*, *noted above*, etc.

4. Evidentials: They refer to sources of information from other texts, such as: *X states*, *(Y, 2010)*, *According to X*, etc.

5. Code glosses: They help readers grasp functions of ideational material. They show the restatements of ideational information, like: *namely*, *such as*, *in other words*, *e.g.*, etc.

II. Interactional Markers: They involve the reader in the argument. They 'focus on the participants of the interaction and seek to display the writer's persona and a tenor consistent with the norms of the disciplinary community' [Hyland 2004: 139]. The interactional resources include:

1. Hedges: They withhold writer's full commitment to proposition. Examples: *might*, *about*, *perhaps*, *possibly*, etc.

2. Boosters: They emphasize force or the writer's certainty in proposition. Examples: *it is clear that*, *in fact*, *definitely*, etc.

3. Attitude markers: They indicate the writer's appraisal or attitude to propositional information. Some examples are: *unfortunately*, *surprisingly*, *I agree*, etc.

4. Engagement markers: They explicitly refer to or build a relationship with the reader. Examples: *consider*, *you can see that*, *note that*, etc.

5. Self-mentions: They explicitly refer to authors' presence in terms of first person pronouns and possessives. Examples: *I*, *we*, *our*, *my*, *your*, etc.

4.3. Procedure

To carry out the analysis, discussion sections in English and Arabic academic research articles are cut out from the articles. The selected texts are read and analyzed carefully for metadiscourse categories. The analysis is repeated after three months and the results are compared in order to validate the results. The findings are then subjected to statistical analysis by using chi-square in a null hypothesis. The sole problem faced is that of selecting appropriate articles because some Arab scholars merge the discussion section in other sections. Such articles are discarded. Finally, appropriate conclusions are drawn.

5. Results and discussion

This section aims at comparing the qualitative and quantitative nature of inter-active and interactional metadiscourse markers used in linguistics research arti-cles by Arab and English native scholars. The following table demonstrates the frequency of these two categories of metadiscourse markers in Arabic and English articles and their total numbers and percentages.

Table 2: The frequency of interactive and interactional metadiscourse markers in Arabic and English

	Categories	Arabic		English	
		Total No.	%	Total No.	%
Interactive	Transitions	576	46.33	411	39.03
	Frame markers	33	2.65	52	4.93
	Endophoric markers	11	0.88	20	1.89
	Evidentials	59	4.74	97	9.21
	Code glosses	51	4.10	42	3.98
Interactive	Hedges	311	25.02	237	22.50
	Boosters	70	5.63	56	5.31
	Attitude markers	63	5.06	41	3.89
	Engagement markers	17	1.36	3	0.28
	Self-mentions	52	4.18	94	8.92
	Σ	1243		1053	

To test the differences between Arabic and English interactive metadis-course markers, we run the first chi-square test. In Table 3, the value of ob-served chi-square ($x^2 = 15.97$) is meaningful at α level (α = 0.05) with a degree of freedom of 4. This indicates that there is a significant difference between Arabic and English in their use of interactive metadiscourse markers.

Table 3: Results of chi-square test of Arab and English writers' use of interactive metadiscourse markers

p	df	Value	
0.005	4	15.97	X < 0.05
		1352	n

Level of significance = 9.488

The chart bar in Figure 1 displays that ALRAs (Arabic Linguistics Research Articles) use a higher number of interactive metadiscourse markers than do the ELRAs (English Linguistics Research Articles) (Arabic, n = 730; English, n = 622).

A detailed look onto the subcategories of interactive metadiscourse reveals interesting cross-linguistic differences. Within the interactive metadiscourse markers, the numerical preponderance of transitions in both languages over the rest of subcategories responds to the organizational principles and the flow of information management. However, Arab scholars utilize transitions much more frequently than did their English counterparts. It is found that transitions in Arabic are used approximately three times more than the rest of subcategories. In English, transitions are approximately two times more than the rest of subcategories. Evidentials in ALRAs are the second most frequent markers and they are more frequent than in ELRAs. Code glosses in ALRAs are more frequent than in ELRAs. Frame and endophoric markers in ELRAs are more frequent than in ALRAs.
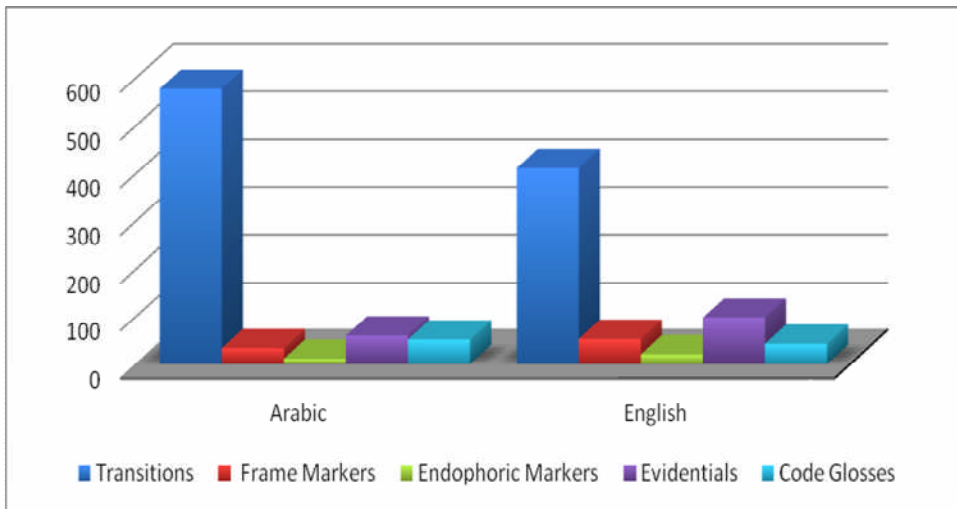

Fig. 1: Interactive metadiscourse markers in Arabic and English

To test the differences between Arabic and English interactional metadiscourse markers, the second chi-square test is run. As shown in Table 4, the value of observed chi-square ($x^2 = 13.10$) is significant at α level (α = 0.05) with a degree of freedom of 4. The difference in data is not due to chance and therefore the null hypothesis is rejected. Data indicate that Arab and English writers of LRAs use interactional metadiscourse markers significantly differently. This is best demonstrated by the chart bar in Figure 2.

Table 4: Results of chi-square test of Arab and English writers' use of interactional metadiscourse markers

p	df	Value	
0.01	4	13.10	X < 0.5
		944	n

Level of significance = 9.488

According to Figure 2, ALRAs use a higher number of interactional meta-discourse markers than do the ELRAs (Arabic, n = 513; English, n = 431). There is also a significant difference between the uses of all subtypes of the interactional markers. Although far more recurrently employed in Arabic, findings disclose that hedges were the most frequently used in both languages among the interactional metadiscourse subtypes: Arabic (n = 311) and English (n = 237). The possible interpretation is that the mitigated points of view and linguistic facts are combined in LRAs so as to attain maximum effect. After hedges, boosters were the second most frequent metadiscourse marker in Arabic. Conversely, the second most frequent marker in English was self-mention. Hedges, boosters, attitude markers and engagement markers in ALRAs were more frequently utilized than in ELRAs. Engagement markers in both languages displayed the lowest frequency within the interactional metadiscourse subtypes. This possibly suggests that these markers are not favored by both groups of writers. Attitude markers held the third position in ALRAs and the fourth position in ELRAs in terms of quantitative use.
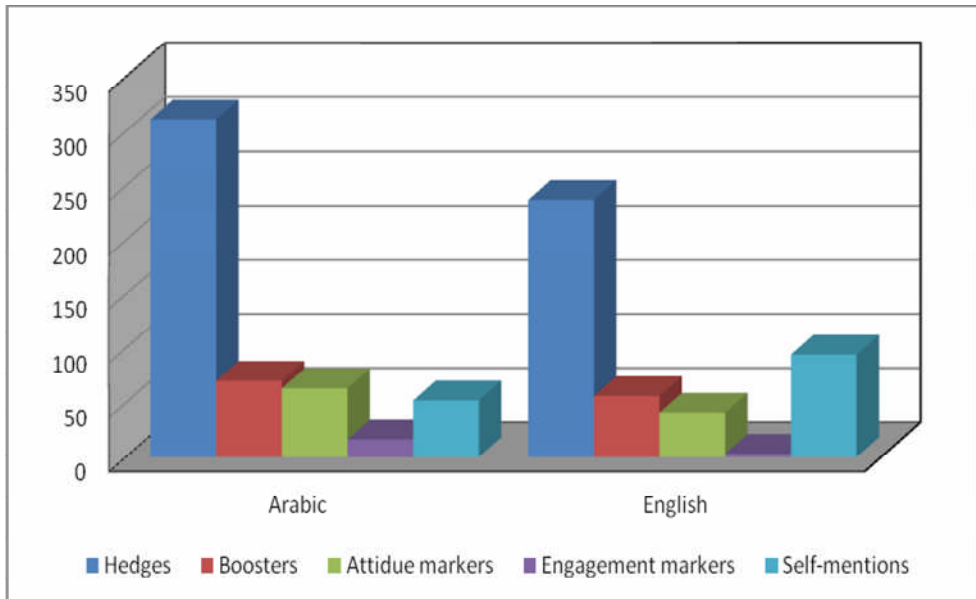

Fig. 2: Interactional metadiscourse markers in Arabic and English

The analysis of total corpus shows that there are 2,296 metadiscourse elements in 49,455 words, that is, there is one metadiscourse element in almost 21 words. This is almost one per 23 for the English corpus (total English corpus 23,903 words), and one in almost 20 for the Arabic corpus (total Arabic corpus 25,552 words). In other words, the total percentage of metadiscourse use for the English language is 4.4 while it is 4.86 for the Arabic language (Table 5).

Table 5: The analysis of metadiscourse markers in English and Arabic

	Total Words	Metadiscourse Frequency	Interactive	Interactional	Total
English	23,903	1053	2.6	1.8	4.4
Arabic	25,552	1243	2.8	2.0	4.86
Z-test	******	******	15.97	13.10	$X^2 = 29.04$

The percentages in Table 5 are calculated on the basis of the total number of metadiscourse markers identified in relation to the total number of words used in English and Arabic corpora. It seems clearly that linguistics research articles in both languages contain a relatively large number of metadiscourse markers. This underscores the importance of the interactive and interactional organization of discourse. Therefore, it is implausible to consider metadiscourse markers marginal to the discourse (*cf* [Crismore, Farnsworth 1990]).

Further analysis of the two dimensions of metadiscourse in Table 5 shows that Arabic makes use of interactive category more than interactional category (58.72% vs. 41.27%, respectively). The English language also uses interactive markers more than interactional elements (59.06% vs. 40.93%, respectively). This finding may indicate the significance of textual congruity over explicit interpersonal relations with the audience. Arabic and English both relied more on interactive markers than on interactional ones. Arabic manages to overtake English in both the interactive category and in the interactional category. On the whole, the statistical analysis shows that the differences between the two languages are statistically significant (See Table 5).

The fact that the difference between the two languages is more salient in the use of interactive markers may show that Arabic tends to go to greater lengths establishing coherence in the text, hence providing more guidance for the reader to comprehend the purpose of the text. Arabic remains slightly more faithful to the involvement of the reader in the text (more use of interactional markers), that is, the writers in Arabic are inclined to have a closer association with the reader.

As Table 2 shows, English and Arabic differ in the way they prioritize the subcategories of metadiscourse makers. Arabic tends to capitalize maximally on the transitions (46.33) and minimally on the endophoric markers (0.88). On the contrary, English seems to maximally rely on the transitions (39.03) and minimally on the engagement markers (0.28). It does seem reasonable that Arab and English writers of LRAs do their best to maximally connect their propositions by heavily relying on transitions. Arab writers rarely tend to refer to information in other parts of the article. English writers rarely tend to explicitly refer to or build relationship with the reader through using engagement markers.

It has been discovered that writers who are native speakers of Arabic and English, strive to tone down their theories, ideas and claims. In other words, they try to signal tentative assessments of propositional information. They also try to 'convey collegial respect for the views of colleagues' [Hyland 2000]. Findings of this study do not support Hyland's (ibid.) suggestion that hedges are

highly frequent in academic writing and are more frequent than one in every 50 words. Our data demonstrates that one instance of hedging appears in every 77 words in Arabic and in every 100 words in English.

Boosters are used to 'mark involvement and solidarity with an audience' [Hyland 1998] when expressing conviction and discussing issues that are divisive. When we compare the frequency of occurrence of boosters in ALRAs to that of ELRAs, figures clearly indicate that Arab writers tend to use them much more than English writers (one booster per 327 words in Arabic and one per 426 in English). In Arabic academic writings, the occurrence of boosters seems quite normal. However, when Arab researchers write in English, they should take this cross-linguistic disparity into consideration and avoid unjustifiable, strong assertions.

According to [Crismore et al. 1993: 53], 'attitude markers express writers' affective values – their attitudes towards the propositional content and/or readers rather than commitment to the truth-value. At times writers use attitude markers to show their attitudes about the style of the text or about themselves as the writers of the texts. The attitude expressed can be of many different types: expressions of surprise, of thinking that something is important, or of concession, agreement, disagreement, and so on.' In Arabic, there is one attitude marker per 405 words, in English one per 583. Arab writers are more inclined towards using attitude markers in their writings in comparison to their English colleagues. This tendency is, however, not easy to explain and all endeavors to account for it should include a variety of cultural, social, and psychological factors embedded in the two writing cultures. Attitude markers appeared in different morpho-syntactic forms in both Arabic and English. It seems that writers of LRAs of different cultural backgrounds use different strategies for expressing their attitudes and determining how frequently they use attitude markers. Given the percentage of hedges in both ALRAs and ELRAs, it seemed that there was one attitude marker for about five hedges. Writers of both languages, therefore, seemed to use attitude markers to guide their readers in understanding their opinions, intentions, and points of view. They also held some kind of control over the interpretation of the presented content, and suggested, sometimes subtly and sometimes obviously, the way they want their statements to be interpreted and comprehended.

Evidentials held the third position in ELRAS but the fifth position in ALRAs. Evidentials in ELRAs (15.59) are approximately two times more frequent than in ALRAs (8.08). This suggests that English writers of LRAs provide a stronger ground for documentation of the information.

Hyland [Hyland 2001: 223] argued that the use of self-mention is important in academic writing. He pointed out that the 'points at which writers choose to announce their presences in the discourse are those where they are best able to promote themselves and their individual contributions.' Despite the fact that impersonality is used to create distance between the author and the ideas expressed in the text, thus conveying an impression of objectivity in academic research, the use of authorial presence is a method for promoting the author's role as the individual responsible for the creation of the text. By using more self-

mentions, writers of ELRAs tended to project a more powerful authorial identity than writers of ALRAs.

Code glosses were not very frequent markers in English and Arabic LRAs. In both languages, they hold the seventh position among overall metadiscourse markers. There was no actually significant difference between the two languages. Code glosses are used to provide exemplification, restatement, clarification and assured reading. This possibly suggests that the texts under analysis were clear and straightforward and their authors cared little about ensuring the intended reading and anticipating the needs of readers. This paucity in Arabic is motivated and expected by the repetitive nature of Arabic writings. Arab writers rely very heavily on circularity and repetitions which ensure clarity and explicit reading as intended.

English writers of LRAs used more frame markers (n = 52) than Arab writers did (n = 33) to explicitly refer to text boundaries through introducing shifts and preparing for the next step in the text. Arab writers of LRAs used more engagement markers than English did. So they were more explicit in addressing their audience. Endophoric markers enabled readers to understand the macro-structure of the articles in both languages.

6. Conclusions

The present study has tried to perform an inter/intra-lingual contrastive analysis between Arabic and English. It has used a corpus of linguistics research articles. Research articles are now considered the outcome of a very complex process in which writers try their best to predict reader's reactions, comments and criticisms. This prediction enables writers to use an appropriate set of metadiscourse markers and this reflects their awareness of the reader's needs.

The analysis allowed us to draw some conclusions. Findings reveal that metadiscourse markers play a very significant role in LRAs in both English and Arabic. From a statistical perspective, ALRAs' more intensive usage of interactive and interactional metadiscourse markers than ELRAs' is significant. Compared with English, Arabic drew more on interactive resources, which shows that Arabic puts rather a premium on textuality at the expense of reader involvement, hence, being comparatively less reader responsible than English. Arabic, in this respect, expressed a clearly impersonal voice which is consistent with the positivist portrayal of science. ELRAs seemed to be more reader-involved and more reader-responsible. Although the differences can be seen in all five main functions of interactive metadiscourse, the most significant differences occur in the transition from one subtheme of the text to the other. Both Arabic and English used interactive resources more than interactional ones, emphasizing the significance of text coherence over interpersonal functions of language in the academic genre. Research in this paper heightened our understanding of the cultural differences between Arabic and English concerning the use of metadiscourse in linguistics research articles. In general, it was found that there was an exaggerated tendency among Arab writers to use metadiscourse markers. This is justifiable in that Arab writers usually pay as excessive attention to the formal aspects of the text as to the content.

This contrastive study may have a pedagogical implication. For an Arab researcher writing in the field of LRAs to be maximally effective and to achieve worldwide fame, s/he must increase his or her awareness of the writing conventions in English. It also helps us to adopt a more effective method for teaching research methodology at university level.

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