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TO BE, OR NOT TO BE, *SELF-CRITICAL*? WRITING DISCUSSION AND/OR CLOSING SECTIONS IN ENGLISH AND SPANISH SOCIAL SCIENCE RESEARCH ARTICLES

Abstract

Research article Discussion and/or Closing (DC) sections represent the last opportunity to convince readers of the validity of the researchers' own study, specifically its conceptual value and methodological soundness. However, writing these sections for publication in English-medium journals is especially challenging for authors for whom English is not a first language, especially so for Spanish social scientists. In this paper, I hypothesise that one reason for the difficulties felt by these authors is that the conventions for being self-critical, such as in stating the limitations of the study, in these sections for publication in Spanish-medium journals edited in Spain differ from those followed in comparable sections published in English-medium journals. Using move-step analysis methodology, this study compared the self-critical segments in ten pairs of comparable social science DC sections from the Exemplary Empirical Research Articles in English and Spanish (EXEMPRAES) Corpus. The study found that researchers in English were more critical about the quality, both positive and negative, of their own study. In contrast, researchers writing in Spanish were more inclined to focus on its contributions. These differences were explored further through email interviews amongst a sub-sample of authors. Implications for intercultural rhetoric and English for research publication purposes are discussed.

221

Key words

research article, discussion and/or closing section, move analysis, research evaluation, self-critical attitude, intercultural rhetoric.

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1. INTRODUCTION

The research article (RA) is the preferred academic genre for most researchers around the world, including Spanish researchers (Bordons et al., 2017). The trend towards publishing RAs in English continues to grow due to its essential role in the advancement of knowledge, as a means for authors' international recognition, and for increased promotion prospects (Curry & Lillis, 2017; Lillis & Curry, 2010). However, writing an RA is not an easy task, especially for those researchers for whom English is not their first language (EFL) (see e.g. Flowerdew, 1999; Hanauer & Englander, 2011; Pérez-Llantada, Plo, & Ferguson, 2011). Thus, since the 1980s many applied linguists have turned their attention to studying the rhetorical and linguistic features of RAs with a view to helping EFL authors acquire relevant skills to improve their chances of publication success in English-medium journals (e.g. Cotos, Link, & Huffman, 2016; Swales, 1981/2011, 1990, 2004). These types of efforts have materialised in specific pedagogic proposals and/or resources (e.g. Corcoran, Englander, & Muresan, 2019; Fortanet Gómez et al., 2002; Moreno, 2010; Moreno & Sachdev, 2019; Swales & Feak, 2012). Moreno (2010), for instance, proposed raising EFL authors' awareness of cross-cultural differences in the rhetorical strategies preferred by RA authors across English-medium journals and those published in their L1s. As the author argued, this would help EFL scholars understand some of their difficulties in the publication process in English.

Specifically, the Discussion and/or Closing (DC) sections of RAs have been reported as the most challenging for Spanish social scientists writing in English (Gea-Valor, Rey-Rocha, & Moreno, 2014). One reason proposed for this is that, since these are the sections where authors need to persuade readers of the conceptual value and methodological soundness of their study, they are the most evaluative ones (Flowerdew, 1999). In the case of Spanish social scientists, it has been suggested that their difficulties writing these sections could be related to differences in their cultural attitude "towards previous academic works, and their own findings" (Moreno et al., 2012: 172), making it difficult for them to know how to achieve the expected persuasive purposes appropriately in English. It is not surprising that Spanish social scientists report agreeing to a high degree that their awareness of cross-cultural differences between RAs in English and Spanish would help them to improve their English for research publication purposes (Gea-Valor et al., 2014).

In order to understand such findings, the Exemplary Empirical Research Articles in English and Spanish (EXEMPRAES) Corpus was compiled to allow the study of cross-cultural differences between these two languages by knowledge areas (Moreno, 2013). The RAs in this compilation were not translation pairs. Instead, they were independent RAs in English and Spanish paired according to relevant variables, such as their overall topic, methods, expected audience and persuasive capacity (Moreno, 2013). Drawing a sample of 15 comparable RA pairs from a wide range of disciplinary fields in this corpus, Moreno and Swales (2018) developed a modified move-step analytical methodology that could serve to

annotate the RAs for their communicative functions systematically and reliably to establish a baseline for cross-cultural studies. The major feature of this methodology, in relation to the traditional one (Swales, 1981/2011, 1990, 2004), derives from the fact that it is better able to distinguish the moves-steps *proper*, which may be considered the nuclear text segments of a genre, from other text segments at their service, such as announcements and elaborations. Another feature comes from the validation of the communicative functions obtained with a sample of the RA authors themselves.

Applying this methodology has begun to identify English-Spanish cross-cultural differences in the critical attitude of authors towards research in DC sections. For example, using the same sample as above, Moreno (2014) revealed that *Limitation* statements, which are communicative functions specialised in displaying a negative critical attitude towards the researchers' own studies, were included in twice as many DC sections in English as in Spanish. However, given that the sample was heterogeneous in terms of knowledge areas, it is unknown whether the differences affect all knowledge areas similarly.

Previous studies offering comparable data from DC sections across English and other languages as L1 have cast some light that might help to explain the difficulty of EFL authors with being self-critical in English DC sections. For instance, Amirian, Kassaian, and Tavakoli (2008) compared twenty DC sections in Applied Linguistics (AL) written in international English with twenty in Persian as L1, and twenty in English by Persian EFL writers whose manuscripts had been rejected by international journals. In their study, the evaluative step of *Limitations* was reported to be included by over twice as many authors in English (85%) as in Persian (40%), in line with Moreno (2014). In the EFL sample, it was used at a point between the two levels (55%). The researchers interpreted this difference as a possible sign of Persian authors' reluctance to reveal their studies' weak points. However, not only was this explanation speculative, but one may also wonder how many *Limitations* are appropriate to state per DC section, as no frequencies of occurrence of this function were offered.

Recent cross-cultural research into DC sections in AL has offered more precise frequency data about the inclusion of *Limitations*. For instance, Sheldon (2019) also compared them across three comparable samples from AL in English as L1, English as L2, and Spanish as L1. However, her results about English conflict with those of Amirian et al.'s (2008). Sheldon characterised *Limitations* as an 'optional' move, rather than as a 'conventional' step, due to their relatively low occurrence: 39% and 17% in English as L1 and English as L2, respectively. Surprisingly, her results in English as L2 were lower than in Spanish as L1 (33%), a counterintuitive finding that received no explanation. Given Spanish social scientists' difficulty stating them in English (see section 5), is acknowledging fewer *Limitations* an avoidance tactic? To make matters more complicated for ELF writers, previous research has found the frequency of *Limitations* in English to be affected by cross-disciplinary variation (see

section 2). External generalizability of findings about *Limitations* in AL to those in other social sciences may be difficult to do.

A further cross-cultural study compared the critical attitude of social scientists other than applied linguists (henceforth, SSC) in RA DC sections published in English-medium journals (henceforth, English) *versus* in Spanish-medium journals edited in Spain (henceforth, Spanish) (Moreno, 2021). Based on a focused sample of 10 comparable pairs of SSC DC sections from the EXEMPRAES corpus, Moreno showed that these sections in English were more promotional of the authors' own research than those in Spanish. Specifically, the DC sections in English 'directly' promoted the authors' own study by including more statements about *Positive features of the current study* and about the *Applicability of results or usability of outcomes*. Interestingly, researchers in Spanish appeared to include more statements about the *Contribution of the current study*, as well as positive statements about the *Relevance of the topic or the state of knowledge or practice*. However, Moreno (2021) did not systematically analyse 'indirect' promotional statements such as *Limitation* statements (Lindeberg, 2004), which enhance the authors' credibility despite apparently detracting from the value of the contribution. Thus, it is unclear how the inclusion of *Limitations* statements in SSC DC sections varies across the two contexts and why.

In an attempt to clarify the situation, the present study systematically compared all positive and negative statements made about the authors' own study (i.e. self-critical segments) in the same sample of DC sections from the EXEMPRAES Corpus as Moreno (2021) before focusing on *Limitation* statements. Using Moreno and Swales's (2018) move-step analytical methodology, this comparison is framed within intercultural rhetoric research (Connor, 2011), whose procedural steps were revised in Moreno (2021). Particularly, the study is situated within intercultural 'academic' discourse analysis (Moreno, 2010), as it is ultimately concerned with the accommodations (and/or negotiations) that RA EFL scholars need to make to achieve their intercultural 'academic' communication goals successfully and their underlying reasons. To explore these, the research reported here is mainly cross-cultural in that it compares the same self-critical functions across two cultural writing contexts. The next section provides a review of previous relevant studies that have used move (and step) analysis as the primary method for the identification of specific communicative functions in RA DC sections in English and other languages, with a special focus on statements of *Limitations*.

2. MOVE-STEP ANALYSES OF DISCUSSION AND/OR CLOSING SECTIONS

Over the last four decades, there has been a growing body of research that has had as its focus the generic structure of DC sections in English (e.g. Basturkmen, 2012; Berkenkotter & Huckin, 1995; Cheng, 2020; Cotos *et al.*, 2016; Holmes, 1997; Hopkins

& Dudley-Evans, 1988; Kanoksilapatham, 2005; Joseph & Miin-Hwa Lim, 2019; *Lindeberg, 2004*; Nwogu, 1997; Parkinson, 2017; *Peacock, 2002*; *Yang & Allison, 2003*). The studies in italics are those that include social science RA DC sections in their corpora. A common feature to all these studies is that they draw on move analysis (Swales, 1981/2011), an essential component of Swales's genre analytical framework (1990). In this framework, moves are defined as "discoursal or rhetorical units performing coherent communicative functions in texts," their length being variable (Swales, 2004: 228-229). In contrast, steps are the more specific text fragments that "together, or in some combination, realize the move" in such a way that "the steps of a move primarily function to achieve the purpose of the move to which it belongs" (Biber, Connor, & Upton, 2007: 24). Along similar lines, the present study conceives of text fragments as meaningful when they fulfil coherent communicative functions that can be interpreted at two levels: general, like moves (e.g. *Evaluating research*); and specific, like steps (e.g. stating a *Limitation of the current study*).

All these works have made important contributions to help us understand the multiple rhetorical purposes of a DC section in English by segmenting and labelling texts in terms of moves (and steps). For instance, Cotos et al. (2016) found the frequency of occurrence of statements of *Limitations* as one of the most variable across disciplines, in agreement with Lindeberg's (2004) crossdisciplinary study of RAs in social science fields. The former authors clearly showed that in disciplines such as Arts and Humanities, Business and Education, Economics, Sociology, and Psychology and Applied Linguistics, the statement of *Limitations* was more frequent than in the rest of disciplines as a whole, except for a few cases (Cotos et al., 2016). Thus, the study of *Limitation* statements in social science DC sections is particularly important. Yet, consistent with findings by Peacock (2002), Cotos et al. (2016) identified much fewer *Limitations* in Language and Linguistics than in Business. This suggests that extreme caution must be exercised in generalising findings on *Limitations* to all social sciences.

Despite the popularity of move analysis since its conception, several methodological issues need to be considered, especially when conducting cross-cultural research (Moreno & Swales, 2018). One issue is the annotation of some segments as a move-step. For instance, announcements of communicative functions such as "This study has some limitations" must have been annotated in most previous studies as part of the segments fulfilling moves-steps since no extra category has been devised to assign them to (e.g. Moyetta, 2016: 97; an exception is Boonyuen & Tangkiengsirisin, 2018). Similarly, elaborations of functions, such as the exemplification of a *Limitation*, must have been included either as part of the *Limitation* segment (cf. Yang & Allison, 2003), or annotated as a separate move segment (e.g. Sheldon, 2019). However, as Moreno and Swales (2018) argue, such segment types are not strictly moves-steps themselves because they do not contribute to moving the text forward, although they are relevant in relation to a neighbouring move-step segment. Thus, an analytical framework that distinguishes

among three major types of communicative functions, i.e. moves-steps *proper*, announcements and elaborations, would be more suitable for establishing meaningful cross-cultural comparisons of *Limitations*.

Also problematic is the great variability in the existing conceptualisations of moves. For instance, Yang and Allison's (2003) widely used move-step taxonomy of DC sections conceived of *Evaluating the study* as a move consisting of three different steps (*Indicating limitations*, *Indicating significance/advantage* and *Evaluating methodology*). In contrast, Cotos et al. (2016) conceived of the same step, *Addressing limitations*, as a realisation of the *Framing the new knowledge* move, while the similar *Stating the value* step was considered a realisation of the *Establishing additional territory* move. This makes comparisons of results across cultures at the move level difficult. As there seems to be greater consensus among analysts about the conceptualisation of self-critical segments at the step level, this level is considered more suitable for cross-cultural comparisons.

Yet, the labels and definitions of a few of the self-critical steps are unclear. For instance, one of the steps in the *Evaluating the study* move in Yang and Allison (2003), *Evaluating methodology*, overlaps in meaning with two others: *Indicating limitations* and *Significance/advantage* of the study. The major problem emerges when the authors of the taxonomy explain that the purpose of the *Evaluating methodology* step in DC sections is to note strengths and weaknesses of research methods. Thus, the methodological question that immediately arises when categorising segments noting weaknesses or strengths of the researchers' own methodology is whether, in the former case, they should be annotated as *Evaluating methodology* or as *Indicating limitations*; and whether, in the latter case, they should be classified as *Evaluating methodology* or as *Significance/advantage* of the study. A similar problem is observed in cross-cultural studies of English versus other languages as L2 that have followed this model (e.g. Amnuai & Wannaruk, 2013). Clearly the use of self-explanatory labels for move (and step) categories that are mutually exclusive is important.

Another methodological uncertainty occurs when trying to use existing taxonomies, given the constant evolution of genres. For instance, self-critical segments where the target of the evaluation is previous research were previously unidentified in DC sections (e.g. Holmes, 1997), but would presently need to be classified separately too (e.g. Moreno, 2021). A further concern is the use of the orthographical sentence as the segmentation unit in most previous move (and step) analyses (e.g. Moyetta, 2016; see a review in Moreno & Swales, 2018: 48). Arguably, quantitative cross-cultural studies of *Limitations* ought to annotate all the corresponding segments separately, irrespective of their grammatical structure, so that valid comparisons can be made. Finally, the highest possible reliability levels should be aimed for, given the subjective nature of pragmatic interpretation involved in move-step analyses. For instance, Moreno and Swales's (2018) move-step methodology was applied to the comparison of research promotion segments across English and Spanish (Moreno, 2021). The results showed that not only did

the level of agreement for steps rise to 99.51%, improving that of previous studies (cf. Peacock, 2002), but the level of agreement for announcements and elaborations was 100%, even in the absence of explicit definitions.

In conclusion, an analytical framework such as that presented by Moreno and Swales (2018) is proposed to be more suitable for the current cross-cultural study for the following reasons: its distinction between announcements, moves-steps *proper* and elaborations; its proposal to interpret segments at the specific level (e.g. *Limitations of the current study*) before classifying them as part of a move (e.g. *Evaluating research*); its use of mutually exclusive and validated labels for functions; its adoption of a truly functional approach, where meaningful segments may not necessarily correspond to the orthographical sentence; and its capacity to produce higher reliability levels. Thus, the present study will use Moreno and Swales's (2018) methodology to find out the extent to which authors of comparable SSC RAs in English and Spanish include segments for being self-critical, both positively and negatively, in their DC sections, and what general criteria of evaluation they employ. Its new focus on negative self-critical segments, considered as cases of indirect research promotion, will contribute to completing the picture offered in previous comparisons of the research promotional nature of RAs across English and Spanish. To achieve these aims, this study will compare the following rhetorical variables involved in displaying authors' critical attitude towards their own study across English and Spanish:

- 1) the status, or degree of conventionality, of each self-critical step;
- 2) the frequencies of occurrence of each segment type;
- 3) the polarity of the evaluation (i.e. positive/negative); and
- 4) the general evaluation criterion used (i.e. contribution/quality).

227

These variables are rhetorical in so far as they are indicative of the conventions followed by research authors to achieve the overall purpose of persuading readers of the value of their study in a DC section in their field. In this study, quantitative differences from text analyses are complemented with a qualitative approach specifically designed to increase convergent validity by using email interviews with the authors of RAs themselves.

3. METHODS

This section reports on the characteristics of the SSC DC sections in English and Spanish that were compared, the units of comparison, the coding scheme used for labelling the units, or segments, the operationalisation of the rhetorical variables under comparison, as well as the statistical tests, and qualitative methods used for explaining relevant differences.

3.1. The sample

This study was based on a sample of 20 DC sections, 10 in English and 10 in Spanish, taken from highly comparable empirical RAs drawn from the EXEMPRAES Corpus (Moreno, 2013). The RAs belong to the following SSC disciplines: Pedagogy, Psychology, Sociology, Business, and Economics (see reference details in Appendix 1). Table 1 displays the sizes of the RAs and DC sections in each language, or sub-sample:

Size of 10 text pairs	Eng. RAs	Sp. RAs	Eng. DCs	Sp. DCs
Total number of words	71914	69982	10919	12409
<i>M</i>	7191	6998	1092	1241
<i>SD</i>	2773	3433	586	497

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Table 1. Size of the sample of social science (SSC) empirical research article (RA) Discussion and/or Closing (DC) sections in English (Eng.) and Spanish (Sp.)

As can be seen, the DC sections in both sub-samples are on average lengthy texts of over 1,000 words. The high comparability of the RAs in each pair in terms of size, disciplinary field, study type (e.g. surveys, tests, and other quantitative data), audience, and persuasive capacity, as perceived by the expert informants that recommended each RA pair (Moreno, 2013), makes them suitable for this comparison (such variables would be expected to influence the status and frequency of self-critical segments). Five of the pairs were from Business and Economics (BE) and five from the other social sciences (OSSC, i.e. Pedagogy, Psychology, and Sociology), allowing me to explore possible interactions between the context of publication and disciplines. Arguably, researchers in BE are more likely to share features in their writing that are different from those in the OSSC due to different academic conventions and training.

It is also noteworthy that researchers writing in English had a variety of mother-tongues including English (from UK, Canada, and USA), Danish, Dutch, and German (but not Spanish, an issue to be explored in future studies). All researchers writing in Spanish had Castilian Spanish as a mother tongue except one who was Argentinian. The journals in Spanish had been edited in Spain, so that the research could better capture the rhetorical preferences of Spanish scholars, who were the participants to which the results of this study were especially addressed.

3.2. Segmenting the DC sections into comparable units

Following the move-step analytical methods proposed in Moreno and Swales (2018), the DC sections were first segmented into text fragments performing specific communicative functions that could serve to achieve the multiple purpose(s) of DC

sections. Thus, the comparable units in this study were neither the words nor the orthographical sentences, necessarily. Instead, for a segment to be considered meaningful from this perspective, it had to contain one proposition including “at least one verb, whether finite, non-finite or elliptical, or a nominalization easily convertible into a verb phrase” (Moreno & Swales, 2018: 49). In addition, for a segment to be considered a step *proper*, it had to contain “‘new propositional meaning’ from which a specific communicative function could be inferred ‘at a low level of generalization by a competent reader of the genre’ and was perceived as ‘essential to advance the text’ in the direction expected ‘to achieve the purpose(s) of the (part-)genre in which it appears.’” (Moreno & Swales, 2018: 49). Interpretation of the communicative function of all the segments was guided in a corpus-based (or deductive) rather than corpus-driven (or inductive) fashion by the hierarchy of 25 specific communicative functions, or coding scheme, proposed for DC sections by Moreno and Swales (2018) (see a revised version in Table 2, section 3.3.)

The above procedure is illustrated with the analysis of the following extract including segments 43-46 from the DC section in SSC7ENG (see Appendix 1).

- (1) [There are several limitations of this research]⁴³ [that should be considered when interpreting its findings]⁴⁴. [Firstly, we did not research the moderating effect of the relationship between e-service quality and customer]⁴⁵ [due to time and complexity]⁴⁶. (SSC7ENG.43-46).

Following Moreno and Swales (2018), this extract was segmented into four meaningful segments, each taking on its own specific communicative function. Segment [43] in (1), “There are several limitations of this research”, was announcing, rather than expounding, the limitations of the study. Hence, it was not considered a step *proper* but an announcement. Segment [44], “that should be considered when interpreting its findings”, contained new propositional meaning essential to achieve one of the purposes of the section. It was specifically interpreted as *Making a recommendation for future*. Hence, it was a step *proper*. Segment [45], “Firstly, we did not research the moderating effect of the relationship between e-service quality and customer”, also contributed essential new propositional meaning from which the specific function of stating a *Limitation* was inferred. Hence, it was also a step *proper*. And segment [46], “due to time and complexity”, was a verbless segment easily convertible into the finite proposition [because it was time-consuming and complex] which served to justify the *Limitation* without including essential new propositional meaning. Hence, it was not a step *proper*, but an elaboration.

229

3.3. The coding scheme for labelling the steps

Once each DC section was segmented into meaningful segments, they were labelled according to the specific communicative function inferred from them. To interpret these specific functions, a combined bottom-up and top-down approach (e.g.

Flowerdew, 2002) was followed. Basically, the bottom-up inferential process occurred when the words in each segment were interpreted to perceive the semantic meaning of the corresponding proposition(s). The top-down inferential process occurred when such semantic meaning was combined with some relevant assumption(s), e.g. those retrieved from other meaningful propositions in the neighbouring text and/or about the conventional purposes of a DC section, to interpret its pragmatic purpose. Since this interpretation was corpus-based (i.e. deductive), I drew on the 25 specific communicative functions in Moreno and Swales's (2018) coding scheme for DC sections. Importantly, instead of imposing such categories on the data narrowly, I allowed some scope for revision, wherever necessary.

To facilitate the top-down processing, I focused on the text signals in the segment of focus, or in its co-text, that could lead me to a given relevant pragmatic interpretation. For instance, in example (1), the clause "There are several limitations of this research" generated assumptions that led me to predict a series of upcoming *Limitation* statements. Thus, when I read the beginning of the sentence "Firstly, we did not research...", the conjunct 'Firstly' led me to infer that the content of this segment would specify the first *Limitation of the current study*, a pragmatic interpretation that was reinforced by the semantic meaning of the personal pronoun 'we' referring to the researchers, and therefore, to their study, in combination with the negative meaning of the particle 'not' before the action verb 'research'.

The 25 specific communicative functions in Moreno and Swales's (2018) coding scheme for DC sections appeared classified into seven major categories of general communicative functions: 1) *Announcing function*; 2) ***Background information for the discussion***; 3) ***Summarizing or restating key results***; 4) ***Commenting on key results or other features***; 5) ***Evaluating research***; 6) ***Drawing implications for future***; and 7) *Elaborating*. The ones highlighted in bold correspond to the moves *proper*. These were conveniently placed in the central part of their taxonomy, as the steps realising these moves are the nuclear communicative functions that make the DC section move forward towards achieving its expected purpose(s), around which the other two groups of functions, announcements and elaborations, revolve. Thus, after assigning a segment to a specific communicative function, it would be simultaneously assigned to one of the general communication functions from 1) to 7) above. The procedures worked well, as all functions had been validated with informants from the two publication contexts (Moreno & Swales, 2018). However, given that the present sample was more discipline specific, I also validated my annotations of the segments with most of the authors of the RAs themselves, leading to a minor revision of the coding scheme (see Table 2, and full details in Moreno, 2021).

CODE	COMMUNICATIVE FUNCTION
AF	ANNOUNCING
SEC	Announcing (sub)section
EXT	Announcing or referring to an external source or another text part
MSP	Announcing move, step or proposition
BGI	BACKGROUND INFORMATION FOR THE DISCUSSION
KFS	Key feature of current study
RWC	Information reported with citations
POC	Information provided without citations
SUM	SUMMARIZING OR RESTATING KEY RESULTS
NRES	Presenting result neutrally
CRES	Contrasting result with authors' own result
HRES	Highlighting result
COMM	COMMENTING ON KEY RESULTS OR OTHER FEATURES
MEAN	Establishing meaning of result
COMP	Comparing with previous research
EXPL	Explaining results or other phenomena, or discussing effects
PRED	Making a prediction
REACT	Reacting to result or another feature
EV	EVALUATING AND/OR SITUATING THE RESEARCH
POS	Positive feature of current or proposed study
CONTR	Contribution of current study
LIM	Limitation of current study
RELSTATE	Relevance of topic or positive evaluation of the state of knowledge or practice
GAP	Gap or deficiency in others' research or practice, or problem
IMP	DRAWING IMPLICATIONS FOR FUTURE
REC	Recommendation for future research or practice
APP	Applicability or usability of outcomes
HYP	Hypothesis for future research
ELF	ELABORATING
JUST	Justifying
EXEM	Exemplifying
CLAR	Clarifying

Note: This table is adapted from supplementary material 3 (Moreno, 2021), which in turn is a minor revision of Moreno & Swales (2018). (Copyright 2017 Elsevier Ltd.).

Table 2. Coding scheme of general and specific communicative functions in the DC section

Of this framework of 25 specific communicative functions and seven general communicative functions, the segments the present study focused on were used to

realise three of the steps under the general communicative function of *Evaluating and/or situating the research*: those whereby authors evaluate their own study (henceforth self-critical segments) (see light grey area in Table 2), as opposed to those whereby authors evaluate others' research (see dark grey area). Thus, the comparable segments of focus were those performing three mutually exclusive evaluative steps (see examples in English (#E) and Spanish (#S) from the current sample below): a) stating a *Positive feature of current or proposed study* (henceforth, *Positive feature*); b) stating the *Contribution of current study* (henceforth, *Contribution*); and c) stating a *Limitation of current study* (henceforth, *Limitation*). The examples of these types of segments are shown in schematic form with the signals of the functions highlighted in bold.

a) *Positive feature* (POS)

English	(2E) A strength of this study is the use of multiple measures of ability.... (SCS6ENG.33)
Spanish	(2S) Una de sus características positivas es la amplitud de la muestra, ... (SCS3SP.36)
Trans.	' One of its positive features is the large size of the sample, ... ' (SCS3SP.36)

b) *Contribution* (CONTR)

English	(3E) One interpretation of this is that our methods provide a new way to document the existence of discrimination. (SCS10ENG.18)
Spanish	(3S) Este resultado aporta nueva evidencia respecto a la influencia que ejerce el ... sobre el ... (SCS11SP.6)
Trans.	' This result provides new evidence about the influence of ... on ...' (SCS11SP.6)

c) *Limitation* (LIM)

English	(4E) One of the limitations of this study is the low response rate of ...%. (SCS11ENG.41)
Spanish	(4E) Otra limitación del estudio es que la muestra puede haber sido heterogénea ... (SCS7SP.67)
Trans.	' Another limitation of the study is that the sample may have been heterogeneous ... '(SCS7SP.67)

While the first two types of segments, a) and b), display a positive attitude towards the authors' own study (henceforth, positive self-critical segments), the third, c), exhibits a negative attitude towards it (henceforth, negative self-critical segments).

On the other hand, while the segments in a) and c) evaluate the quality of the authors' own study, the segments in b) evaluate its contribution, in terms of its novelty, addition, or improvement.

Table 3 below illustrates how the type of self-critical segments that this study is especially concerned with, i.e. c) *Limitations*, were annotated after their segmentation within Excel, the software used to analyse the data. The table presents the segments in their context of use as they are all part of the same extract from DC section SSC7ENG (see Appendix 1). The two rightmost columns show how each segment (see middle column) was coded for its specific and general communicative functions. The meaning of the corresponding codes can be checked in Table 2 (see section 3.3).

CASE	LANG	TEXT	N	RESEARCH ARTICLE SEGMENT	SIGNALS	SPECI-GENER
347	ENG	SSC07ENG	42	<p> Research limitations and future research </p>	Research limitat	MSP AF
348	ENG	SSC07ENG	43	<p> There are several limitations of this research	There are sever	MSP AF
349	ENG	SSC07ENG	44	that should be considered when interpreting its findings.	should be consid	REC IMP
350	ENG	SSC07ENG	45	Firstly, we did not research the moderating effect of the relationship between e-service quality and customer satisfaction	firstly (*the first	LIM EV
351	ENG	SSC07ENG	46	due to time and complexity.	due to	JUST ELF
352	ENG	SSC07ENG	47	This limitation of the study would be interesting for future research. </p>	This ... would be	REC IMP
353	ENG	SSC07ENG	48	<p> Secondly, application of this research in different business and settings such as business-to-business in both cross-sectional and longitudinal studies could also help extend the validity of these findings. </p>	application of th	REC IMP
354	ENG	SSC07ENG	49	<p> Thirdly, not all of the diverse factors that moderate the relationship between customer satisfaction and customer loyalty were discussed in this study.	(*Another limita	LIM EV
355	ENG	SSC07ENG	50	Besides customer perceived value, further studies might also benefit from focusing on a wider range of variables, possibly exploring the effect of involvement, convenience orientation, and switching costs for example.	further studies n	REC IMP
356	ENG	SSC07ENG	51	In addition, a more comprehensive model might be developed. </p>	a more compreh	REC IMP
357	ENG	SSC07ENG	52	<p> Fourthly, repurchase intention and WOM were integrated into customer loyalty.	(*Another limita	LIM EV
358	ENG	SSC07ENG	53	However, some studies have shown that marketing programmes can have different effects on different customer behaviours.	some studies hav	RWC BGI
359	ENG	SSC07ENG	54	It would therefore be interesting to conduct further research	It would therefore	REC IMP
360	ENG	SSC07ENG	55	to examine the different behaviours of customer loyalty. </p>	to...	JUST ELF
361	ENG	SSC07ENG	56	<p> Finally, within the broad business-to-customer grouping, this study considers e-commerce in general	this study consid	LIM EV
362	ENG	SSC07ENG	57	and does not focus on any particular type of website.	and	CLAR EI

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Table 3. Excel annotations of the DC sections in the EXEMPRAES Corpus for their communicative functions

As also shown in Table 3, the third column from the right indicates the signals, or text items, that led me to interpret the specific communicative function of each segment. When there were no explicit signals, I retrieved them from the context, included them in brackets after an asterisk (e.g. (*another limitation of the study), at segment 49) and validated them with most of the informants (see Moreno, 2021). As shown in the middle column, some of the meaningful segments were indeed shorter than one orthographical sentence (e.g. 45 and 46; and 56 and 57). Annotating the segments performing announcements and elaborations (i.e. 42, 43 and 46, 57, respectively) separately allowed me to clearly identify the self-critical segments to investigate the effect of the publication context, English vs. Spanish, on the rhetorical variables of focus (see below).

3.4. The rhetorical variables

I operationalised the four rhetorical variables compared across the two languages (i.e. status, frequency, polarity, and general evaluation criteria) in the following ways:

1) To compare the *status* of the self-critical steps (i.e. their degree of conventionality), I considered them obligatory if they occurred at least once in 90-100% of the texts; conventional (if 60-89%); optional (if 30-59%), as in Sheldon (2019); and non-salient (if in less than 30%).

2) To compare the *relative frequency* of the self-critical segments, instead of normalising their absolute frequency in relation to the number of words in each sub-sample, I did so in relation to the absolute frequency of meaningful segments in the immediately higher-level category in the coding scheme, or taxonomy.

3) To compare the *polarity* of the self-criticisms involved, I further annotated the segments as 'positive' or 'negative' depending on whether the attitude displayed by the authors towards their own study was positive (i.e. through *Positive feature* and *Contribution* statements) or negative (i.e. through *Limitation* statements).

4) To compare the *general evaluation criteria* involved in the self-criticisms, I further annotated the segments as 'contribution' or 'quality' depending on whether the authors were focusing on the novelty, addition, or improvement brought about by their study (i.e. through *Contribution* statements) or they were focusing on the quality of their study (i.e. through *Positive feature* and *Limitation* statements).

234

3.5. Statistical analyses

I performed various chi-square tests of independence to interpret the significance of the quantitative differences observed, i.e. to determine whether the two sub-samples of self-critical segments in each test were distributed differently among the categories, since no assumption about the normality of the distributions could be made. I used the chi-square calculator for 5 x 5 (or less) contingency table (Chi-Square Test Calculator, 2018), as most conditions (sample size, expected cell counts, and independence) were met. It is unlikely that the expert informants used a random approach, given the requirements for compiling the comparable pairs of RAs.

3.6. The interviews

To further explore the authors' motivations for stating (or not) *Limitations*, I interviewed a sample of ten authors by email (see an extract from the three-section interview in Appendix 2). The first section dealt with their preferences about managing *Limitations* in RA DC sections. This included two interview items which asked them to rate a list of reasons for a) stating *Limitations*; and b) for not stating or

not stating more *Limitations* than they would have liked in a DC section, on a five-point Likert scale. The second section elicited personal and professional information about the authors and the third one asked them about their experiences writing and learning to write RAs. Responses were obtained from 50% of the sample. This sample of five authors was fairly evenly balanced: two authors in English (one, whose L1 was Danish and one, German; both of whom received most of their post-graduate training in English) and three authors in Spanish. Relevant qualitative findings are outlined in the ‘Results and discussion’ section to aid to the reliability and validity of my findings.

4. RESULTS AND DISCUSSION

This study investigated the relationship between the context of publication (English vs. Spanish) and the status, frequency, polarity, and general evaluation criteria involved in the self-critical segments of SSC RA Discussion and/or Closing sections. To contextualise the results on self-critical segments, comparative results are presented in a top-down fashion. Using all segments in the sample, I first compare evaluative vs. non-evaluative step segments. Second, using all the evaluative segments, I compare critical statements about the authors’ own study (i.e. the present concern) vs. those about others’ research. Next, using all self-critical segments, I explore interactions between the language and the four rhetorical variables. Finally, I compare *Limitations* across Business and Economics (BE) and other social sciences (OSSC), excluding AL, to explore possible interactions with more specific disciplinary contexts.

4.1. Evaluative vs. non-evaluative step segments

Table 4 offers the absolute and relative frequencies (and the means and standard deviations) of evaluative and non-evaluative step segments in DC sections by language. It also shows the number of DC sections in each sub-sample that include at least one meaningful segment of the corresponding type so that its *status* in the DC part-genre may be properly assessed.

Communicative function segments	English					Spanish				
	N	%	M	SD	Status	n	%	M	SD	Status
Step segments										
Evaluative	109	19.9	10.9	10.8	10	90	15.7	9.0	8.7	10
Non-evaluative	349	63.8	34.9	8.5	10	371	64.8	37.1	8.4	10
Subtotal	458	83.7	45.8	17.6	10	461	80.5	46.1	16.2	10
Non-step segments	89	16.3	8.9	5.7	10	112	19.5	11.2	6.2	10
Total	547	100.0	54.7	23.0	10	573	100.0	57.3	19.9	10

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Table 4. Proportion of evaluative step segments in social science Discussion and/or Closing sections by language

As can be seen in Table 4, although Spanish DCs were longer in number of words (see Table 1), the number of step segments across the two corpora was practically the same, i.e. an average of around 46 per DC section, no statistically significant differences being found, $X^2(1, N = 1120) = 2.0392, p = .153294$). These results overall indicate that authors of DC sections in English and Spanish tended to include a similar number of step segments to achieve the purposes of the DC section, adding to the comparability of the sub-samples.

Table 4 also shows that the evaluative segments were obligatory in both contexts, since at least one case was included in every of the ten DC sections in each sub-sample. This contrasts with their optional status obtained in studies involving AL (Amnuai & Wannaruk, 2013). Statistical analyses revealed no significant difference between the number of evaluative and non-evaluative step segments as a function of publication context, $X^2(1, N = 919) = 2.4765, p = .115557$). Thus, it would be difficult to conclude that authors in English are more evaluative of research in general than their Spanish counterparts, despite being more promotional (Moreno, 2021).

4.2. Self-critical segments vs. segments evaluating others' research

Table 5 below offers quantitative results to compare the distribution of the evaluative segments across the two sub-samples according to the target of evaluations: whether the authors' own study (i.e. through self-critical segments) or others' research.

Evaluative segments	English					Spanish				
	N	%	M	SD	Status	N	%	M	SD	Status
Of authors' own study	82	75.2	8.2	6.6	100	62	68.9	6.2	4.4	100
POS*	32	29.3	3.2	3.9	50	12	13.3	1.2	2.7	40
LIM	27	24.8	2.7	2.2	80	18	20.0	1.8	1.8	70
CONTR	23	21.1	2.3	1.4	90	32	35.6	3.2	2.7	80
Of others' research	27	24.8	2.7	7.1	50	28	31.1	2.8	7.1	60
GAP	16	14.7	1.6	4.1	40	10	11.1	1.0	1.7	40
RELSTATE	11	10.1	1.1	3.8	30	18	20.0	1.8	5.8	50
Total	109	100.0	10.9	10.8	100	90	100.0	9.0	8.7	100

(Copyright 2021 by Moreno). *The meaning of the codes can be checked in Table 2 (section 3.3.)

Table 5. Distribution of evaluative segments in social science Discussion and/or Closing section according to the target of evaluations by language

As shown in Table 5, the only obligatory self-critical step in English was that of *Contribution* (CONTR), while in Spanish, despite being more frequent, this step was not obligatory but conventional. *Limitation* (LIM) was conventional and, therefore,

highly relevant too in both contexts, while *Positive feature* (POS), *Gap or deficiency in others' research or practice, or problem* (GAP) and *Relevance of topic or positive evaluation of the state of knowledge or practice* (RELSTATE) were only optional in both. Overall, patterns of frequencies were significantly different across the two languages, $X^2(4, N = 199) = 13.7492, p < .01$. To explore where the differences lay, I first examined the relation between the publication context and the target of the criticisms. This was not statistically significant, $X^2(1, N = 199) = 0.9909, p = .319517$. Next, I focused on self-critical segments.

4.3. Self-critical segments

Whereas the relationship between the publication context and the polarity of the criticism (i.e. positive vs. negative) was not statistically significant, $X^2(1, N = 144) = 0.2493, p = .617602$, that between the publication context and the general criteria of evaluations (i.e. contribution vs. quality) was significant, $X^2(1, N = 144) = 8.3046, p < .01$. As Table 5 shows, twice as many critical comments about own-study quality were made by authors in English (59) than by authors in Spanish (30). However, authors in Spanish made more critical comments about their study contribution (32) than authors in English (23). In the DC section, authors in English seem to have a greater need to communicate evaluations of their research quality, both negative and positive, than of its novelty, addition, or improvement in relation to previous studies. Moreno (2021) suggested that Spanish researchers' relative reluctance to make *Positive feature* statements is probably cultural, due to their higher observation of the academic principle of 'modesty'. The author also concluded that their greater inclusion of *Contribution* segments could well be the result of their experience in the publication process with Spanish journals, which often required them to state their contribution more clearly.

4.4. Limitation segments

Analyses of the frequency of *Limitations* across disciplines, grouped into BE and OSSC, revealed significant differences, $X^2(1, N = 45) = 5.688, p < .05$. While numbers of *Limitations* in the BE group in both languages were broadly similar (13 in English and 15 in Spanish), those in the OSSC group were greater in English (14) than in Spanish (3). It is also noteworthy that the similarity levels found for English across disciplines offer support for Cotos et al.'s (2016) observations.

To understand the cross-cultural difference identified, I used anonymised findings of the email interviews conducted as part of the qualitative phase of this study. These suggested that the common reasons for stating *Limitations* in the DC sections in the two publication contexts were preventing readers from over-generalising the researchers' findings, and warning readers about what cannot be

concluded from them. However, consideration of authors' secondary reasons indicated a more complex understanding of the role of *Limitations* in these sections. Specifically, authors in Spanish also reported including *Limitations* "to create a niche for suggestions of future research". In contrast, the secondary reasons provided by authors in English included "to display your expertise by showing your awareness of the shortcomings of your own study", and "to anticipate potential criticism and ward off criticism" (in agreement with Cotos et al., 2016). Negative self-criticism for Spanish interviewees seemed to be directed towards future development of the field, while authors in English appeared to use it as an indirect tactic for creating a positive impression or for self-protection.

Different concerns were revealed when interviewees were asked about their reasons for *not* including more *Limitations* (than they would have liked). For the authors in Spanish, these concerns were mainly audience considerations (e.g. "because the anticipated reader would not understand the intricacies of your study" and "because it was not necessary"). In contrast, for the authors in English the concerns were related to the composition of the paper (e.g. "due to space limitations" or "because you had already mentioned them in another section of the article"), as if assuming that such statements were required. Interestingly, one Spanish author admitted not including a larger number of *Limitation* statements "in order not to detract more from the value or contribution of your study", as if such statements could be self-damaging. This motivation echoes Amirian et al.'s (2008) in their research on Persian authors in AL. Arguably, the higher frequency of reporting *Limitations* for those who publish in English may be also related to a belief that such transparency in DC sections is likely to be favourably perceived (Tedeschi, 1981) and also self-protective. This perception is more likely to be promoted by the journals in English, as only one author in English reported having been requested to point out limitations that they "could not address through revisions."

5. CONCLUSION

Based on the annotations of 20 social science Discussion and/or Closing (DC) sections from the EXEMPRAES Corpus, this study is, to the best of my knowledge, a first systematic attempt to explore the relationship between the context of publication (English vs. Spanish) and authors' display of critical attitude towards their own research. The findings show that authors of DC sections in English evaluate the quality of their own research more frequently than those in Spanish, both positively and negatively. Clear differences were found in statements of *Limitations* in DC sections from the other social science (OSSC) fields such as Psychology, Sociology, and Pedagogy. Given that *Limitation* statements can be considered indirectly promotional (Lindeberg, 2004), this paper also contributes further to the overall characterisation of RA authors in English as more promotional of their own research relative to their Spanish counterparts (Moreno, 2021).

Additionally, the qualitative component of the study has uncovered more complex understandings of the role of *Limitation* statements in these sections, as well as some differing secondary concerns that might explain the extent to which *Limitations* were acknowledged in these sections. These findings generally reinforce an approach based on intercultural rhetoric (Connor, 2011), and specifically, intercultural academic discourse analysis.

Although the representativeness and generalizability of this research is to be empirically verified in the future, especially given its small scale, the use of the RA authors in follow-up interviews allowed for less speculative interpretation of the evidence from the highly comparable sub-samples of DC sections in Spanish and English. The self-critical segments, including *Limitations*, identified through the modified move-step analytical methods used, will allow future studies to perform comparisons of other rhetorical and linguistic features of these segments in useful ways. It is hoped that the study will serve as a model in future research, possibly exploring disciplines from other knowledge areas and other languages, while engaging a larger number of authors.

In view of the differences identified in the general evaluation criteria involved in the self-critical statements across English and Spanish, it is perhaps not surprising that many Spanish social scientists feel uncertain when writing DC sections in English. Despite their greater efforts to make statements of *Contribution*, this study suggests that their manuscripts may not be sufficiently convincing of the soundness of their research if they do not evaluate the quality of their study to the expected extent in these sections. Future studies in intercultural rhetoric research could use these comparative results to explore the possible negative effect of transfer (Connor, 2011; Moreno, 2010) of Spanish OSSC authors' tendency to include fewer *Limitations* when they write DC sections for publication in English. Considering that the statement of *Limitations* is conventional in OSSC but only optional in AL in English (Sheldon, 2019), my findings argue for the provision of relevant training for OSSC researchers. The variations are so subtle, and discipline bound, that they are unlikely to be clearly perceptible unless scrutinised, as in the present study, before being used in training sessions.

The training of Spanish OSSC researchers could take the form of a workshop in writing for publication purposes in English including a cross-cultural component that offers a comparative view of the statement of *Limitations* in the DC section (e.g. Moreno & Sachdev, 2019). Drawing on the current findings, this type of participants could be advised to make at least two *Limitation* statements to evaluate the quality of their research in their DC section in English. They could also be encouraged to identify these statements in two small comparable samples of RA DC sections in English and Spanish in their own fields. Their own confirmation of the extent to which the acknowledgement of the study limitations varies according to the type of audience could help them feel more comfortable when revealing some of 'the weaknesses of their studies' in English. Implications for authors' editors and translators of Spanish OSSC RA authors' manuscripts in(to) English for publication

in an international journal are also apparent. Their awareness of the status of *Limitation* statements in DC sections across these two languages could increase their confidence in requesting Spanish social scientists to produce the expected number. Obviously, if self-critical statements are not present, or not so to the expected degree, it will be impossible to edit, or translate, them in(to) English; and, if they are overused, reviewers may request to delete them. In either case, the resulting manuscript may need to be revised, even if edited or translated by an English-as-L1 speaker, leading to a form of intercultural communication breakdown.

Notwithstanding, far from accepting the superiority of Anglo-American rhetorical conventions for writing DC sections, this study recognises the legitimate rhetorical preferences of social scientists for self-criticism in these sections in Spanish. Spanish was, and continues to be, a well-established vehicle for scientific communication in the social sciences around the time the RAs in the present corpora were published (2004-2012). In fact, scientific production in Spanish has shown a tendency to grow from the 1990s and, in 2015, 75% of this production was distributed between the social sciences, healthcare sciences and arts and humanities (Instituto Cervantes, 2015). After 2015, however, this trend started to reverse again (Instituto Cervantes, 2020), suggesting the renewed relevance of the current findings to Spanish social scientists wishing to disseminate their research in English.

The increasing merger between the Spanish and English RA writing contexts in the last few decades, where Spanish social scientists also frequently read RAs in English, combined with their motivations to publish in English (Gea-Valor et al., 2014), is likely to have led to a fair degree of convergence in academic rhetoric. In accordance with accommodation theory applied to multilingual communication (Sachdev, Giles, & Pauwels, 2013), these authors will have adopted (or will need to adopt) some of the self-critical strategies for writing these sections in English, even in the absence of explicit teaching. After all, such convergence is likely to have been (or will be) rewarding (Sachdev et al., 2013). Explicit training will be an effective catalyst.

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[Appendix 1](#)

[Appendix 2](#)