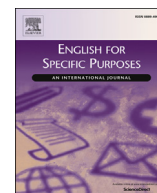




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Selling research in RA discussion sections through English and Spanish: An intercultural rhetoric approach

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ABSTRACT

Discussion (and/or other closing) (DC) sections of research articles in English-medium journals are difficult to write, especially when English is not a first language. This intercultural rhetoric research explores whether greater effort is made to promote research in English than in Spanish. I drew ten pairs of comparable DC sections from the EXEMPRAES (exemplary empirical research articles in English and Spanish) Corpus. I systematically annotated these sections for their communicative functions, and, for the first time, my annotations were validated by the article authors, themselves. Additionally, I used an online survey to understand the authors' promotional behaviour. This innovative mixed methodology confirmed that the social scientists in the study were more promotional in English than in Spanish. Authors in English highlighted more positive aspects of their studies and applications of their results. In contrast, Spanish authors were more neutral, focussing largely on statements of contribution and relevance to the zeitgeist. Revealing how different levels of culture (unstated communication principles, knowledge areas, socialisation processes and research assessment policies) affect the inclusion of specific communicative functions demonstrates how social scientists' promotional approaches in DC sections are complex and merit further attention. Implications for the teaching of academic writing in English are drawn.

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1. Introduction

Over the last few decades, researchers have increasingly published their research in English-medium scientific journals (Lillis & Curry, 2010). Of all possible academic genres, the research article (RA) continues to be the “pre-eminent genre of the academy” (Hyland, 2009: 67), with the empirical research article being the most relevant for many (e.g., Moreno et al., 2011). Before publication, RA manuscripts tend to be mediated in various ways, from translation, to reviewing, through editing and proofreading. This mediation typically results in text additions, deletions, reformulations, as well as changes in argumentation, positioning, and so on, potentially affecting how manuscripts are evaluated (Lillis & Curry, 2010).

Some of the rhetorical and stylistic changes that multilingual scholars make to achieve their intercultural communication goals can be identified and explained within the framework of intercultural rhetoric (IR¹) (Moreno, 2013a; also see; Connor,

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¹ Unusual abbreviations: CR = Contrastive rhetoric; DC = Discussion (and/or other closing); ENEIDA = Spanish National Team for Intercultural Studies on Academic Discourse; ERPP = English for research publication purposes; EXEMPRAES = Exemplary empirical research article in English and Spanish; IR = Intercultural rhetoric; RT = Rhetorical transfer; SSC = Social science(s); WOE = Writing obstacle in English.

2004). Especially relevant to this research are those rhetorical and stylistic features of manuscripts that are employed by writers whose L1 is not English (EFL writers); for instance, **a lack of critical attitude towards others' work** (Harwood & Hadley, 2004) or **failure to clearly articulate the contribution of the study** (Burgess, Fumero Pérez, & Díaz Galán, 2005; Mur-Dueñas, 2012b; 2014). These types of features have been referred to as writing obstacles in English (WOEs), since they often make it “necessary for multilingual authors to revise their manuscripts so as to conform to the expectations of English-medium scientific journals” (Moreno, Rey-Rocha, Burgess, López-Navarro, & Sachdev, 2012, p. 12). For example, Mur-Dueñas's (2012b) ethnographically oriented study of Spanish social scientists' RA manuscripts in English as L2 shows how the authors' failure to clearly articulate the contribution of their study in the introduction needed to be revised for the manuscript to be published.

IR in English for research publication purposes (ERPP) seeks to explain the WOE's faced by EFL writers in terms of two hypotheses (Moreno, 2013a): contrastive rhetoric (CR) and rhetorical transfer (RT) (Connor, 2004; Kaplan, 1966). According to the CR hypothesis, the rhetorical structures and, as I have added elsewhere (Moreno, 2008), the stylistic features of texts may vary greatly across languages and cultures in similar contexts. For instance, social science (SSC) RA introductions published in Spanish-medium journals tend to include much fewer fragments *Establishing a niche* (i.e., Move 2 in Swales, 2004) than in English-medium journals (Mur-Dueñas, 2010). According to the RT hypothesis, it is assumed that “when multilingual writers produce texts in English, they are likely to transfer rhetorical and stylistic features typical of related [...] texts written in the language and writing culture into which they have been socialized” (Moreno, 2013a, p. 2783). As *Establishing a niche* is an essential step in RA introduction used by authors to justify and position their research in relation to that of others, transfer of the above-mentioned Spanish academic rhetorical habit may have prevented the authors in Mur-Dueñas' (2012b) study from having clearly articulated their contribution.

Consistent with this kind of reasoning, RT and CR hypotheses have been previously offered to explain unconventional features in EFL RAs written by authors from different language backgrounds (e.g., Finnish [Mauranen, 1993]; Thai [Amnuai & Wannaruk, 2013]; Sudanese [ElMalik & Nesi, 2008]; Danish [Shaw, 2003]). However, the RT hypothesis is rarely confirmed in ERPP research because existing study designs are often incomplete and cannot determine whether a given unconventional, or differing, feature in EFL is due to transfer from the authors' L1. For instance, studies such as that of Amnuai and Wannaruk's (2013) do not show how the features of focus compare with RAs in the authors' L1 in comparable contexts. Even when these comparisons are established (as in Amirian, Kassaian, & Tavakoli, 2008; Pérez-Llantada, 2012; Sheldon, 2019; Williams, 2011), the extent to which the published EFL RAs were mediated is often unknown. Furthermore, in some studies (e.g., Ershadi & Farnia, 2015; Moreno, 1998; Shaw, 2003; Sheldon, 2019), it is unclear whether a proven differing feature has led to a WOE due to transfer from the authors' L1. In other studies (e.g., Mur-Dueñas, 2012b), no attempt is made to explain a proven WOE with reference to the use of the corresponding feature in the authors' L1. Moreover, some features supposedly transferred from the authors' L1 have not prevented the RA manuscript from being published in English-medium journals, i.e., not causing WOE (see Shaw, 2003).

Since the 1990s, CR research started to explore rhetorical and stylistic features that might be different between English as L1 and the authors' L1 (e.g., Duszak, 1994; Moreno, 1998). With its more explicitly applied orientation, recent IR research especially concerns those features *requiring revision* despite the corresponding text fragments being lexico-grammatically accurate in English and/or [their absence] conventional in the authors' L1 (Moreno, 2013a). Awareness of these features is crucial for EFL writers, and/or their mediators, as ordinary users of English are unlikely to be able to help them report on their research for publication in English-medium journals successfully. Evidence of this may be found in studies reporting when the editor(s) and/or reviewers recommend revision of manuscripts by a “native” speaker, even if this has already been done (see examples in Mur-Dueñas, 2012a; Pérez-Llantada, 2012). It is in these cases when the double meaning of the WOE acronym reaches its highest intensity.

As I have suggested elsewhere, as well as departing from a clearly defined difficulty, i.e., a WOE, IR studies in ERPP must follow a series of carefully planned, related, and coordinated studies to explore the RT and CR hypotheses successfully (see Moreno, 2008). The present study is part of a larger project carried out by the Spanish National Team for Intercultural Studies on Academic Discourse (ENEIDA, Moreno, 2011) that aims to do so in relation to Spanish researchers' attempts to get published in English-medium journals. In this context, the present study departs from a previously identified WOE: **the failure of Spanish scholars in finance to include Statements of contribution** in the introduction and conclusion of RA manuscripts to the extent and in the manner expected by the reviewers (Mur-Dueñas, 2014).

Mur-Dueñas's ethnographically oriented study compared the use of *Statements of contribution* across two comparable contexts: 1) finance RA manuscripts that had been submitted to high-impact English-medium journals by two teams of Spanish scholars and had either been rejected or required a major revision; and 2) RAs published in the targeted high-impact journals. This research showed that *Statements of contribution* were over twice as frequent in introductions as in conclusions in the target journals. More interestingly, her results revealed a relatively higher frequency of these statements in the Spanish scholars' manuscripts than in the high-impact journals. As the author explained, this unexpected overuse could be due to their increased awareness of the need to make *Statements of contribution* to get published in English-medium journals. She also hypothesized a lower frequency of these statements in lower-impact national publications. Although Mur-Dueñas's (2014) conception of this rhetorical strategy was too broad, her speculation offered an interesting CR hypothesis to be explored as a possible reason for the Spanish scholars' observed difficulties (see Section 2.2).

The supposedly differing occurrence of *Statements of contribution* across English and Spanish might indeed be explained by the increasingly promotional nature that has been repeatedly observed in RAs in English since the 1990s (e.g., Berkenkotter &

Huckin, 1995; Fairclough, 1993; Hyland, 2000). Mur-Dueñas' (2010) study corroborates this, as well as the fact that authors in English tend to concentrate their efforts to promote their research in introduction sections (cf. Lindeberg, 2004). However, the present study shifts the focus to the discussion section for various reasons. First, this section has been recently considered the most important by online RA readers (Pérez-Llantada, 2013). Thus, this section is expected to have experienced an increase in the amount of research promotion for persuading readers that the research is “sound, significant, and worthy of publication” (Flowerdew, 1999, p. 259) (see also Pérez-Llantada, 2012). Second, this section has been increasingly perceived as more difficult to write than other sections especially in English-medium journals (Flowerdew, 1999; Moreno et al., 2012). Such difficulties are also amplified among Spanish scholars in the SSC (Gea-Valor, Rey-Rocha, & Moreno, 2014).

In accordance with the RT and CR hypotheses, I have previously suggested that these extra difficulties might be due to the negative transfer of the Spanish researchers' tendency to be less evaluative of their own and others' work in similar L1 contexts (e.g., Moreno et al., 2012). As will be argued, this tendency must be explored as a cultural rather than a linguistic phenomenon. The effect of the Spanish national culture on the argumentative structure of discussions in English as L2 has been previously explored by means of indirect methods such as n-gram searches (Pérez-Llantada, 2012). There have also been a few cross-cultural studies on the discussion section published in English and other languages as L1 in comparable disciplines (e.g., Persian, computer science [Ershadi & Farnia, 2015]; Spanish, applied linguistics (AL) [Sheldon, 2019]). However, no previous research has rigorously quantified the rhetorical strategies employed by RA authors to promote their research in this section, let alone in fields other than AL. Thus, this is the first systematic attempt to compare the rhetorical strategies used in SSC discussion sections for persuading readers of the value and soundness of their research *explicitly* (henceforth *research promotion strategies*) through English and Spanish, and to explain the expected differences. In the next section, the paper reviews recent IR developments to situate the study.

1.1. From contrastive to intercultural rhetoric in ERPP

Since Kaplan's (1966) seminal paper, CR has morphed considerably, encouraging Connor (2004) to suggest adopting the term of IR to highlight the developments (see Connor, 2011; Moreno, 2013a, for recent reviews). Overall, CR has developed in parallel with advances in many related research traditions, such as (academic) genre analysis, (critical) discourse analysis and the teaching of EAP and ERPP. Corpus linguistics has also inspired scholars to study increasingly representative corpora, and to use statistics for assessing the reliability of analyses and the significance of the cross-cultural differences, as in the present research.

CR scholars have also been influenced by developments in contrastive analysis to look at increasingly comparable data, both at a generic level (Connor & Moreno, 2005) and at textual levels (e.g., Moreno & Suárez, 2008b). Indeed, before choosing the corpora for this study, it was observed that the discussion of results in RAs does not always follow the report of results in a separate section, but often conflates it with results or conclusions, and sometimes precedes other closing sections (see also Swales, 1990; Yang & Allison, 2003). Thus, comparability at a generic level is established in the present study between comparable functional text blocks (see Section 3.2). In addition, a great diversity of text fragments in discussion sections have been considered in previous studies to have a promotional function (see Section 1.2), making it difficult to transfer their research results to applied fields. This suggested the need to compare more specific comparable, and mutually exclusive, research promotion strategies at the textual level (see Section 3.4).

Given its pedagogical orientation, CR research has traditionally been more interested in comparing recurrent tendencies in good samples of rhetoric and style across writing cultures, than in comparing individual rhetoric and styles. This does not mean, however, that individual preferences in writing should be ignored. The notion of writing culture is understood as the set of ways of writing in a language (variety) and context, together with the reasons (i.e., the values, beliefs, norms, practices, attitudes, feelings, previous experiences, and so on) for doing so. The writing cultures in this study concern two publication contexts in the early 21st century: English-medium scientific journals (henceforth English) and Spanish-medium scientific journals published in Spain (henceforth Spanish) in the SSC. Thus, the present findings will be especially relevant to Spanish social scientists in contexts where ERPP is learned as a foreign language.

The World Englishes and English-as-a-lingua-franca movements have made the standards of English compared with other languages questionable in view of their relative value as a target norm for the discourse community who uses English (Baker, 2013; see also; Li & Flowerdew, 2020). This consideration leads the present study to compare samples of discussion sections across English and Spanish irrespective of whether English was used as an L1, provided that the RAs in the English-medium journals were not written by Spanish scholars. The reason for the latter decision is that a corpus of discussion sections written in EFL by Spanish scholars is the aim of a future related study.

Another recent development in IR has been the study of intercultural discourse encounters, that is, “interaction among speakers or writers requiring negotiation and accommodation” (Connor, 2011, p. 2). Despite the spoken mode not being the immediate concern of the present study, this development also influenced its design. When selecting the samples of *good writing* in RAs for future pedagogical purposes, instead of choosing RAs published in high-impact journals, as is common in much ERPP research, this study draws texts from comparable corpora of exemplary RAs compiled in collaboration with Spanish experts who chose the RAs based on their appreciation of the way they were written (see Section 3.2). This method has various advantages. First, taking the perspective of real Spanish readers entails an implicit negotiation about efficient science communication with a more realistic international audience. Second, future use of these texts to teach ERPP in intercultural contexts will avoid imposing Anglo-American standards, or even our perspective, about academic writing. Third,

this method allows us to capture good ways of reporting in the readers' own fields, irrespective of the impact factor and beyond the editors-reviewers' views. Lastly, who better than Spanish experts to decide on the comparability of RAs across English and Spanish in their own fields?

CR scholars have also seen the need to move from purely text-based into more context-sensitive research. Conceiving of texts as the result of writing as a socially constructed activity and process, recent studies have used qualitative methods to look beyond the texts into their contexts of production and interpretation (e.g., [Moreno & Suárez, 2008a](#)), as suggested in [Connor \(2004, 2011\)](#). Rhetorical and stylistic preferences are now seen as the result of writing culture(s) operating at different levels, including "national, disciplinary, classroom, individual, among others" ([Connor, 2011](#), p. 9). The present study aims to tap into possible interactions among various levels of culture that may help explain the reasons for the cross-cultural differences identified. To capture such interactions as factors of the cultural context of writing, this study surveys the authors of the selected RAs, while conceptualizing the notion of writing culture as complex and dynamic rather than monolithic and static.

The next section reviews previous work on research promotion strategies in SSC discussion sections. This review excludes studies of RA sections that conflate results and discussion, as this type of sections have not been the focus of the present study (see Section 3.2).

1.2. Promotional steps in RA discussion sections

In the last 25 years there has been a growing body of research focused on the generic structure of SSC discussion sections in English (e.g., [Boonyuen & Tangkiengsirisin, 2018](#); [Cotos, Link, & Huffman, 2016](#); [Hashemi & Moghaddam, 2019](#); [Holmes, 1997](#); [Lewin, Fine, & Young, 2001](#); [Lindeberg, 2004](#); [Peacock, 2002](#); [Yang & Allison, 2003](#)). A common feature across these studies is that they draw on move analysis ([Swales, 1990, 2004](#)); consequently, the multiple rhetorical strategies (i.e., moves/steps) that writers articulate to achieve the purposes of the discussion section in the SSC have been identified. The findings from these works also suggest that the amount of, and the language resources used for, research promotion in discussion sections are affected by the discipline (e.g., [Lindeberg, 2004](#)). Taking a combined cross-cultural and cross-disciplinary approach, similar to that in [Martín and León Pérez's \(2014\)](#) study of rhetorical promotion in RA introductions, this study explores the effect of the writing culture on research promotion in discussion sections as it interacts with the knowledge area culture.

A diachronic look at models of discussion sections in English does suggest an increase in the range of explicit research promotion strategies, supporting previous researchers' observations about the evolution of RAs towards greater promotion of the "news value" of research ([Berkenkotter & Huckin, 1995](#), p. 43). The initial models of discussions (e.g., [Hopkins & Dudley-Evans, 1988](#); [Peng, 1987](#)) represented these sections as attempts "to discuss the findings and to assess the significance and implications of the research" ([Lindeberg, 2004](#), 150). Subsequent models included other promotional steps more focused on evaluating the research. For instance, *Limitations* were singled out in the SSC models (e.g., [Holmes, 1997](#)), and later frameworks introduced finer distinctions reflecting authors' greater efforts to sell their own research. For example, [Yang and Allison \(2003\)](#) included a separate *Evaluating methodology* step within the *Evaluating the study* move in their study of applied linguistics texts. [Lindeberg \(2004\)](#), in turn, identified *Explicit boosts of the current contribution* and *Gaps in previous research*, clearly highlighting the value of the authors' research in finance, management and marketing discussions. The *Suggesting applications of the work* step was later introduced by [Stoller and Robinson \(2013\)](#) (also see [Moreno & Swales, 2018](#); [Sheldon, 2019](#)).

Of particular relevance is [Lindeberg's \(2004\)](#) study of research promotion in discussion sections, where two types of explicit research promotion strategies were distinguished: direct and indirect. In her model, explicit promotion was considered direct when the text seeks to enhance the authors' own contribution by means of three overt evaluative functions: *Claims of centrality*, *Gaps in previous research* and *Explicit boost of the writers' own contribution*. In contrast, explicit promotion was indirect by making statements such as *Limitations and caveats* and *Suggestions for future research*. Although at first glance *Limitations* may seem to detract from the value of the contribution, [Lindeberg \(2004\)](#) suggested that they actually enhance its credibility, perhaps by providing information about the generalizability of the findings. In turn, *Suggestions for future research* increase the value of the contribution in terms of its "interest/fruitfulness" ([Lindeberg, 2004](#), p. 111).

The present study distinguishes between direct and indirect explicit research promotion strategies in the same sense. However, instead of just focusing on cross-disciplinary variation, as in [Lindeberg \(2004\)](#), it takes a mainly cross-cultural perspective. Furthermore, it adapts the author's taxonomy of promotion strategies in two ways. First, it added *Hypothesizing for future research* as an indirect promotional step, since this represents another way of inspiring interesting directions for further research without making explicit recommendations ([Moreno & Swales, 2018](#)). Second, the *Explicit boost of the writers' own contribution* step in [Lindeberg \(2004\)](#) was subdivided into three evaluative steps: *Contribution of the current study*, *Positive features of the current study* and *Applicability of results or usability of outcomes* to identify where the possible differences may lie (see Section 3.3).

These three steps appear separately in [Moreno and Swales's \(2018\)](#) new model of communicative functions in RA discussion sections. This recent model has the advantage of being specifically designed to carry out systematic cross-cultural studies of communicative functions in all RA sections, and it is illustrated with those identified in discussion sections from a wide range of disciplines. The term *communicative function* was preferred because the model explicitly distinguished nuclear rhetorical functions (i.e., moves/steps) from other communicative functions at their service, such as announcing

functions and elaborating functions (see Section 3.4). These distinctions are often overlooked in previous move analysis research but are essential for making meaningful cross-cultural comparisons (see Moreno & Swales, 2018). To identify research promotion functions rigorously, the current study thus applies Moreno and Swales's strengthened move analysis methods at the specific level of the step. Unlike their paper, which did not conduct cross-cultural comparisons, the current study does offer cross-cultural findings about the articulation of research promotion steps in SSC RA discussion sections through English and Spanish. The study is also innovative in its aim to explain the identified differences through qualitative methods.

2. The intercultural study

To explore research promotional steps from a cross-cultural perspective, Moreno and Swales's (2018) move analytical methods were combined with the theoretical and methodological CR framework proposed by Moreno (1998) (summarised in Connor & Moreno, 2005). This framework was, however, adapted in several ways in the current study to reflect the recent developments discussed in Section 1.2, and so that its comparative results can be more applicable in contexts where English is learned as a foreign language. Table 1 below summarises the procedural stages proposed in the revised framework which could be adapted to the study of other language pairs.

Table 1
Revised stages for applied intercultural rhetoric across English and other languages.

No	Procedural stage
0	Identify a real, perceived, or reported writing obstacle in English (WOE)
1	Formulate clear hypotheses about the relationship between the writing cultures relevant to the EFL writers of focus and rhetoric and/or style
2	Define the population of exemplary texts that can be considered comparable and specify the basis for the similarity constraints
3	Select a corpus of comparable pairs from that population with the collaboration of expert readers from the EFL writers' writing culture
4	Identify comparable textual units (e.g., coherence relations, announcements, steps, elaborations) and establish mutually exclusive qualitative categories
5	Validate those qualitative categories as recognizable text units in each culture
6	Annotate each text by segmenting it into units and assigning each unit to a category
7	Offer proof of annotation reliability
8	Establish the qualitative constants of focus and quantify their occurrence
9	Devise analytical criteria to describe the textual realizations of the constants
10	Apply the analytical criteria to describe their rhetorical and stylistic realisations
11	Juxtapose the resulting taxonomies across the sub-corpora
12	Compare the quantitative results for each comparable qualitative category
13	Interpret the significance of the possible differences by statistical analysis
14	Draw conclusions about the relation between writing cultures and rhetoric and/or style
15	Explain the reasons for the differences identified through qualitative research

Note: Bold face highlights the adaptations from Connor and Moreno (2005). (Copyright 2020 by Ana I. Moreno).

A comparison between this framework and the one in Connor and Moreno (2005) is made and rationalised in Supplementary material 1. The major adaptations introduced were the following. Stage 0 was added so that results can be more relevant for pedagogical purposes. Stage 1 emphasises a focus on rhetoric and/or style; Stage 2, on models of good writing; and Stage 3, on using expert readers from the EFL writers' writing culture to avoid imposing Anglo-American standards when teaching English for intercultural communication. Stage 6 encourages a systematic annotation of the corpus and, Stage 7, the use of reliability tests, to improve the quality of the results brought to the classroom. Stage 15 recommends the use of qualitative methods to explain the reasons for the cross-cultural differences identified. It should be noted that stages 9–10 were omitted in the present study, as it did not examine any stylistic or rhetorical aspect of the textual realisation of the constants, but the extent to which these were articulated.

2.1. The WOE

Stage 0 consists in the identification of a real, perceived, or reported WOE. The WOE initially identified was **failure to clearly highlight the research contribution to the field**. This WOE is frequently reported by Spanish social scientists (Gea-Valor et al., 2014; Mur-Dueñas, 2014, see Section 1). Interestingly, Mur-Dueñas's (2014) ethnographic analysis revealed an unconvincing overuse of the *Stating the contribution* step in the finance RA manuscript that received a recommendation for a major revision in comparison to a reference corpus in English. Apparently, the reviewers were not convinced about the authors' contribution because of the authors' lack of clear motivation and positioning, suggesting the need to investigate additional research promotion strategies. Thus, the present study examined the extent to which authors in the two writing cultures promoted their research not only in terms of its contribution (i.e., novelty, addition, or improvement), but also in terms of its need, relevance, quality/rigor, and usefulness. This led to the reformulation of the WOE as **Spanish social scientists' failure to promote their research in the expected explicit ways in RA discussion sections**.

2.2. The hypothesis and research questions

Based on the literature reviewed and the WOE redefined above, the main hypothesis of this study (Stage 1) is the following:

H: Authors of social science (SSC) RA discussion sections in Spanish are less explicitly promotional of their own research than authors of similar sections in English.

After testing this hypothesis, the following research questions will be posed, if relevant: a) where do the differences lie? and b) what is the cause of the identified differences?

3. Methods

3.1. The population

To define the population of comparable exemplary texts (Stage 2), a common platform of comparison was established by focussing on similar sections from the same disciplines within the SSC and the same subgenre, i.e., “empirical” RA (henceforth RA). Furthermore, given the influence of the *study type* factor on the structure and discourse style of discussion sections (Williams, 2011), the texts in each pair were proposed to be comparable in terms of their study type from a methodological viewpoint (e.g., experimental, survey-based, qualitative), as well as in terms of general topic, without being translation pairs. Other similarity constraints were the following: the texts had to be good models of writing in English, as published in English-medium journals, and of writing in Spanish, as published in Spanish-medium journals edited in Spain, irrespective of their impact factor. Their text quality had to be appreciated by Spanish expert readers in the SSC, as justified in Section 1.2. As also justified, at a generic level the texts had to be sections where the research results were not reported the first time around but were at least discussed, and conclusions were drawn from the study. In this paper, this multifunctional text block, which can be realised by a variety of text subdivisions and headings, i.e., just conclusion, discussion and conclusions separate, discussion and conclusion conflated, and/or other closing sections, will be referred to as the DC section (see Section 3.1 in Moreno & Swales, 2018, for further details).

3.2. The corpus

The only available corpus that met the similarity constraints established in Section 3.1 was the exemplary empirical research articles in English and Spanish (EXEMPRAES) Corpus (Moreno, 2013b, June), collected by the ENEIDA Team, under my coordination and in collaboration with 54 experts from a great variety of disciplines. Each RA in the corpus is divided into its major sections: abstracts, introductions and literature review sections, methods, results (and discussion) sections, and DC sections. As shown in Figure 1 below, the corpus contains 32 comparable pairs of exemplary RAs in English and Spanish from disciplines in four broad knowledge areas: SSC, life sciences, healthcare sciences and other natural sciences.

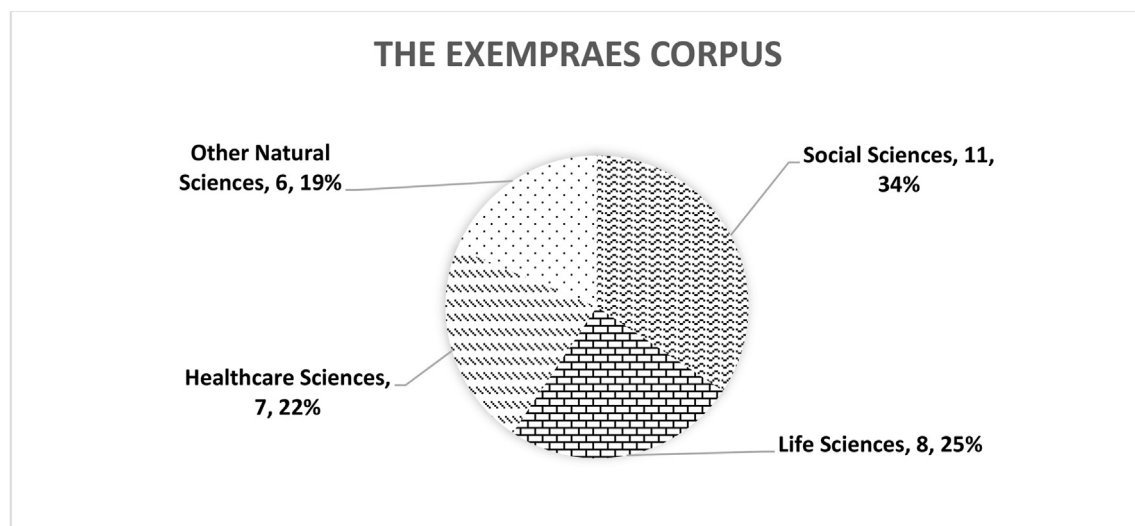


Figure 1. Number of comparable pairs of RAs in the exemplary empirical research articles in English and Spanish (EXEMPRAES) Corpus. (Copyright 2020 by Ana I. Moreno).

Of the 32 pairs, 11 belong to the SSC. For the present study, I chose all the pairs of DC sections available in this component except for the one in applied linguistics, a disciplinary field that would be the focus of future research. Table 2 shows the disciplines each SSC pair belongs to, the size of the RAs and of their DC sections in each language and the corresponding means and standard deviations, all expressed in number of words. Of the ten RA DC pairs selected, published between 2004 and 2012 (see full reference in Supplementary material 2), five belong to business and economics (BE) and the other five to other social sciences (OSSC): pedagogy, psychology, and sociology.

Table 2

Size of the corpus of social science (SSC) empirical research article (RA) discussion (and/or other closing) (DC) sections in English (Eng.) and Spanish (Sp.).

Pair			Eng. RA	Sp. RA	Eng. DC	Sp. DC
No	Code	Discipline	N	N	n.	n.
1	SCS02	Pedagogy	5,088	2,852	383	1,029
2	SCS03	Psychology	8,137	3,674	1,395	1,279
3	SCS04	Sociology	8,635	8,439	942	1,200
6	SCS05	Sociology	7,559	6,865	1,925	2,480
7	SCS06	Sociology	3,476	5,105	1,060	986
4	SCS07	Economics	13,096	6,780	2,048	1,000
5	SCS08	Applied Economics	9,155	15,135	1,313	1,674
8	SCS09	Applied Economics	4,640	5,816	517	1,032
9	SCS10	Applied Economics	6,257	8,999	419	876
10	SCS11	Applied Economics	5,871	6,317	917	853
Total number of words			71,914	69,982	10,919	12,409
M			7,191	6,998	1,092	1,241
SD			2,773	3,433	586	497

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Although it may be argued that 20 texts of this size constitute a small corpus, a pilot study on the rhetorical structure of DC sections based on a larger variety of disciplines (Moreno, 2015, October) revealed that ten pairs could offer sufficient data for the present quantitative comparisons. It is interesting to observe that the relative length of the DC sections in number of words is higher in Spanish than in English, the difference being statistically significant, $\chi^2 (1, N = 141,896) = 167.6572$, $p < 0.001$ (cf. Section 4).

3.3. The textual units

The comparable textual units in the present study, though, were the communicative functions articulated in the DC sections and interpreted from a genre-based perspective at a low level of generalisation (e.g., *Positive feature of the current or proposed study*). These functions were considered as the *tertium comparationis* at the propositional level of text analysis (Stage 4) against which differences in variables at this and other levels might be significant. The variables focussed on in this study were the distribution and frequency of occurrence of research promotion functions. All communicative functions in DC sections, including research promotion functions, had been previously validated in Moreno and Swales (2018) by interviewing authors from each writing culture (Stage 5).

3.4. Text annotation

To annotate the DC sections in the corpus for their communicative functions rigorously (Stage 6), I followed Moreno and Swales's (2018) methods. Accordingly, I first segmented each section into relevant text segments, also considering the authors' extra segmentation rules to deal with fuzzy boundaries. Propositions were considered relevant for this type of annotation, either in relation to the purposes of the whole section or to some surrounding proposition. The first type of propositions was analogous to Swales's (1990) steps, whose definition was made explicit in Moreno and Swales (2018) as follows:

A step is a text fragment containing 'new propositional meaning' from which a specific communicative function can be inferred 'at a low level of generalization by a competent reader of the genre' and is perceived as 'essential to advance the text' in the direction expected 'to achieve the purpose(s) of the (part-)genre in which it appears ...', and contain[s] at least one verb, whether finite, non-finite or elliptical, or a nominalization easily convertible into a verb phrase. (Moreno & Swales, 2018: 49)

I then interpreted the segments thus obtained for their specific communicative function. To do so, I adopted a simultaneous bottom-up and top-down approach and followed Moreno and Swales's (2018) recommendations for assigning functions in complex cases. A major difference was that, instead of using a corpus-driven approach to generate the categories of specific communicative functions, as explained in Moreno and Swales (2018), for the present study I applied a previously validated codebook (Moreno, unpublished) in a corpus-based fashion. A codebook is a document often used in qualitative

analysis research that includes a set of codes used for data analysis, together with their definitions and examples of how to apply the codes. The codebook for annotating DC sections used here was a seven-page document consisting of: 1) a coding scheme, i.e., a hierarchical list of communicative functions and their codes; 2) detailed definitions of each communicative function at a specific (and general) level; and 3) examples of each specific communicative function in the two languages, with highlighted signals (whether explicit or implicit) aiding interpretation (see the relevant parts of this codebook in Section 3.6).

The coding scheme for the entire DC section is shown in [Supplementary material 3](#), including translations of the functions into Spanish. This scheme consists of 25 mutually exclusive specific communicative functions grouped under seven general communicative functions, which belong to three major types: Announcing functions at the top, whose purpose is to announce rather than expound new propositional material in the scope of a proposition that is structurally independent of others; nuclear functions (or moves) in the middle, i.e., propositions whose role is essential to advance the text in the direction expected to achieve the specific purpose(s) of the section in which they appear; and elaborating functions at the bottom, i.e., propositions whose functional value is at the service of some move/step.

The specific research promotion functions the present study focussed on are grouped under two of the moves in the coding scheme: *Evaluating and/or situating the research* and *Drawing implications for future* (see highlighting). The rest of the functions are grouped under non-promotional moves (i.e., *Background information for the discussion*, *Summarizing or restating key results*, and *Commenting on key results or other features*). It should be emphasised that the general communicative functions, or moves (in capital letters), in the coding scheme were created at a later stage to group the specific functions (in lower case) identified, according to common purposes. This was done to be able to categorise and code every relevant segment at two levels of generality: general and specific, as is illustrated in the two tables in [Supplementary material 4](#). Each table shows the beginning of a DC section, one in English and one in Spanish, annotated in the way explained, with explicit, and/or implicit, signals of the function highlighted in the right column. To apply the codebook to all the relevant segments in the corpus in this way, instead of using the QSR NVivo 10 International software, I employed Microsoft Excel because it handled larger samples more efficiently and it allowed me to analyse and export the data in more convenient ways for the present study.

3.5. Reliability measures

One common criticism of annotating text segments for their communicative function in the way described above is that their interpretation may be subjective, so independent analysts are usually required. In [Moreno and Swales \(2018\)](#), my annotations as the main researcher of DC sections in a much larger variety of disciplinary fields were highly consistent (99.5%) with those of an independent coder using NVivo 10. This increased confidence in my reliability as an analyst for this study. However, given that the current study involved the annotation of a larger sample in a focused broad knowledge area group, the SSC, and this time no trained independent analyst was available, two further reliability reinforcements were employed (Stage 7). The first was to re-annotate most of the corpus using a different piece of software (UAM Corpus Tool) six months after my first annotations in Microsoft Excel. This “informal” reinforcement was important before proceeding, as the similarity of the results obtained across the two pieces of software reassured me that the codebook was sufficiently clear, and I was interpreting it consistently. Additionally, re-annotation in UAM Corpus Tool would help me prepare the work for future more linguistically oriented studies of the communicative functions.

The second check was formal and more innovative. It consisted in requesting the authors themselves in an iterative manner over two phases to consider the coding scheme and my Excel annotations exported to a Word document and to state their agreement with each one; and, in case of disagreement, provide an accurate annotation. After all, who better than the authors themselves to assess whether my functional interpretation of their text segments coincided with their intended meanings? In phase 1, 70% of authors responded to my request for participation (7/10). They agreed to a high degree with my coding (98.6%), and only the wording of three (out of 25) steps was revised in a minor way for clarity (see italics in [Supplementary material 3](#)). In phase 2, a new set of authors was approached, and an almost equally high response rate was obtained (6/10). In this phase, total agreement was achieved with the annotations. This represented a significant increase in reliability compared to previous methods (cf. [Peacock, 2002](#); [Sheldon, 2019](#)). A further minor revision was suggested for the wording of the evaluative move to make it a better descriptor.

3.6. The constants

The constants of focus in this study, i.e., research promotion strategies, were the eight steps highlighted in the coding scheme, five being directly promotional and three, indirectly promotional (Stage 8). Brief definitions, schematic examples in English (#E) and Spanish (#S) with highlighted signals (whether explicit, in bold, or implicit, preceded by *) taken from the codebook used in this study are shown below. Each example is followed by a code referring to their corresponding source text (see [Supplementary material 2](#)) and to the position of the segment in the text, in brackets (e.g., [SCS8ENG.26]):

The direct steps promote the authors' research in the following ways:

- 1 Stating the *Contribution of the current study* (CONTR) highlights the value of the research in terms of its novelty, addition, or improvement.
(1E) **This study is a first systematic attempt to demonstrate** the existence of ... (SCS8ENG.26)
(1S) ... **es, la primera vez, que** la formación del individuo **es introducida** como ... [Trans: ... **it is the first time that** the individual's training **is introduced** as ...] (SCS5SP.49)
- 2 Pointing out *Positive features of the current or proposed study* (POS) highlights the quality and soundness of the authors' research.
(2E) But, on the other hand, our list also **takes into account ... that enable to** accurately estimate ... (SCS5ENG.31)
(3S) **La consideración** formativa **del riesgo permite** evaluar ... [Trans: **The training value of risk allows to** evaluate ...] (SCS5SP.35)
- 3 Noting *Gaps or deficiencies in others' research or practice* or identifying a *problem* (GAP) highlights the need or motivation for the current research.
(3E) Especially in the case of investigating ..., **traditional inquiry methods are no longer sufficient** (SCS5ENG.86)
(3S) a nuestro juicio **dicha aproximación ha sido bien insuficiente** para ... [Trans: In our view, **such an approach has been insufficient** for ...] (SCS5SP.92)
- 4 Suggesting the *Applicability or usability of outcomes* (APP) highlights the usefulness of the research in future.
(4E) **This instrument allows to support ... with ...** (SCS5ENG.25)
(4S) Y, además, ... **podrán** hacerse una idea en cuanto a ... [Trans: And, furthermore, ... **they will be able to** have an idea of ...] (SCS8SP.41)
- 5 Stating the *Relevance of the topic and/or evaluating the state of knowledge or practice positively* (RELSTATE) situates the research in a positive light.
(5E) ... **it is of interest to** scrutinize the relationship between ... and ... (SCS4ENG.4)
(5S) **Una de las líneas más interesantes se refiere** al papel que desempeñan ... [Trans: **One of the most interesting lines refers to** the role played by ...] (SCS5SP.4)

In contrast, the indirect functions work towards increasing the credibility and/or the utility of the contribution, thus promoting it too, in the following ways:

- 6 Pointing out *Limitations of the current study* (LIM) shows awareness of the shortcomings of the researchers' study, increasing credibility.
(6E) ... (*one limitation is that) **the study design did not allow us to** examine ... (SCS3ENG.30)
(6E) En primer lugar (*una limitación es que) en **esta investigación se ha analizado de forma global** la ... [Trans: In the first place, (*a limitation is that) **this research has analysed ... globally.**] (SCS7SP.55)
- 7 Making *Recommendations for future research or practice* (REC) builds on the findings, and therefore indirectly reinforces the value of the study.
(7E) For the long-term sustainability of ..., businesses **should** develop. (SCS5ENG.55)
(7S) Y por otro lado, los directivos **deberán** fomentar ... [Trans: And, on the other hand, managers **should** encourage ...] (SCS8SP.48)
- 8 *Hypothesizing for future studies* (HYP) provides interesting directions for further research, increasing the perception of the researchers' expertise, and further promoting their contribution.
(8E) [In this paper, we focus on ...], [an important element in the innovation process,] but regional social capital **might influence** the effectiveness of ... [Another avenue for future research would be to ...] (SCS8ENG.67)
(8S) Pero además, ... y ... **tornan razonable la hipótesis de** ... [Trans: In addition, ... and ... **make the hypothesis about ... reasonable.**] (SCS4SP.39)

Having established the constants of the comparison, I then used Excel to quantify their occurrence in each sub-corpus independently (Stage 8) and to juxtapose the resulting taxonomies in the form of graphs and tables (Stage 11), which allowed me to compare their distribution and frequency across English and Spanish (Stage 12). It should be recalled that Stages 9 and 10 were not relevant to this study, as its aim was not to examine stylistic or rhetorical aspects of the textual realization of these constants. This will be the aim of further research.

3.7. Statistical analyses

To interpret the significance of the quantitative differences obtained (Stage 13), i.e., to determine whether the two groups of research promotion segments were distributed differently among the categories, a chi-square test of independence was performed, since no assumption about the normality of the distributions could be made. These calculations were performed automatically with the chi-square calculator for 5 × 5 (or less) contingency table ([Chi-Square Test Calculator](#)), as most conditions (sample size, expected cell counts, and independence) were met. A possible limitation might be found in the sample random condition as it is unknown whether each pair of comparable RAs in the SSC disciplines constituting the population had an equal probability of selection by the expert informants, a limitation that is shared by other corpus studies in our field. The results of each statistical test are shown in Section 4. Such results made it possible to draw conclusions about the relation between the writing culture variable and the distribution and frequency of research promotion functions (Stage 14).

3.8. The online survey

To investigate the reasons for the differences identified (Stage 15), I sent a pre-piloted Google Forms questionnaire to each group of authors in the language of their RAs (Spanish or English). Questionnaires for both groups (available from Author on request) were structured in the same seven sections. The first three sections included items to explore the following issues about the DC sections.

- A. The authors' views and reasons for using explicit promotional and non-promotional moves.
- B. Their views about the appropriate status of the five explicit direct research promotion steps, their reasons for including these steps, and their learning strategies for promoting their research directly in a DC section.
- C. Their perceived difficulty getting their RA published, the degree to which they had to change the research promotion steps to be accepted for publication, their degree of comfort including them and their previous publication experience.

The next three sections were exploratory. I asked those authors who had some publication experience in high(er)-impact English-medium journals (section D) to answer the same questions (section E) as in section C to allow a comparison of their responses between the two publication contexts. Section F elicited demographic and other contextual information. In Section G, authors were offered certificates of participation and a copy of the study upon request.

3.9. The participants

Table 3 below shows the characteristics of the authors that participated in the online survey.

Table 3

Demographics of the online survey participants from the sample of 20 business and economics (BE) and other social sciences (OSSC) authors.

Participant types	English		Spanish		Total	
	n	%	n	%	N	%
Gender						
Female	1	5%	2	10%	3	15%
Male	1	5%	3	15%	4	20%
Knowledge area group						
BE	1	5%	3	15%	4	20%
OSSC	1	5%	2	10%	3	15%
Total	2	10%	5	25%	7	35%

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As can be gathered from Table 3, the survey received a respectable response rate (35%). Although it must be acknowledged that a raw sample of seven participants was limited in size, one advantage is that it was balanced for gender and knowledge area group and respondents from both groups reported a variety of levels of publication experience. This offered me an opportunity to explore other variables to help us understand the cross-cultural patterns observed.

All authors in Spanish, whose first language was Spanish, reported having read RAs in English and Spanish rather or very frequently before they wrote their RA. Two of them received most of their relevant academic training in Spain and the UK or the USA. Of the two authors in English, only one, who had received most of her academic training in Canada, used English as a first language. The other respondent, whose first language was German, received most of his relevant academic training in the Netherlands. Only those authors who had been trained exclusively in Spain reported having changed some aspect of their research promotion evaluations in the DC section as a condition for publication.

4. Results and discussion

To test the main hypothesis that authors of SSC RA DC sections in Spanish are less explicitly promotional of their own research than authors of similar sections in English, I compared explicitly promotional and non-promotional move segments in the SSC across the two writing cultures. Figure 2 shows their distribution by language. It is first interesting to observe that, despite the Spanish texts being longer in number of words, the total number of move segments was practically the same across the two languages, i.e., 458 in English and 461 in Spanish. This supports the comparability of the corpora, while it also suggests that the use of more words in Spanish to achieve similar purposes may be an additional cross-cultural difference.

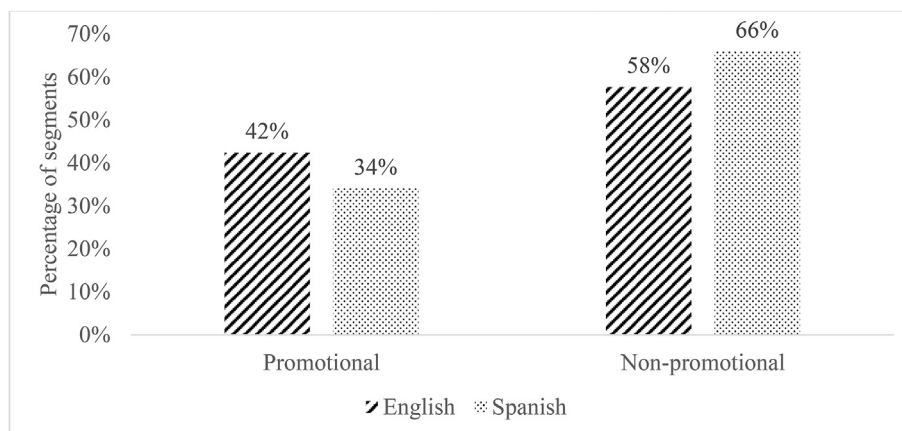


Figure 2. Explicitly promotional vs. non-promotional move segments in the social sciences by language. Percentages are rounded to the nearest whole number. (Copyright 2020 by Ana I. Moreno).

In support of the main hypothesis, Figure 2 shows that explicitly promotional segments were less frequent in Spanish (157) than in English (194), whereas the non-promotional segments were more frequent in Spanish (304) than in English (264). A chi-square test of independence showed that the relation between these two variables was significant, $\chi^2 (1, N = 919) = 6.7075, p < .01$. The reasons might be economic and/or social, including researchers' immersion in an increasingly consumer-oriented culture, and the greater competitiveness of modern science (Berkenkotter & Huckin, 1995), especially for those who publish in English-medium journals. However, the survey data suggested otherwise. Surprisingly, the two authors in English reported that there was not much competition for publication in their journal, whereas most of the authors in Spanish perceived their journal to be *bastante* [rather] competitive. Interestingly, most authors in Spanish also reported not having written on a local topic, suggesting that they were using Spanish to convey scientific knowledge transcending the interests of their local community of readers.

To explore possible interactions with other levels of culture, I looked more closely at the distribution of promotional and non-promotional move segments across knowledge areas grouped into BE and OSSC (see Figure 3). Although the tendency to include explicitly promotional move segments in BE seemed lower in English (66) than in Spanish (86), while it was the opposite for non-promotional segments (137 in English; 130 in Spanish), statistical evidence was not found to suggest a significant relation between these variables, $\chi^2 (1, N = 419) = 2.4141, p = .12$. However, for OSSC, the relation was significant, $\chi^2 (1, N = 500) = 23.4749, p < .001$. Authors in English included a greater number of explicitly promotional segments (128) than in Spanish (71), whereas authors in Spanish used more non-promotional segments (174) than in English (127). This suggests that the overall cross-cultural differences identified in the levels of explicit research promotion can be attributed to authors in the OSSC, who appeared to be more evaluative of their research in English.

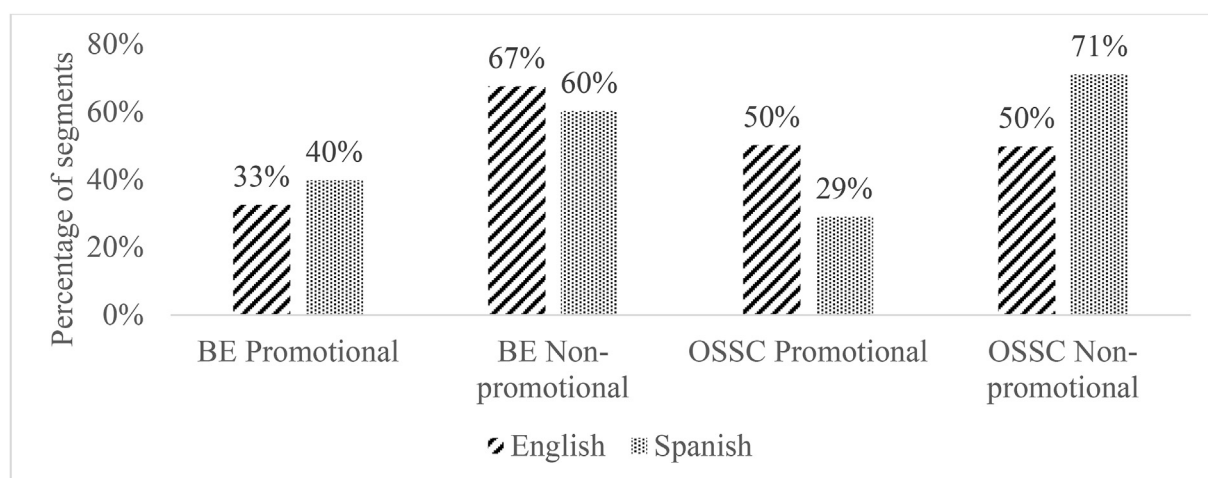


Figure 3. Explicitly promotional vs. non-promotional move segments by language and knowledge area group: business and economics (BE) and other social sciences (SSC). Percentages are rounded to the nearest whole number. (Copyright 2020 by Ana I. Moreno).

4.1. Direct versus indirect promotion

Having confirmed the main hypothesis, I set out to explore where the differences might lie and why. I first compared how explicit research promotion step segments were distributed into direct and indirect across English and Spanish. Figure 4 shows this comparison. As can be seen, the distribution of direct (174) and indirect (177) segments was balanced in both languages. Although in English the number of direct segments (100) was apparently higher than that of indirect (94) and in Spanish this tendency was the reverse (74, direct; 83, indirect), this distribution did not differ significantly by language, $\chi^2 (1, N = 351) = 0.6759, p = .41$.

The survey responses support this empirical result, as most authors believed that striking a balance between direct and indirect promotion is more persuasive. Moreno (2015, October) expressed this balance in the following verses of “The Discussion Section in Essence” Poem (see full poem in Supplementary material 5, inc. its Spanish translation), which represent research promotion functions, annotated below as ^D for ‘Direct’ and ^I for ‘Indirect’.

Remember this was our plan
 In view of what others have done^(D)
 [...]
 Our study has some limitations^I
 But, please, note its many innovations^D
 It makes a great contribution^D
 As it offers the desired solution^D

We now show a few implications^I
 We can make some recommendations^I
 Our results could well be applied^D
 But some things need to be clarified^I
 (Moreno, 2015, October)

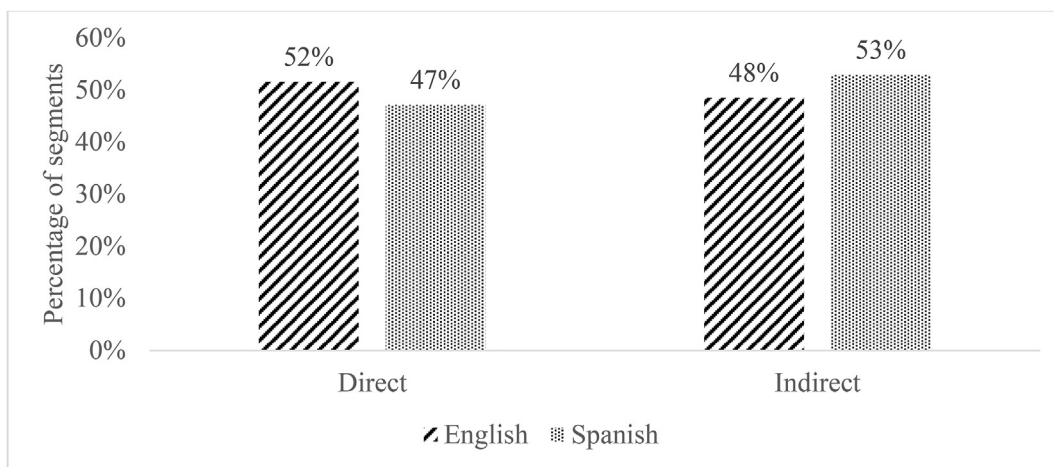


Figure 4. Explicitly direct vs. indirect promotional step segments in the social sciences by language. Percentages are rounded to the nearest whole number. (Copyright 2020 by Ana I. Moreno).

4.2. Distribution of direct and indirect promotion steps

Continuing my search for cross-cultural differences, I compared the distribution of step segments within each group, direct (174) and indirect (177), across the two languages. On the one hand, no evidence was found to suggest that there was a difference in the distribution of indirect segments (i.e., LIM, REC, and HYP) across the two languages, $X^2(2, N = 177) = 1.1521$, $p = .56$. On the other hand, the distribution of direct segments (POS, CONTR, GAP, APP and RELSTATE) was found to be significantly different, $X^2(4, N = 174) = 23.0679$, $p < .001$. This led me to explore the group of direct promotional steps further (see Section 4.3).

4.3. Direct promotion steps

I first assessed the degree to which direct steps were conventional in the DC section in the following way: those occurring at least once in 90–100% of the texts were considered obligatory; 60–89%, conventional; 30–59%, optional, as in Sheldon (2019); and those appearing in less than 30%, non-salient. This criterion is referred to as the *status* of the step. Table 4 sets out direct promotion steps in terms of their status from the most to the least conventional in the English corpus of DC sections, because English was the target language in this comparison, and there was a different order in Spanish.

Table 4

Status and distribution of the direct promotion steps in social science discussion (and/or other closing) sections by language.

Step	English				Spanish			
	Status*	n	%	M	Status	n	%	M
CONTR	90%	23	23	2.3	80%	32	43	3.2
POS	50%	32	32	3.2	40%	12	16	1.2
GAP	40%	16	16	1.6	40%	10	14	1
APP	30%	18	18	1.8	10%	2	3	0.2
RELSTATE	30%	11	11	1.1	50%	18	24	1.8
Total		100	100	10		74	100	7.4

Note: *Degree to which the step appears at least once: 90–100% = obligatory; 60–89% = conventional; 30–59% = optional; < 30% = non-salient. APP = Applicability or usability of outcomes; CONTR = Contribution of the current study; GAP = Gap or deficiency in others' research or practice, or problem; POS = Positive feature of the current or proposed study; RELSTATE = Relevance of topic and/or positive evaluation of the state of knowledge or practice. (Copyright 2020 by Ana I. Moreno).

Interestingly, while two of the direct research promotion step segments were more frequent in English than in Spanish (i.e., POS and APP), another two were more frequent in Spanish than in English (i.e., CONTR and RELSTATE), the latter findings being unexpected. In the next sub-sections, I consider direct promotional steps in turn.

4.3.1. Contribution of the current study

As Table 4 shows, CONTR statements appeared at least once in 90% of the texts in English, making them obligatory. Their average frequency in the present English sub-corpus (2.3) is comparable with that deduced from Peacock's (2002) findings about Business discussions in English as L1 (2.5). Interestingly, this average is higher than the average obtained by Mur-Dueñas (2014) in business management introductions (1.5) and conclusions (0.7). The higher frequency of CONTR statements in the DC sections of the present study suggests that these sections are becoming the promotional sections *par excellence* in English RAs. This might be explained by authors' awareness that discussions are the sections that readers nowadays consider the most important, as suggested in Pérez-Llantada (2013). However, this finding should not be extrapolated to other fields, given the effect of cross-disciplinary variation, as shown by previous studies (Lindeberg, 2004; Cotos et al., 2016). For instance, the *Statements of contribution* identified by Yang and Allison (2003) in applied linguistics were not nearly as frequent as those in the present study, even after summing up those occurring in discussions (0.5) and conclusions (0.46). Yet, these comparisons should be made with caution as the temporal frame of publication was not the same.

In the Spanish sub-corpus, CONTR statements appeared in 80% of the texts, supporting the main hypothesis at first sight. However, closer inspection of the data in Table 4 surprisingly showed that the number of CONTR statements in Spanish (32) was significantly higher than in English (23), $X^2(1, N = 174) = 8.0618, p < .01$. This finding supports neither the main hypothesis nor Mur-Dueñas's (2014) prediction of a lower frequency of these statements in lower-impact national [Spanish] publications. This unexpected result leads me to propose an alternative explanation for the observed "overuse" of *Statements of Contribution* in the introduction and conclusion of manuscripts submitted by Spanish scholars to English-medium journals (Mur-Dueñas, 2012a).

In the light of the present findings, the observed "overuse" might also be explained by the transfer of the authors' rhetorical habits in Spanish, since CONTR statements also seem to have become very important in the rhetorical structure of RA DC sections in this language. In fact, two of the surveyed Spanish authors in the present study reported having been requested by the corresponding Spanish journal to express their contribution more clearly. Furthermore, most authors considered the DC section as the most appropriate place for persuading the reviewers that their contribution was significant. This consideration may be the result of a recent general trend towards preferring to state CONTRs in DC sections, supporting Pérez-Llantada (2013) views about the standardization of contemporary scientific rhetoric.

4.3.2. Positive feature of the current or proposed study

POS was an optional step in DC sections in both sub-corpora (see Table 4). However, as shown in Table 4, the frequency of POS statements in English (32) was higher than in Spanish (12), the relation between these variables being significant, $X^2(1, N = 174) = 5.608, p < .05$. Comparison of these results with previous research suggests that this step is also affected by cross-disciplinary variation (cf. Yang & Allison, 2003). Although this study provides some evidence for this kind of variation in the use of POS statements (33 for OSSC vs. 11 for BE), the language of publication had a strong main effect; many more POS statements were used in English than in Spanish regardless of knowledge area.

These results are consistent with the general CR approach. Most of the Spanish authors surveyed reported not feeling comfortable about directly promoting the value of their research in the DC section. This may help to explain Spanish authors' tendencies to adopt a more neutral approach towards the foregrounding of their own research in these sections. POS statements are the evaluative version of some of the neutral, or descriptive, *Restating key features of the study* (KFS) statements within the *Background information* move (Moreno & Swales, 2018). Through KFS statements, writers (re-)state or remind readers of key features of the current study other than the results in a neutral way. When I compared KFS (68) with POS statements (44), it was found that the KFS ones were more frequent in Spanish (40) than in English (28), $X^2(1, N = 112) = 10.6917, p < .01$, supporting the idea of the more neutral approach taken by Spanish authors.

These findings suggest the interaction of another level of culture: the extent to which authors comply with the general principle of modesty which, in the case of Spanish scholars, was taken to the extreme. Indeed, according to the survey data, the majority of Spanish RA authors preferred to leave the responsibility for appreciating the value of the research in the readers' hands, with the other two, somewhat neutrally, admitting having used POS statements because they wanted to help the reviewers appreciate the quality and soundness of their research. In contrast, the two authors of the English RAs felt comfortable directly promoting the value of their research in this section. In particular, the author in OSSC reported having been explicitly trained to highlight her successes. Given that this author denied being boastful by nature, like the rest of the surveyed authors, it is possible that her training gave her greater confidence using POS statements.

4.3.3. *Gap or deficiency in others' research or practice, or problem*

GAP was also an optional step in both languages (see Table 4) and was the only one where there was no difference in its frequency of occurrence across the two languages, $\chi^2(1, N = 174) = 0.2069, p = .65$, unlike in RA introductions (Mur-Dueñas, 2010). According to the survey results, authors reported using GAPs in the DC section for promotional reasons. Indeed, four authors admitted stating them to help the reviewers appreciate the contribution of their research better. As the English author in sociology explained: "As for author's positioning – this is the game – identify the gap, promote your own work and, possibly, discount other research" (Personal communication, 4 March 2020).

4.3.4. *Applicability or usability of outcomes*

APP statements were also optional in English, averaging 1.8 occurrences per section (see Table 4), but not salient in Spanish. In fact, when compared to the occurrence of other direct step segments, the overall frequency of their use in English was significantly higher than in Spanish, $\chi^2(1, N = 174) = 9.7827, p < .01$. Closer inspection of the data revealed an interaction between the national culture and the disciplinary culture. In particular, the vast majority of APP statements (17 out of 20) occurred in OSSC RAs written in English, whereas the remaining three were in BE (1 in English and 2 in Spanish). The reasons for this are unclear, as all surveyed authors reported that their research was applied to a similar degree.

The differences may be related to the greater concern about promoting the benefits of social research and its impact in many countries around the world (Morgan Jones, Manville, & Chataway, 2017) since the beginning of the millennium. Arguably, the lower frequency of APP statements in Spanish was probably associated with the lack of a national science assessment policy that emphasised impact in the past. In fact, it was only recently that calls for research funding, like the *Retos Investigación* [Research challenges] scheme by the National Plan for R+D+i of the Ministry of Science and Innovation, started to give special emphasis to the transfer of results to society. Even a mild version of the "impact" agenda for applied research (the *sexenio de transferencia*) was not introduced until 2018 in the Spanish research assessment system (several years after the RAs in the present study were published). Given that researchers participating in these schemes are now expected to justify the spending of their research with reference to real-world benefits, future Spanish RAs are likely to include more APP segments in their DC sections.

4.3.5. *Relevance of topic and/or positive evaluation of the state of knowledge or practice*

RELSTATE was another optional step in both languages, with an average of 1.8 statements per section in Spanish versus 1.1 in English (see Table 4). In this case, Spanish authors articulated it significantly more frequently than authors in English, $\chi^2(1, N = 174) = 5.4363, p < .05$. The majority of Spanish authors reported that they thought readers would value their study more if they used RELSTATE statements in this section. As the survey revealed, most of them followed advice from such sources as their co-authors, paying attention to how others write, their PhD supervisor, a course in academic writing, or their personal style. In contrast, while one author in English agreed with the majority of the Spanish authors that it was helpful to remind readers of RELSTATE in DCs, the other reported trying to distribute it evenly across the introduction-literature review and DC sections. The survey data showed that the authors in English learned about the use of this step through the reviewers and editors of manuscripts.

As with other steps where there was some indication of potential cross-disciplinary variation, it is difficult to make comparisons with previous research (e.g., Cotos et al., 2016; Lindeberg, 2004; Yang & Allison, 2003). This is mainly due to differences in definitions, operationalisations, sampling and knowledge areas covered. Disciplinary variation may be a fruitful avenue for future research in this area using the current methods.

5. Conclusion

This study builds on previous research suggesting that scientific articles in English had become increasingly promotional of the "news" value of research (e.g., Berkenkotter & Huckin, 1995). The contributing factors cited were an augmented competitive environment in the modern sciences, and researchers' immersion in a market governed consumerist culture. Subsequent investigations suggested that promotion in English occurred to a greater degree in research article introductions than in conclusions (Lindeberg, 2004; Mur-Dueñas, 2014), and to a greater degree in RA introductions in English than in Spanish (Martín & León Pérez, 2014). This paper adds to this literature by exploring the promotional aspects of discussion (and/or other closing) (DC) sections in English and Spanish, particularly in view of the difficulties that Spanish researchers in the social sciences have reported in writing these sections in English (Gea-Valor et al., 2014).

Given the lack of evidence on the full range of research promotion strategies from a contrastive rhetoric (CR) perspective, this study compared the extent to which they were used at the step level in DC sections published in English and Spanish-medium journals. This was achieved by using highly comparable but independent sub-corpora of DC sections in the two languages and applying Moreno and Swales's (2018) strengthened move analysis methodology and coding scheme to segment and annotate the texts. An important methodological and unusual triangulation innovation was accomplished by asking the authors of the RAs, themselves, to check moves, steps, coding, and signals. This, together with an online survey, also allowed for the exploration of cross-cultural issues, fully situating the study in the recent intercultural rhetoric tradition (Connor, 2004, 2011).

The main findings tended to support the CR approach. For instance, the set of promotional steps that were identified in the corpus (five, direct; three, indirect, following Lindeberg, 2004), were, overall, used less frequently in Spanish than in English. Interestingly, the differences did not appear to be related to degrees of perceived competitiveness of journals in the two languages, according to the Spanish authors surveyed in this study. Rather, the differences may be conventional for the specific knowledge areas of the RAs: authors in business and economics seemed to be less promotional than those in other social sciences like psychology, sociology and pedagogy. The reasons for this would be speculative at this stage; a cross-disciplinary focus in future studies will be illuminative (cf. Martín & León Pérez, 2014).

Closer inspection of the more clearly distinguishable promotional steps in the coding scheme revealed that the major differences lay in the distribution of direct promotional steps. DC sections in English included a high frequency of *Positive features of the current or proposed study*, suggesting that these sections are evolving more towards greater promotion of the "quality" value of research than of its "news" value. The more neutral approach adopted by Spanish researchers may be cultural, as Spanish authors reported that they preferred to leave the appreciation of the good features of their research in the hands of the reader. DC sections in English also contained more segments about the *Applicability of results or usability of outcomes*. It is likely that some of this is due to the earlier advent of new science assessment policies emphasising the social impact of research in many countries around the world than in Spain.

Unexpectedly, analyses revealed that *Stating the contribution of the current study* was more frequently used in the Spanish than the English DC sections. This supports Pérez-Llantada's (2013) views about the standardization of contemporary scientific rhetoric. The current trend revealed by the present study was a preference to state CONTRs in DC sections. Given some of the Spanish authors' experience of having to express their contribution more clearly in the review process of their previous articles, the higher use of such statements observed in Spanish may be the result of a strategy to err on the side of caution. Also notable was Spanish authors' higher use of *Stating the relevance of the topic or evaluating the state of knowledge or practice positively* segments. Such findings may reflect an overall pattern of assimilating advice obtained in the general process of socialisation into academic writing for publication purposes. This is likely to be an interesting topic for future research.

Overall, this study demonstrates that social scientists writing in Spanish are less promotional of their own research in RA DC sections than those writing similar sections in English. Furthermore, authors across the two publication contexts have different preferences for promoting their work. Explanations for the pattern of differences observed may be situated in the complex interactions at different levels of culture. These range from general communication principles (e.g., the degree to which "academic modesty" is observed in each context), to specific disciplinary conventions, through an array of science assessment policy interventions and different processes of socialisation into academic writing. The observation of how different levels of culture affect the inclusion of specific steps demonstrates how social scientists' promotional approach in DC sections should not be essentialized by exclusive reference to monolithic cultural writing traditions. They can also be seen as the result of researchers' responses to new communication needs. Thus, in the light of the present findings and because of the new assessment policy interventions that are taking place in Spain, it is expected that Spanish researchers will focus more on highlighting the applicability of their results in future RAs.

The disadvantages of the relatively small size of the corpora, and the survey sample in this study, are outweighed by the advantages of being able to do a detailed and systematic annotation of the texts for their communicative functions. This is usually a daunting task, frequently acknowledged by previous researchers. This study had a further strength: it is probably the first time that the text annotations have been validated by the majority of the authors themselves, boosting their reliability. Of course, the length of time that had elapsed following the publications of their RAs (2004–12) may have had a bearing on the accuracy of authors' reports. Arguably, some of the potentially negative effects of this may have been mitigated by authors' focused recognition memory (as opposed to recall) by asking them to reflect on the moves and steps in the validation process, and in the survey parts of the study.

The present comparative findings may help explain some of the writing obstacles in English (WOEs) faced by Spanish SSC authors when writing DC sections in this language in terms of the CR and RT approaches. Further WOE could be explored in similar ways, following examination of Spanish authors' manuscript histories, and complemented with surveys and interviews (as in Gea-Valor et al., 2014; Lillis & Curry, 2010; Mur-Dueñas, 2014; Pérez-Llantada, 2012).

Pedagogical implications of the findings of this study are also apparent. For instance, Spanish social scientists will benefit from explicit training to help them highlight the possible superior quality of their research without feeling uncomfortable. Spanish social scientists may be made more aware of the purposes of research promotional statements by finding them in two model DC sections, one in English and one in Spanish, and discussing the cross-cultural differences observed and the reasons for them, before observing similar texts in their own fields. Such discussion could follow, or precede, the presentation of 'The Discussion section in Essence' Poem (Moreno, 2015, October), whose verses represent the essential steps identified in RA DC sections.

Acknowledging the implied criticism of the hegemonic status of English as a language of scientific communication (Canagarajah, 2002), the pedagogical approach framing such tasks should attempt to be pragmatic, evidence based, and critical. Pragmatic in attempting to show Spanish researchers ways to fulfil the expectations of English-medium journals, reducing their extra burden in the publication process, thus making them more competitive. Evidence based in that, rather than imposing the Anglo-American norms, the approach should aim to help Spanish researchers understand the reasons for accommodating to a different audience, using data from systematically conducted research. Furthermore, far from accepting the superiority of Anglo-American over Spanish academic writing conventions, it should critically recognise the important status of Spanish as a language of communication in the social sciences (Gea-Valor et al., 2014). Indeed, adopting a functional perspective to the comparison of English and Spanish DC sections ensures that one language is not privileged over the other, and contributes to the description and explanation of Spanish as a current language of scientific communication (cf. Swales, 1997).

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Appendix A. Supplementary data

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