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Stance in English Research Articles: Two Disciplines of the Same Science

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Abstract

Research in academic writing has revealed a strong tendency on the part of writers to interactively communicate their stance with their readers. This study targets the stance component of writer-reader interaction by integrating Hyland's (2005b) and Hyland and Tse's (2005) frameworks to investigate psychology and sociology English research articles; the former for lexical stance markers and the latter for grammatical *evaluative that* construction. The corpus included 100 English research articles published during 2012-2014, 50 from each field, yielding a total number of 922,400 words. The data were first analyzed by AntConc (Anthony, 2014) and, to ensure maximum reliability, a crosscheck was carried out by the researchers to discard the anomalies. Moreover, chi-square was run to compare the results. The results suggested remarkable similarities and significant differences between those disciplines. Based on the findings, some implications are drawn with plausible applicability in academic writing and EAP syllabus design. Finally, suggestions are put forward for future research.

Keywords: Academic writing; Discipline; Research Article; Stance

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1. Introduction

Writing in general and particularly academic writing have witnessed the so-called waxes and wanes as other branches of science. It has evolved from a focus on the text to a focus on the writer and lately to the reader (Hyland, 2009). This evolution has occurred due to the interaction between the writer and the reader which has recently captured the attention of the experts in writing research and practice (Hyland, 1998). The writer and the reader must try to evaluate evidence leading to conclusions based on the given data. Mostly, scientific writing incorporates writers' expressions of ideas, opinions, and orientations. That is, academic writing cannot be considered as exclusively objective and factual, but there are features within the text that encode the writer's point of view and take the role of mediators between the information presented in the text and the writer's factual information (Hyland, 2010).

In traditional academic writing, it was widely believed that researchers should be objective and have an unbiased style when they make a report of their studies. This conventionally prevailing viewpoint of academic writing has been recently challenged and discredited by a number of researchers (e.g., Harwood, 2005; Hyland, 2001, 2009).

Hyland (2005a) believes that interaction with different effects can be demonstrated in the same way both in written text and in speech. This view of interaction between writers and readers in academic writing has come to be perceived as a process of social engagement. A great deal of recent research (e.g., Hempel & Degand, 2008; Hyland, 2004; Ifantidou, 2005) has shown an increasing interest toward the interactive aspects of research articles (RAs) that are created by textual metadiscursive resources in different disciplines; metadiscourse being the part of writing which guides the reader (Jalilifar, 2014).

One such aspect is that of stance or the positionality of the writer regarding the provided information or the argument

(Jaffe, 2009). In simple terms, stance means the way that one thinks of something in a particular way. Therefore, this way of thinking is reflected in the way that writers align themselves in reporting their findings or other research outcomes. Such positioning is evident in academic writing, especially research articles (RAs), being the primary means of knowledge sharing in academia.

As Hyland (2010) puts succinctly, academic texts are no longer "as completely 'author evacuated' as we had once supposed. Instead, they are actually comprised of careful evaluations and interactions" (p. 116). He further argues that research articles are sites where authors not only disclose their fresh perspectives but also attempt to establish and maintain relations with their plausible readers. Borrowing from Halliday (1978), Hyland (2010) has turned the spotlight on the notion of interpersonality in academic writing. In a nutshell, the term interpersonality is concerned with the ways used to establish, maintain, and signal relationships between the writer and the reader(s) (Richards & Schmidt, 2010). In other words, the authors use meaning devices and/or markers to project their voice in their texts to be heard by the readers.

To address this dimension of academic writing, the present study was launched to examine how and to what extent the authorial stance is realized in English RAs through metadiscursive stance markers (Hylandb, 2005) and evaluative *that* constructions (Hyland & Tse, 2005). The underlying assumption is that different fields within the same science branches might have similar or different patterns of such *stance markers*. It is the aim of the present research to address such an assumption.

2. Literature Review

Academic and professional discourse has gained momentum in recent years. Different scholars have started to study such stretches of language from different perspectives including

linguistic, rhetorical or even cultural aspects (Flowerdew, 2002; Gunnarsson, 2009, Hyland, 2009). Specifically, in the academic sphere, RAs as the main dissemination means of fresh knowledge have captured full attention of researchers examining them from different angles ranging from rhetorical structures to various sections of such articles (Stoller & Robinson, 2012; Swales, 1990, 2004). There have also been many studies, especially in the last decade, of linguistic features in research articles in general, and linguistic realizations of stance (i.e., the writer's identity as well as the expression of attitudes, feelings, or judgments in particular) (Englebretson, 2007; Parkinson, 2011).

There are several terms frequently used to refer to authorial stance: evaluation (e.g., Thompson & Hunston, 2000), stance (e.g., Biber, 2006; Hyland, 2004; Jaffe, 2009), voice (e.g., Hirvela & Belcher, 2001), persona (e.g., Tse & Hyland, 2008), metadiscourse (e.g., Hyland, 2005a), hedging (e.g., Hyland, 1998), appraisal (e.g., Martin & Rose, 2007), or writer identity (e.g., Ivanic□, 1998). In Thompson and Hunston's (2000) words, *evaluation* is "the broad cover term for the expression of the speaker or writer's attitude or stance towards, viewpoint on, or feelings about the entities or propositions that he or she is talking about" (p. 5).

Alternatively, Biber (2006) defines stance as the expression of "many different kinds of personal feelings and assessments, including attitudes that a speaker has about certain information, how certain they are about its veracity, how they obtained access to the information, and what perspective they are taking" (p. 99). Hyland (2004, 2005b) uses the term *stance* or *author stance* in a broader way. Stance, according to Hyland,

> can be seen as an attitudinal dimension and includes features which refer to the ways writers present themselves and convey their judgments, opinions, and commitments. It is the ways that writers intrude

> to stamp their personal authority onto their arguments or step back and disguise their involvement. (Hyland, 2005b, p. 176)

Expanding the above definition and attempting to account for the interaction between the writer and the reader, Hyland (2005b) has proposed a model in which the writer-reader interaction is conceptualized as having two major components of stance and engagement. This is because, as he argues, the purpose of writing is two-fold. On the one hand, it aims to produce some stretch of text to
impart knowledge, on the other hand, it tries to invite the reader to construct a social relationship for involvement in the information exchange. His model includes the following components and subcomponents:

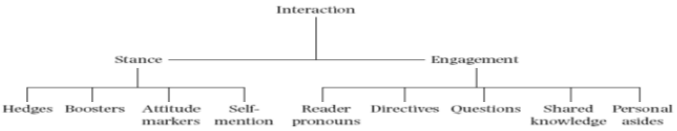

Figure 1. Key Components of Academic Interaction

As it can be observed in the Figure 1, in Hyland's (2005) conceptualization, writers try to put their voice into their writing by applying the subcomponents of stance and engagement. To be more precise, the first component of *interaction* i.e., *stance* is the main concern of the present research. Categorically speaking, its subcomponents can be defined and exemplified as follows (summarized from Hyland, 2007, pp. 94-95):

1. Hedges (devices which withhold complete commitment to a proposition), for example, *possible, may, could, tendency.*
2. Boosters (devices which allow writers to express their certainty in what they say and to mark involvement with the topic and solidarity with their audience), for example, *should, definitely, of course.*

3. Attitude markers (devices which indicate the writer's affective, rather than epistemic, attitude to propositions, conveying surprise, agreement, importance, frustration, and so on, rather than commitment), for example, *believe, remarkable, extraordinary, interesting.*
4. Self-mentions (the use of first person pronouns and possessive adjectives to present information), for example, *I, we, our*.

In addition to stance markers mentioned above which are lexical in nature, writers can also make use of other linguistic mechanisms including grammatical devices to take stance. One such grammatical device, being the other focus of the current research, is *that* construction. Writers can express their stance by using different types of *that* construction with verbs (. . . *it is hypothesized that*….), adjectives (*I am certain that*….), and nouns (*One important finding of this study is that*….) as controlling words (Hyland & Tse, 2005). This construction is described as *evaluative that* which refers to "a grammatical structure in which a complement clause is embedded in a host super-ordinate clause to complete its construction and to project the writer's attitudes or ideas" (Hyland & Tes, p. 124).

Regarding empirical studies, due to space limitations, this section will be selective. To begin with, Hyland (2000) analyzed the data of a small-scale retrospective think aloud study and found that boosters were far more visible than hedges and some students tended to overlook the formulations indicated by the hedges. In another study, Hyland (2005b) examined 240 research articles comprising eight disciplines. He found that questions occurred in the science and engineering papers. Reader pronouns were frequently used in the soft discipline papers where they appealed to scholarly solidarity, presupposing a set of mutual, discipline-identifying understandings.

Comparing history textbooks and journal articles, Bondi (2007) concludes that the stance of the arguer occurs less in

history textbooks than in journal articles. He further argues that the writer's interpretative position in the text and the dialogic involvement of other voices can be seen as constitutive of authorial identity, together with forms of explicit self- and other-representation. Academic history is not just a narrative account of facts, but also interpretation of narrated events and ultimately dialogic argumentation of the interpretation put forward (Bondi, 2007).

In a related study, Abdollahzadeh (2011) studied 60 *Conclusion* sections of research articles and concluded that the American writers made a lot use of attitude markers and emphatics compared to the Iranian authors who tended to make less use of attitudinal language. Tse (2012) investigated a corpus of 600 bio data taken from three different disciplines of philosophy, applied linguistics, and engineering peer-reviewed journals to represent the continuum of academic disciplines from humanities, to social sciences to applied sciences, respectively. She concluded that "a majority of bio writers do take this opportunity to strategically position themselves in the community through showcasing their research expertise and publications, displaying theoretical alliances and collegiality, as well as emphasizing contribution and services. As such, the bio is essentially a form of stancetaking at the metalevel" (p. 83). Furthermore, she also notes that writers can make use of that space to position themselves with the beliefs and values held by their fellow colleagues and disciplines.

In another stance study in medicine, Gross and Chesley (2012) state that the findings of such studies would be affected by the type of the study plus the impact factor that the prospective journals have. The results of their study suggest that "the language used to report findings in the biomedical research community varies according to degree of involvement from industry sponsors" (p. 96).

Pishghadam and Norouz Kermanshahi (2012) studied *Discussion* section of 90 English and Persian research articles. Their findings indicated that compared to *attitudinal* and *epistemic* markers, *textual* stance markers were mostly used in English and Persian articles. Analyzing 120 research chemistry and sociology articles, Taki and Jafarpour (2012) concluded that hedges were frequently applied in English articles; attitude markers were frequently used in the Persian research articles. With respect to self-mentions, they found that to maximize objectivity, the Persian writers highlighted the phenomena under discussion rather than themselves.

McGrath and Kuteeva (2012) tried to pin down how writers convey their stance and interact with readers by examining the "disciplinary writing practices of the pure mathematics academic community from an ESP genre analysis perspective" (p. 161). By applying Hyland's stance and engagement framework (2005b), they focused on pure mathematics RAs. Their data consisted of a corpus of 25 articles collected from five authors and semistructured interviews with the same authors. The results of the corpus analysis revealed a low number of hedges and attitude markers compared to other hard and soft disciplines, but higher than expected shared knowledge and reader references.

Gillaerts and Van de Velde (2010) conducted a study to investigate how writers deploy stance markers, namely hedges, boosters and attitude markers. In fact, they aimed to investigate to what extent research article abstracts differ with regard to the use of the above mentioned stance markers. The corpus included 72 research article abstracts from articles in *Journal of Pragmatics*. Based on the results, it was claimed that research article and research article abstracts show differential use of subcategories of stance markers in focus. That is, "whereas research articles exhibit a rather high number of hedges in comparison to boosters and attitude markers, abstracts show

more affinity with boosting, rather than with hedging" (Gillaerts & Van de Velde, 2010, p. 135).

Based on an analysis of 240 published research papers, Hyland (2014) argued that stance features like hedges, self-mentions, and boosters "are not simply dry textualisations but elements of persuasive craftsmanship which help construct a disciplinary view of the world while simultaneously negotiating a credible persona for writers" (p. 1). Put differently, academic writers make use of stance features to wave their discourse community flag primarily to make their own voice audible and secondarily make their judgments and claims more persuasive and convincing.

What went in the review above was a quick sketch of lexical stance markers. Regarding the grammatical *evaluative that* construction, to the best knowledge of the researchers, the single most relevant study has been conducted by Hyland and Tse (2005b) in which they investigated this grammatical structure through the lens of frequency, forms, and functions. Their study compared abstracts of journal articles written by expert authors and those of theses and dissertations written by L2 MA and doctoral students. They concluded that this structure was variously used by these two groups with similarities and differences.

Despite the studies looking differently at the concept of stancetaking and stance markers as reviewed above, further research is required to carefully appraise the use of lexical and grammatical stance markers combined. Therefore, unlike previous studies investigating individual sections of RAs (e.g., Abdi, 2002; Abdollahzadeh, 2011; Gillaerts & Van de Velde, 2010), the current study, integrating Hyland's (2005b) and Hyland and Tse's (2005a) frameworks to examine lexical and grammatical stance markers, has focused on all sections of RAs as a big picture.

To the best knowledge of the researchers, at least at the time of writing this paper, almost no comprehensive study has been reported to focus on the whole RAs applying both categories of stancetaking markers targeted here. Therefore, lexical stancetaking markers and particularly *evaluative that* construction as "a relatively overlooked interpersonal feature" (Hyland & Tse, 2005, p. 123) are combined together in the present study in order to come up with a big picture of taking positions in the writing of academic RAs.

3. Method

The present study, following Hyland's (2005b) model and that of Hyland and Tse (2005), was an attempt to carefully analyze the linguistic realizations of stance in the RAs taken from two disciplines of psychology and sociology. The logic behind selecting psychology and sociology revolves round the fact that, as two sides of the same science, they go hand in hand and play a major role in scientifically studying the human beings (Becher & Trowler, 2001). They help us to better understand and recognize the essentials of emotions, relationships, and behaviors. Although they both belong to soft sciences and are classified as pure disciplines (Becher & Trowler, 2001), the primary focus of psychology is on individuals, while sociology concentrates on society as a whole. Therefore, these two disciplines are well worth studying deeply and extensively.

To get the best of both worlds and maximize the credibility of the study, Hyland's (2005b) and Hyland and Tse's (2005) models are applied in tandem. This study investigates whether and to what extent, the authors make use of metadiscourse and grammatical elements of stance in their RAs as a realization of interaction. More specifically, the study was an attempt to address the following research questions:

1. Does the authors' use of stance markers in psychology and sociology RAs show any significant difference?

2. Does the authors' use of stancetaking *that* constructions in psychology and sociology RAs show any significant difference?
3. Which category of stancetaking marking is used more: lexical or grammatical?

3.1 Corpus

Regarding the RAs of the disciplines in focus, a total number of 100 English RAs drawn from peer-reviewed journals were selected through systematic random sampling by picking out the third article of the third issue in each consecutive volume. In fact, the type of RAs were kept constant as a control variable. Furthermore, due to the random nature of sampling, the number of authors and the nationality or their ethnic background were not taken into account. Therefore, the whole corpus was comprised of 50 RAs coming from psychology and 50 from sociology published between 2012 and 2014 in each journal. The rationale for this selection was to apply statistical data provided by the Journal Citation Reports: Social Sciences Edition (2005) in order to pick out prestigious journals within each discipline. The total number of constituting words amounted to 922,400 words of which 534,850 and 387,550 belonged to psychology and sociology, respectively. Table 1 includes the journals from which the RAs of the current research were sampled.

Table 1

Psychology and Sociology Journals for the Sampled RAs

psychology journals	**sociology journals**
Journal of Personality and Social Psychology	American Sociological Review
Journal of Consulting and Clinical Psychology	American Journal of Sociology
Journal of Abnormal Psychology	Journal of Marriage and the Family
Journal of Applied Psychology	Social Forces
Developmental Psychology	Social Problems

3.2 Procedure

In order to have a balanced and accurate data collection procedure, first, the list of metadiscursive stance markers was taken from Hyland (2005b) and Hyland and Tse (2005); lexical items were selected from the former and *that* construction from the latter. Unlike the previous studies which have generally focused on either lexical or grammatical items, the present study integrated lexical and grammatical measures in order to yield a detailed picture of stancetaking in English RAs of psychology and sociology. Moreover, it examined the whole RAs not just some specific parts or sections. This objective was also tenable in terms of vocabulary instruction, as some considerable fraction of academic texts is occupied by metadiscourse markers (Hyland, 2005c).

The corpus was analyzed through AntConc (Anthony, 2014)—a corpus analysis toolkit for concordancing and text analysis. The sampled RAs were first saved in text format which is the required format for AntConc. That is because this software does not recognize other document formats. It is capable of hosting and analyzing batches of texts at once. Then, the lexical and grammatical stance markers were fed into the software to come up with a total frequency count of such markers. In order to guarantee a valid analysis, the authors crosschecked the highlighted items in the concordance lines in the original articles in which the stancetaking markers occurred to discard the anomalous items. For example, in terms of *that* construction, those instances of *that* functioning as relative pronoun or as demonstrative pronoun were tossed out.

4. Results

As mentioned, the main motivation behind the present research endeavor was to investigate how one aspect of metadiscourse i.e., stancetaking, is realized in the two fields of the same soft science. For this purpose, what follows is an account of such stance markers in psychology and sociology English RAs. To

this end and in order to have a balanced account, stancetaking is approached through lexical markers (Hyland, 2005b) and grammatical *that* constructions (Hyland & Tse, 2005). To give an example of AntConc output, the concordance lines for *probably* are given in Figure 2 for a subsection of the whole corpus.

Figure 2. Concordance Lines for Probably

In the rest of this section, we will deal with the main results. Table 2 is allocated to such features of stance based on a list borrowed from Hyland (2005) in the 100 English research articles of psychology and sociology:

Table 2

Stance Markers in English Psychology and Sociology Research Articles

Features	Psychology (534,850 Words)	Sociology (387,550 Words)
Hedges	8,593 (1.6%)	4,887 (1.26%)
Boosters	3,791 (.7%)	3,012 (.77%)
Attitude markers	1,469 (.27%)	959 (.24%)
Self-mentions	5,493 (1.02%)	3,913 (1%)
Total	19,346 (3.59%)	12,771 (3.27%)

As observed in Table 2, it can be argued that a sensible amount of space is given to such stance markers in psychology and sociology RAs. This finding is in line with the previous findings of other researchers (e.g., Abdi, 2002, Hyland, 2005b, Hyland, 2010). They indeed argued that a sizable amount of such stance features is included in the RAs written in different academic fields, especially those belonging to soft sciences.
Accordingly, regarding the first research question, it can be safely argued that in the fields under investigation, 3.59% of the words express stance in psychology journal articles and 3.7% of the words are used for taking stance in sociology articles. Therefore, a sizeable ratio of lexical items constitutes stancetaking in research articles.

Having looked at the frequency counts of stance markers in RAs of psychology and sociology, in the following section, the results of the conducted chi-square test is presented in order to detect any statistically significant differences between the two mentioned fields of the social sciences.

Table 3
Observed and Expected Stance Markers in Psychology and Sociology

	Observed *N*	Expected *N*	Residual
Psychology	19346	16058.5	3287.5
Sociology	12771	16058.5	-3287.5
Total	32117		

Table 3 includes the total number of lexical stance markers using Hyland's (2005b) taxonomy. The number is 19,346 for psychology and 12,771 for sociology, respectively. However, to spot any significant difference, first we need to cross-tabulate the data in order to present the observed and expected values. Here it follows:

Table 4
Stance Markers vs. Grouping Cross-tabulation

			Psychology	Sociology	Total
Stance Markers	Hedges	Count	8593	4887	13480
		Expected Count	8119.8	5360.2	13480.0
		% within Stance Markers	63.7%	36.3%	100.0%
		% within Grouping	44.4%	38.3%	42.0%
		% of Total	26.8%	15.2%	42.0%
	Boosters	Count	3791	3012	6803
		Expected Count	4097.9	2705.1	6803.0
		% within Stance Markers	55.7%	44.3%	100.0%
		% within Grouping	19.6%	23.6%	21.2%
		% of Total	11.8%	9.4%	21.2%
	Attitude Markers	Count	1469	959	2428
		Expected Count	1462.5	965.5	2428.0
		% within Stance Markers	60.5%	39.5%	100.0%
		% within Grouping	7.6%	7.5%	7.6%
		% of Total	4.6%	3.0%	7.6%
	Self-mentions	Count	5493	3913	9406
		Expected Count	5665.8	3740.2	9406.0
		% within Stance Markers	58.4%	41.6%	100.0%
		% within Grouping	28.4%	30.6%	29.3%
		% of Total	17.1%	12.2%	29.3%
	Total	Count	19346	12771	32117
		Expected Count	19346.0	12771.0	32117.0
		% within Stance Markers	60.2%	39.8%	100.0%
		% within Grouping	100.0%	100.0%	100.0%
		% of Total	60.2%	39.8%	100.0%

Table 4 contains the observed and expected values for the stance markers. The next logical step would be to run the chi-square test to capture any statistically significant difference. Table 5 contains the results:

Table 5
Lexical Stance Markers Chi-square Test

	Value	*df*	Asymp. *Sig*. (2-sided)
Pearson Chi-square	1.405E2*	3	.000
Likelihood Ratio	140.508	3	.000
Linear-by-Linear Association	53.328	1	.000
N of Valid Cases	32117		

*0 cells (.0%) have expected count less than 5. The minimum expected count is 965.47.

Table 5 includes the results of the chi-square test in which with the *df* of 3 the Sig. (2-tailed) is less than .05 meaning that the difference between psychology and sociology RAs is significant. In other words, based on the frequency count of the stance markers and the total number of words, more stancetaking lexical items are used in psychology than in sociology. Therefore, with respect to the second research question, it can be claimed that the difference between psychology and sociology RAs in terms of stance markers reaches statistical significance.

The second textual aspect through which the stance of the author gets realized is the grammatical *that* construction (Hyland & Tse, 2005). In this conceptualization, stance is realized through *that* constructions centered on verbs, adjectives, and nouns. What follows is a frequency-based account of this aspect and the relevant percentages covered by such constructions in psychology and sociology texts:

Table 6
That Stance Markers in English Psychology and Sociology Research Articles

Features	Psychology (534,850 Words)	Sociology (387,550 Words)
that with verbs	4120 (.77%)	3161 (.81%)
that with adjectives	126 (.02%)	105 (.02%)
that with nouns	834 (.15%)	538 (.13%)
Total	5080 (.94%)	3804 (.96%)

As Table 6 shows, on the whole, .94% of *that* constructions occur in psychology and .96% appears in sociology RAs, compared to the lexical markers of stancetaking which accounted for 3.59% and 3.27% of the corresponding fields as stated above. Table 7 includes the above mentioned points in statistical terms:

Table 7

Observed and Expected That Construction in Psychology and Sociology

	Observed *N*	Expected *N*	Residual
Psychology	5080	4442.0	638.0
Sociology	3804	4442.0	-638.0
Total	8884		

Table 7 includes the total number of *that* construction of stancetaking. The number is 5,080 for psychology and 3,804 for sociology, respectively. What follows is an account of *that* construction based on its three different realizations in the sampled RAs.

Table 8
That Construction vs. Grouping Cross-tabulation

			Psychology	Sociology	Total
That-construction	That-verb	Count	4120	3161	7281
		Expected Count	4163.4	3117.6	7281.0
		% within That-construction	56.6%	43.4%	100.0%
		% within Grouping	81.1%	83.1%	82.0%
		% of Total	46.4%	35.6%	82.0%
	That-adjective	Count	126	105	231
		Expected Count	132.1	98.9	231.0
		% within That-construction	54.5%	45.5%	100.0%
		% within Grouping	2.5%	2.8%	2.6%
		% of Total	1.4%	1.2%	2.6%
	That-noun	Count	834	538	1372
		Expected Count	784.5	587.5	1372.0
		% within That-construction	60.8%	39.2%	100.0%
		% within Grouping	16.4%	14.1%	15.4%
		% of Total	9.4%	6.1%	15.4%
Total		Count	5080	3804	8884
		Expected Count	5080.0	3804.0	8884.0
		% within That-construction	57.2%	42.8%	100.0%
		% within Grouping	100.0%	100.0%	100.0%
		% of Total	57.2%	42.8%	100.0%

Having reviewed the frequency counts of *that* constructions, another chi-square was run to spot any statistical significance of such construction usage in the two mentioned fields. It goes as follows:

Table 9
That Stance Markers Chi-Square Test

	Value	*df*	Asymp. *Sig*. (2-sided)
Pearson Chi-Square	8.997*	2	.011
Likelihood Ratio	9.051	2	.011
Linear-by-Linear Association	7.455	1	.006
N of Valid Cases	8884		

*0 cells (.0%) have expected count less than 5. The minimum expected count is 98.91.

Table 9 includes the results of the chi-square test where with the *df* of 2 the Sig. (2-tailed) is less than .05 meaning that the difference between psychology and sociology RAs is significant in terms of that constructions. In other words, based on the frequency count of that constructions and the total number of words, more such constructions are used in sociology than psychology. Hence, regarding the second research question, it can be claimed that the difference between psychology and sociology RAs in terms of grammatical stance markers gains statistical significance.

Concerning the third research question, the results indicated that lexical stance markers are more frequently used than the grammatical *that* constructions in the RAs of psychology and sociology. Taken together, these two categories roughly amount to 5% of the whole RAs indicating an impressive number. In other words, the findings illustrate that the psychology authors used more lexical items than grammatical ones compared to the sociology writers who did the reverse. Hence, it can be concluded that lexical stance markers were employed more in psychology than sociology RAs and grammatical *that* construction was used more in sociology than psychology.

5. Discussion and Conclusion

This study, part of a more comprehensive research, set out to investigate stancetaking in English RAs realized through lexical markers borrowed from Hyland (2005b) and grammatical *that*

constructions taken from Hyland and Tse (2005) in 100 RAs belonging to psychology and sociology; 50 from each field. The main intention was first to see whether there is any significant difference in the application of stance markers, be it lexical or grammatical, and second, to examine which category is used more and how frequently it is employed in the disciplines under investigation.

According to the findings, the psychology authors significantly used more lexical metadiscursive stance markers than sociology writers. Their use of such stance markers accounted almost for 3.59% of the total number of words utilized in the articles. Pedagogically speaking, it makes a lot of sense. Even from a vocabulary instruction point of view, those items of stancetaking are worthy of direct instruction because they will partially determine the proper understanding of the passage (Hu & Nation, 2000) under study, not to mention the process of academic writing in which such a lexical foundation does stand out. This finding is in line with Abdi (2011) in which he found a great number of metadiscourse strategies including the interpersonal ones used significantly but unequally by native and nonnative writers in different canonical subsections of English RAs. With respect to the sociology articles, the corresponding authors used around 3.27% of the total words in the corpus which again is a sensible amount. This number also in turn highlights the importance of lexical mechanisms in projecting one's stance in academic writing.

On closer inspection, hedges ranked first among the stancetaking markers. Then came the self-mentions and finally boosters and attitude markers. From a metadiscourse marking perspective, this is in contrast to Abdollahzadeh (2011) in which he reported that in the *Discussion* section of the RAs attitude markers were frequently applied by the American writers compared to the Persain writers. It can be attributed to cultural differences of those writers.

Regarding the grammatical category, it accounted for a small fraction of the whole RAs; .94% and .96% for psychology and sociology, respectively. Among the categories investigated, verbs had the highest frequency followed by adjectives and nouns as the core of evaluative *that* construction. Based on this finding, it can be argued that authors writing in English tend to use more lexical items to refer to their stance than grammatical items, as English lacks specific grammatical structures to provide evidence for argumentation (Aikhenvald, 2004).

It goes without saying that the findings of such studies as the present one must be cautiously interpreted according to the disciplines under investigation. As reported by McGrath and Kuteeva (2012), their sample of mathematics RAs showed lower number of hedges and attitude markers in comparison with disciplines in soft sciences and other fields belonging to hard sciences. This not only waves the caution flag of interdisciplinary differences but also the nuances that might exist among the disciplines belonging to the same knowledge area.

The present research does have some applicable messages for the readers. First and foremost, stancetaking is an indispensable part of RAs realized through lexical metadiscourse markers and grammatical *that* constructions (Hyland, 2005b; Hyland & Tse, 2005) being widely applied to signal the positionality of the authors (Jaffe, 2009). Therefore, such an area must capture the attention of syllabus designers in English for academic purposes (EAP) and also academic writing instructors, since admittedly the most difficult portion of academic writing is the proper use of stance markers by the students in order to put forward their own ideas and evaluate those of others (Neff, Dafouz, Herrere, Martines, & Rica, 2003). Second, the predominance of some stance markers such as hedges over other devices must send out the signal of paying further attention to those makers which are far more frequent than other markers of stance. In other words,

those markers frequently applied compared to other categories must be the first candidate for explicit instruction. This finding is in agreement with Abdollahzadeh and Zolfaghari-Erdechi (2012) who concluded that hedges were used with more frequency in argumentative than the narrative samples of written texts.

Moreover, it should be born in mind that grammatical stancetaking can complement that of lexical items. The implication is that different forms must be applied in order to attain different functions. So, academic writing instruction can focus on providing students with guidelines on different aspects of such writing and particularly making use of different markers to deploy stancetaking in a research article (Hyland & Tse, 2005).

Any research endeavor confronts certain limitations demonstrating the necessary evil for gradual progression of human knowledge. First, due to practicality issues, just two disciplines were selected which by no means guarantees their representativeness of other disciplines. Therefore, other similar fields must be investigated as well as more disciplines belonging to the same science division keeping in mind that more is not necessarily better. Second, less observed fields having escaped the attention of the researchers can be selected as the fields under study. Third, the corpus of the study included 100 papers. Other studies might be conducted with more RAs in order to yield more generalizable findings and come up with more reliable and valid studies. Fourth, in order to have a big picture of the academic writing with respect to RAs, other similar studies might replicate the present study with qualitative inquiry. For instance, interested researchers can complement such studies as this one by applying interviews in order to generate more comprehensive image of how and why authors make use of stance markers in their writing enterprise. This can illuminate the underexplored corners of writing practice. Moreover, from a

cross-cultural point of view, it goes without saying that people from different cultures have different ways of pointing out their positions regarding any viewpoint (Jaffe, 2009). Hence, similar studies can be launched to examine the cultural nuances realized in the way that writers apply stancetaking markers in their academic writing venture. Therefore, the culture and the language background of the authors can be considered for further research. In addition, RAs can be classified as different types (Hyland, 2009) with idiosyncratic features and analyzed accordingly.

Finally, the engagement aspect of interaction left untouched in the study can be thoroughly scrutinized in similar studies. This will make the subsequent relevant research more fine-grained. Interested researchers can choose this interactional aspect of writing in genres other than research articles such as academic textbooks in terms of *disciplinary specificity* (Jalilifar, Alipour, & Parsa, 2014) to shed more light on the way(s) writers try to make connections with their readers in their written products.

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