

An intercultural study of first-person plural references in biomedical writing

Oana Maria Carciu

Universidad de Zaragoza (Spain)

oana_carciu@hotmail.com

Abstract

This paper carries out a contrastive analysis of biomedical research articles published in international English-medium journals and written by scholars from two cultural contexts (Anglo-American and Spanish). It first describes both similarities and differences in terms of the rhetorical effects that first-person plural references (“we”, “our” and “us”) create across the different sections of the IMRaD pattern (Swales, 1990). Then, the functions of these pronouns are explored following Tang and John’s (1999) taxonomy of the discourse roles of personal pronouns. Quantitative results show that, overall, Spanish writers tend to use “we” pronouns more than their native counterparts, thus making themselves more visible in their texts particularly in Introduction and Discussion sections. On the other hand, results also indicate striking similarities regarding the discourse role of “we” as “guide”, “architect”, “opinion-holder” and “originator” –roles which seem to indicate writers’ awareness of the specific communicative purposes of “we” references in each RA section. This cross-cultural variation is finally discussed in relation to the dominance of English as the international lingua franca of academic communication and research (Benfield & Howard, 2000; Tardy, 2004; Giannoni, 2008a).

Key words: contrastive rhetoric, personal pronouns, research articles, biomedical writing, English as a lingua franca.

Resumen

Análisis intercultural de las referencias de primera persona del plural en textos biomédicos

Este artículo lleva a cabo un análisis contrastivo de artículos biomédicos publicados en revistas internacionales (publicadas en inglés) y escritos por investigadores de dos contextos culturales (el angloamericano y el español). En primer lugar, el artículo describe las semejanzas y diferencias entre estos textos

en lo que se refiere a los efectos retóricos que realizan las referencias de plural de primera persona (“we”, “our”, “us”) en las distintas secciones de la estructura IMRaD (Swales, 1990). En segundo lugar, el artículo analiza las funciones discursivas del pronombre de primera persona de plural (“we”) siguiendo la taxonomía de funciones propuesta por Tang y John (1999). Los resultados cuantitativos indican que, en general, los investigadores españoles tienden a utilizar con más frecuencia el pronombre de primera persona de plural, haciéndose así más visibles en sus textos, especialmente en las introducciones y en las discusiones de sus artículos. Asimismo, el análisis contrastivo revela notables semejanzas en los roles discursivos de “we” como “el guía”, “el arquitecto”, “el que mantiene la opinión” y el “creador de las ideas”; roles éstos que indican que los investigadores de los dos contextos culturales analizados son conscientes de los usos comunicativos específicos de “we” en las distintas secciones retóricas del artículo de investigación biomédico. Finalmente, el presente artículo valora esta variación intercultural en relación con el predominio del inglés como lengua franca de comunicación internacional en el ámbito académico e investigador (Benfield y Howard, 2000; Tardy, 2004; Giannoni, 2008a).

Palabras clave: retórica contrastiva, pronombres personales, artículo de investigación, textos biomédicos, inglés como lengua franca.

Introduction

In academic writing, the use of the personal pronoun may be considered as a result of the writers’ effort to order things in the real world and then, after creating an order, to reproduce it through language, in a discursive world regulated by institutional norms deeply embedded in specific community practices (Swales, 1990 & 2004; Fairclough, 2003; Hyland, 2005; Ädel, 2006). Medical research articles (henceforth RAs) generally involve the collaborative work of different research group members. As a result, the referential value of the first-person plural pronoun in co-authored medical RAs has come to encode an “exclusive-collective” reference (Ädel, 2006).¹ Exclusive “we” emphasizes personal involvement and responsibility in the research process by showing the researchers as actively involved in a disciplinary community working for the development and progress of their discipline.

Several researchers have referred to the various discourse functions of the personal pronoun “we” considering also its inclusive and exclusive values in native academic spoken English (Rounds, 1987; Fortanet, 2003).

Furthermore, a rich line of investigation has explored cross-cultural variation in the use of personal pronouns in academic writing, mainly as regards the comparison of different disciplinary domains (Hyland, 2000), genres (Hyland, 2000 & 2001; Samraj, 2002; Stotesbury, 2003; Martín Martín, 2005) or European languages (Breivega et al., 2002; Salager-Meyer et al., 2003; Peterlin, 2005; Van Bonn & Swales, 2007). However, in spite of the rise of English as the lingua franca of international academic communication, contrastive studies have revealed noticeable differences between native and nonnative writers of English in the use of personal pronouns in international research articles (Valero-Garcés, 1996; Candlin & Gotti (eds.), 2004; Lorés, 2004; Martín Martín, 2005; Mur, 2007, among others). In order to have their papers published in prestigious international “English-only” journals (Belcher, 2007), nonnative English scholars (henceforth NNES) tend to adopt the Anglo-American discursive practices and yet retain some of their L1 rhetorical conventions when they write in English. This mixing of discourses has been referred to as “interdiscursive hybridity” (Mauranen, Pérez-Llantada & Swales (eds.), forthcoming).

First-person plural references in biomedical writing

Aim of this study

The aim of this paper is to explore the rhetorical preferences of NNES and NES (native English scholars) in the use of the exclusive “we” pronoun and related oblique and possessive forms (“us” and “our”) when publishing internationally. Following Gosden (1993: 62), first-person references could be considered to “form a progressive cline of writer visibility, i.e., a means by which writers seek to present themselves and their viewpoints in the research community, with both very obvious and very subtle means of realization”. Thus, the presence of the writer in the text could be placed along a scalar continuum since the three overt first-person references have their strong (“we”), intermediate (“our”) and weak (“us”) forms that mark the explicit presence of the writer as a visible participant in the research/reporting process. For this purpose, the overall frequencies of “we”, “our” and “us” were compared in RAs written by scholars from Anglo-American and Spanish-based contexts. The frequency of these occurrences was investigated across the different sections of RAs, as correlated with the rhetorical or communicative purpose ascribed to each

section. Finally, the discourse functions of “we” pronouns were classified following Tang and John’s (1999) taxonomy to highlight possible similarities or divergences across the two subcorpora under analysis.

Corpus and methodology

We selected 48 medical articles from SERAC (the Spanish-English Research Article Corpus)²; half of these were written by NNES and the other half by NES (as judged from their names and/or institution affiliation in the case of NES). Both subcorpora were coded into sections following Biber et al.’s (2007) methodology. *WordSmith Tools* (Scott, 1999) was the software used to quantify the average frequency of first-person plural references in the two groups of texts.

Firstly, I conducted a quantitative analysis of “we” references (including “us” and “our”) across the RA sections: Introduction, Methods, Results, and Discussion. Secondly, I analyzed the discourse functions performed by these pronouns using Tang and John’s taxonomy of roles and identities at a discourse level. These roles are:

- a) the “representative”: “a generic first-person pronoun, usually realized as the plural “we” or “us”, that writers use as a proxy for a larger group of people” (Tang & John, 1999: S27);
- b) the “guide”: “the person who shows the reader through the essay (...), locates the reader and the writer together in the time and place of the essay, draws the reader’s attention to points which are plainly visible or obvious within the essay” (Tang & John, 1999: S27);
- c) the “architect”: a manifestation of the writer as a textual level, which “foregrounds the person who writes, organizes, structures, and outlines the material in the essay” (Tang & John, 1999: S28);
- d) the “recounter of the research process”: a writer “who describes or recounts the various steps of the research process” (Tang & John, 1999: S28);
- e) the “opinion holder”: a “person who shares an opinion, view or attitude (for example, by expressing agreement, disagreement or interest) with regard to known information or established facts” (Tang & John, 1999: S28);
- e) the “originator”: involving “the writer’s conception of the ideas or

knowledge claims which are advanced in the essay”, which “calls for the writer to present or signal these as new” (Tang & John, 1999: S29).

Identifying the roles in the texts was a difficult task because the use of “we” showed functional versatility due to the diverse rhetorical aims of the different sections where the pronoun appeared. For example, in expressions such as “finally we show that”, “here we report X”, “we” could be performing the roles of “architect” organizing the information when it occurs in the Introduction section and focuses on the text, or “guide” showing the reader through the essay when it occurs in the Discussion section. Therefore, I deemed it necessary to further classify such roles and re-group them according to their orientation towards the “real world” or the “world of discourse” (Ädel, 2006), as there are instances of “we” where the writer refers to her/himself as a writer (in the “world of discourse”), and cases when the writer refers to her/himself as a person in the “real world”. Moreover, I had to take into account the speech-event considered –that is, whether the interaction involves the “text”, the “writer”, the “reader”, or the “participants” (Ädel, 2006: 20). Accordingly, the roles of “recountner”, “opinion holder” and “originator” were considered to display the writer’s attitudes to phenomena in the “real world”, while “representative”, “guide” and “architect” accounted for strategies belonging to the “world of discourse”. Likewise, the distinction between “guide” and “architect” depended on the fact that the former referred to “text-external realities” –i.e., realities “making reference to the text as study, theory, argument” (Hyland, 2005: 45), while the latter was concerned with “text-internal realities” –i.e., “making reference to the text as text” (Hyland, 2005: 45).

As a result, I have developed an improved model of Tang and John’s (1999) initial taxonomy which is shown in Figure 1. This improved model was specifically designed to disambiguate overlapping instances such as the one described earlier, and helped me to decide which function was more prominent in each case. In sum, the combination of quantitative and qualitative approaches seeks to account for the rhetorical effects of first-person plural references across the two cultural contexts selected for this study.

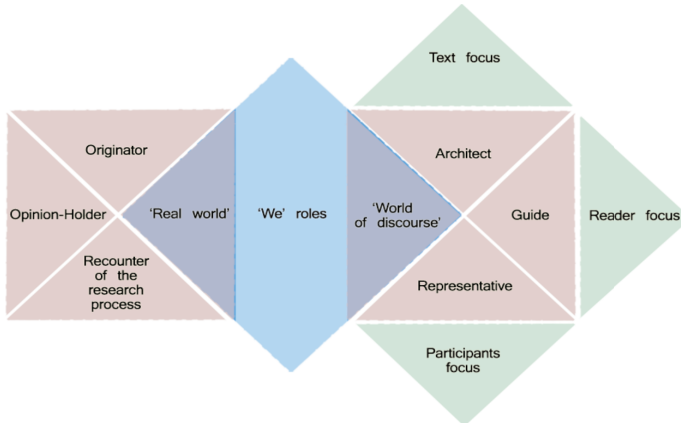


Figure 1. A proposed classification of the roles of “we” in biomedical RAs.

Results

Overall results indicate that Spanish writers tend to make themselves more visible than their Anglo-American counterparts through the use of first-person plural references (see Table 1). The nonnative Spanish-English subcorpus (henceforth SPENG) scored an average frequency of 5.90 occurrences per 1,000 words, whereas the native English subcorpus (henceforth ENG) scored a lower frequency (3.99). Comparing linguistic realizations, “we” scored the highest frequency in both subcorpora, followed by the possessive form “our”. The frequencies for the direct object “us” were too low to be considered for further analysis, unlike the results obtained for this reference in Kuo’s (1998) research on first-person plural pronouns in the field of computer science, electronic engineering and physics.

	WE		OUR		US		TOTAL	
	N	f/1,000	N	f/1,000	N	f/1,000	N	f/1,000
SPENG	305	3.99	138	1.80	8	0.10	451	5.90
ENG	243	2.75	109	1.23	1	0.01	353	3.99

Table 1. Frequency of “we”, “our” and “us” in SPENG and ENG.

Along the same lines, the projection of a strong authorial voice in medical research articles has also been reported in Vázquez et al. (2006), whose research on exclusive pronouns and self-mentions shows that “urologists constructed a stronger authorial voice than that of applied linguists as they

often tended to use personal pronouns for explaining the methodological decisions or for providing hypotheses and results” (Vázquez et al., 2006: 201) and that “references to one’s own work were ostensibly more frequent in the hard knowledge disciplines, with the highest values being found in the medical RA” (Vázquez et al., 2006: 202). Section coding revealed further details as regards rhetorical similarities and differences across the two groups of biomedical RAs under analysis. In general, first-person plural references were present in the four sections that typically constitute an experimental RA (Introduction, Methods, Results, Discussion/Conclusion) in both subcorpora. Table 2 shows their distribution across RA sections, while numbers in bold indicate the most salient occurrences.

RA section	WE		OUR		US		TOTAL	
	SPENG	ENG	SPENG	ENG	SPENG	ENG	SPENG	ENG
Introduction	8.15	4.77	0.65	0.95	0.10	0.00	8.90	5.72
Methods	0.79	0.41	0.66	0.05	0.00	0.00	1.45	0.46
Results	5.43	3.03	0.30	0.49	0.12	0.00	5.85	3.52
Discussion	4.01	3.37	4.90	3.64	0.18	0.04	9.09	7.05

Table 2. Frequencies of “we”, “our” and “us” across RA sections.

Overall, first-person plural references scored a high frequency in the Introduction section of the two subcorpora. This may be justified by the fact that writers need to “Create a Research Space” (the CARS model, described in Swales, 1990) through three main moves: establishing a research territory, establishing a research niche, and occupying the niche. More specifically, “we” has almost twice as many occurrences in SPENG as in ENG. This finding indicates that Spanish scholars are prone to express a stronger “voice” than native English-speaking writers. Following Hyland (2005 & 2006), through “we” realizations writers put forth a more visible stance which “involves expressing a textual “voice” or community recognised personality (...): the extent to which individuals intrude to stamp their personal authority onto their argument” (Hyland, 2006: 29). Moreover, Martín Martín (2004: 10) argues that there is a “higher tendency among Spanish writers to make explicit their authorial presence in the texts by taking full responsibility for their claims”. His results are obtained from research carried on abstracts in the soft social sciences and they reflect how Spanish writers address a smaller, national audience whose members are less likely to manifest such a strong critical opposition than those of an international audience (Becher & Trowler, 2001). However, Martín’s (2004) results support

the hypothesis that there might be a manifestation of a native authorial “voice” when writing in a second language. Therefore, Spanish scholars might transfer this strong overt authorial “voice” from their native writing. On the other hand, their projection of such a visible identity suggests that they are aware that the “Create-a-Research Space” metaphor privileges “an environment in which ‘originality’ (especially in theory) tends to be highly prized, competition tends to be fierce, and academic promotionalism and boosting are strong” (Swales, 2004: 226). Furthermore, Gosden (1993) found that this explicit authorial presence is justified in the Introduction section as one of the most important rhetorical part of a RA (see also Bhatia, 1997) where authors signal explicit commitment to their work. In addition, the expression of a strong self can be explained by the wish to be seen in a text presenting the extent and importance of their contribution –for instance, “we demonstrate”, “we analyze”, “we show”. This is due to the fact that, Spanish scholars try to access an international research world with research projects led at a national level. As suggested by Becher and Trowler (2001), a national local community of researchers requires important financial resources which are difficult to obtain; besides, they get involved in projects that take longer time to reach conclusions that will prove relevant for international research.

In consequence, it may be argued that through explicit first-person pronouns nonnative writers tend to explicitly mark the source of the research in a competitive field such as the medical sciences where discipline knowledge evolves rapidly, and that its use is a means of making themselves visible to establish and occupy the niche, among other interpersonal resources.

As exemplified in (1)-(3) below, Spanish writers use explicit gap indications (“this hypothesis has never been previously explored”, “only two reports”) and consistently rely on intertextual references anticipating the statement of purpose (“recent findings indicate that”) that reflect at a textual level their awareness of research competition in the international context. Moreover, explicit references such as “we demonstrate”, “we show” signal collaborative effort and also, as Pennycook (1994: 176) argues, that “there is an instant claiming of authority and communality”. When using the subjective “we”, writers speak with authority to make knowledge claims, affirm their contribution and commitment to these claims, and they appeal to the reader’s support both for themselves and to ratify the hypothesis advanced. In contrast, native scholars occupy the niche by stating the specific purpose or research objective only as a continuation of their own previous research

(note the use of self-citation before the “Occupying the research niche” move).

- (1) Interestingly, the Dkk-3 gene which negatively modulates Wnt7A signaling is frequently silenced by methylation in ALL [15,23]. It can thus be speculated that the functional loss of Wnt antagonists can contribute to activation of the Wnt pathway in ALL, and may play a role in the pathogenesis and prognosis of the disease; however, *this hypothesis has never been previously explored. In this study, we demonstrate* that silencing of the Wnt antagonists by promoter methylation contributes to constitutive activation of the Wnt signaling pathway in ALL. (SPENG1)³
- (2) Until now, these compounds have been tested mostly in cell lines, *with only two reports describing* HA14-1 as inducing apoptosis in a small number of primary acute myeloid leukemia samples [26,36]. Here, *we analyze* the effects of the Bcl-2 inhibitors HA14-1, antimycin A, and the novel pan-Bcl-2 inhibitors GX15-003 and GX15-070 on CLL cells *ex vivo*. (SPENG8)
- (3) Using this transgenic FcγRIIA model, *we previously observed* increased clearance of IgG-coated cells and an increased incidence of thrombocytopenia, suggesting a role for FcγRIIA in mediating platelet clearance from the circulation [16]. *In the current study, we show* that FcγRIIA transgenic mouse platelets (but not wild-type mouse platelets) as well as human platelets are able to endocytose IgG complexes, a process inhibited by anti-FcγRII antibody. (ENG17)

The Methods section reports on the methodological procedures and materials employed in the research in order to facilitate the replication and thus the validation of the study described in the article. Although this section is an obligatory element in the research process (Nwogu, 1997), it is not as rhetorically charged as the Introduction and Discussion section (Gosden, 1993) since readers need to concentrate on the actual findings. As Berkenkotter and Huckin (1995: 42) explain:

In major research laboratories, where articles are usually written as a team effort with various apprentices involved (...) the more routine parts of the article – the methods section and the presentation of raw results – are typically written by junior scientists or graduate students. In other words, it is only those elements of the article that promote news value that the laboratory head feels deserve his/her attention.

The above statement might be used as a suitable argument for explaining the extremely low frequency of first-person plural references (especially “we”) in Methods sections as compared to the other RA sections. Bearing in mind that passive constructions prevail in this section (Giannoni, 2008b), “we” appears at the beginning of the Methods section to indicate that the research process is a decision taken by researchers who assume responsibility for the choices they made when conducting the research/study. It is used mainly with performative verbs such as “perform”, “follow”, “use”, etc. to mark the steps of the research (this is, the selection or description of participants, technical information or statistics, materials used or observation of processes). Likewise, Giannoni (2008b) shows that the possessive “our” is an alternative option in the Methods section to “reveal writers discursively” and “indicate ownership of particular systems or methodologies” (Giannoni, 2008b: 73). As in examples (4) and (5), writers tend to make themselves visible at this point and signal the decisions previously made in their laboratories as regards research procedures and outcomes (see also Vázquez et al., 2006):

- (4) For the comparison of means between groups, we used t-tests for those variables with a normal distribution and the Mann-Whitney nonparametric U-tests for those without a normal distribution. (SPENG19)
- (5) We followed five steps for hematopoietic differentiation and liquid culture. Step 1. Undifferentiated H1 cells were passaged onto irradiated FH-B-hTERT feeder layers and cultured with differentiation medium composed of (...) (ENG22)

The Results section is where authors present their findings and highlight the “newsworthiness” of their research outcomes. Here, writers construct their discourse in a different way from that of Introduction and Methods sections and make themselves more visible in this section through the use of self-mentions. Overall, “we” again scored the highest frequency in both groups of RAs, whereas “our” registers obtained very low frequencies (see figure 4).

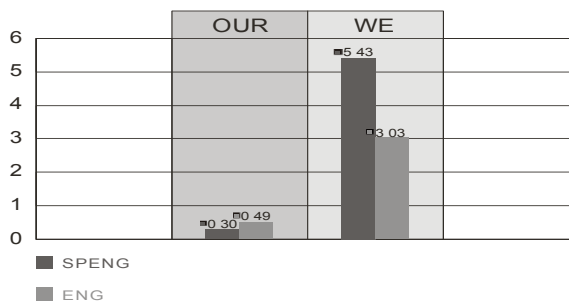


Figure 4. Frequency of “we” and “our” in Results sections across subcorpora.

“We” is thus the preferred reference in both SPENG and ENG subcorpora, with a higher frequency in the former. As stated above, writers make themselves visible in order to assume responsibility for the claims advanced and to highlight their findings and specific observations. Writers put forth the main findings through the first-person pronoun combined with mental process verbs such as “find” in examples (6) and (7):

- (6) When the weekly production of the LTC was evaluated, we found significant differences between patients and donors at each time point (Fig. 1). Thus, the mean number of total progenitors produced along the 8 weeks of culture was significantly decreased in patients (Fig. 2). (SPENG16)
- (7) We found a significant (p 5 0.035) increase in survival times at 1 week for dogs treated with LC compared to historical control dogs (Fig. 5). (ENG19)

The need to highlight specific observations in this section justifies the high frequency of “we” in both groups of texts. This explicit presence of writers is a textual indication that the researchers themselves play or have played a prominent role in the research process. Also, it should be noted that impersonal and passive constructions appear in Results sections as alternative options to the use of “we” when indicating specific observations.

Across sections, the Discussion section is considered the most persuasive part of a RA. Writers make their final claims about the importance of their research, summarize the main implications drawn from the results obtained and stress the most significant findings (Berkenkotter & Huckin, 1995; Nwogu, 1997; Hyland, 2001 & 2005; Swales & Feak, 2004).

Swales (1990 & 2004) describes this section as reversing the direction of the Introduction by moving from the study itself to the field as a whole. Therefore, while in Introduction sections “we” pronouns scored twice as much in the texts written by Spanish writers, in the Discussion section the frequency of this pronoun is similar for SPENG and ENG texts. This observation is consistent with the nature and purpose of this section in which scientists evaluate and interpret the data collected in the experimental stage to put emphasis on the contribution made to the field (Nwogu, 1997), anticipating agreements and/or disagreements from their peers, whereas the rhetoric function of the Introduction section is primarily that of “promotion” (Bhatia, 1997). It is also worth pointing out that when comparing the use of “we” and “our” in Discussion sections, both native and nonnative writers use the two forms similarly, and frequencies are close to those of “we” (see figure 5).

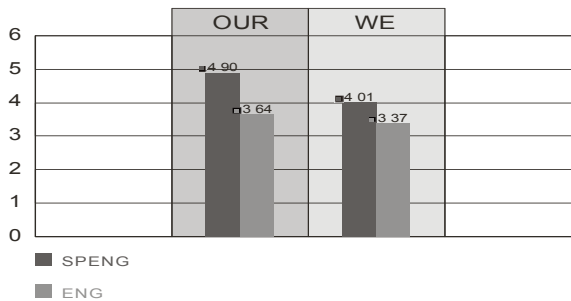


Figure 5. Frequencies of “we” and “our” in Discussion sections across subcorpora.

Interestingly, this is the only RA section where “our” outnumbers “we”. By keeping a balance between explicit self-mentions (“we”) and less visible stance (“our”) the writers tend to establish more tentative positions in this final section of the RA (especially if we compare the frequencies with those of Results sections), since the authority of the individual “we” is subordinated to the authority of the text (“results”). For example, in the expression “our results” the possessive determiner “our” marks not an explicit authorial presence, but that results are a consequence of personal choices in the process of research, also acknowledging the existence of alternative results. It is in the Discussion section that the expert readership has to make the final decision of either accepting or rejecting the claims

made. Therefore, writers' awareness of the impermanence of science and, more specifically, of the potential criticism and alternative views on the part of expert readers, might explain why authors carefully chose between "our" and "we" when they commit themselves to the claims made (Kuo, 1998).

This less visible authorial stance (if compared to that of Introduction sections) in the two groups of texts appears to be directly related to the rhetorical purposes of this particular RA section, that is underlining the significance of research outcomes while in the same time anticipating possible rejections from the audience. As illustrated in example (8), the self-reference "our" is hedged by the verb "suggest" to help writers to be more tentative and tone down the strength of their "novelty" and "significance" claims. It is also worth noting that in both subcorpora "our" pronouns are accompanied by phraseological correlates such as "however", "may/might", "would", "could/can", "possible", "suggest", "recommend", "infer", playing a clear hedging function at a discourse level; this hedged discourse helps writers mitigate propositional meanings and distance themselves from their claims when stating new hypotheses. This can be observed through the "potentiality" feature in example (8) and restricting application of results to the "experimental" level in example (9):

(8) Our results suggest several potential applications for NIC both invitro and invivo. We provide a novel culture system that can be used to investigate the complex process of Mk differentiation. (ENG7)

(9) It can be inferred from our results that we have experimentally bypassed the need for migration by direct intrasplenic injections. (SPENG13)

Discourse role of first-person references

Given the frequencies of "we" across the rhetorical sections in the two subcorpora, it was deemed necessary to take a qualitative look at the specific discourse roles of this pronoun in the two groups of texts.

As indicated in the introduction to this paper, the first-person personal pronoun "we" shows versatility since it is able to express a wide variety of discourse functions. This section presents a detailed analysis of "we" references in terms of the taxonomy elaborated on the model proposed by Tang and John (1999) –i.e., "architect", "guide", "recounter of the research process", "opinion-holder" and "originator".

The "architect" role emerges mostly in Introduction sections in both

subcorpora. Even though writers are acting in the world of discourse, they strictly focus on text-internal realities. Here are some examples of this role:

- (10) Here we show the spectrum of clinical, immunologic, and functional studies of apoptosis and the genetic features of this patient with lymphoproliferative syndrome but without SLE. (SPENG5)
- (11) We report here that the hematopoietic cells produced by coculture on FHB-hTERT can be greatly expanded in vitro into fully mature primitive erythroid cells. (ENG22)

In examples (10) and (11) the speech component under focus is clearly the “text” (see the adverb “here”). The authorial voice is explicitly marked by the first-person plural pronoun and implicitly indicates that writers are attending to the ongoing discourse and its text-internal realities. The “architect” role of “we” is not threatening either for the writer or for his/her readers and in the present subcorpora both NES and NNEs use it when they shape their Introduction. However, in spite of the appearance of similarity, examples (10) and (11) seem to suggest cross-cultural variation in the textual development of arguments. Thus, in example (11) there is a certain degree of evaluation (“greatly”), while there is no intensification of propositional content in example (10). This observation seems to be consistent throughout the ENG texts.

Likewise, the “guide” role is activated in the “world of discourse”, though here the focus is on the “reader”, not the “text”. This role tends to recur in the Discussion sections of the two groups of texts. The reader-focus implies reference to text-external realities, and the aim is to reach a conclusion that the reader is expected to share with the writers. Textual metadiscourse signposts important aspects that the writer wants to render visible for the reader:

- (12) We have previously demonstrated that normal mouse and human B lymphocytes, human Burkitt’s B-lymphoma cells, and human multiple myeloma cells express abundant PPAR γ and undergo cell death after exposure to PPAR γ ligands [1–3]. Our data with human DLBCL precisely reflect these observations as we show that DLBCL of both GC and ABC phenotype express PPAR γ protein. (ENG24)
- (13) In this report, we have studied the role and regulation of MMP-9 in B-CLL cells. We show for the first time that (1) MMP-9 is up-regulated in

response to distinct signals elicited by 4 1 integrin or CXCR4 ligand engagement; (...). *Our* study also establishes that (...). (SPENG2)

In example (12) there is an originator “we” in the first sentence, followed by a guiding “we” in the second. Also, the possessive determiner, “our” (“our data”) and the use of an evaluative adverb (“precisely”), suggest that both groups of writers are reader-friendly when guiding their audience, as reported by Mur (2007). This particular role appears in Discussion sections both in ENG and SPENG, as its use of “our” may also imply.

The “recounter of the research process” is a role with “real world” reference as writers describe phenomena that have taken place in their laboratory. Consequently, researchers establish an interaction with their readers as they describe the steps of the research to their audience. As shown in examples (14) and (15), this role occupies an important place in the Results section of the two subcorpora. In example (14), “we” is followed by the process verb “divide”, which illustrates a stage in the process taking place in the laboratory, with reference to materials and research methods. Hence, authors identify procedures “in sufficient detail to allow others to reproduce the results” (International Committee of Medical Journal Editors, 2008: 13). In example (15), “we” combines with adverbs that provide an accurate account of the different research steps, such as “measurements” (“next”). The use of “we” in both subcorpora with material process verbs and specific terminology suggests that researchers are expert members familiar with disciplinary practices. In addition, this use highlights the role played by the writer in a process that is frequently represented as agentless in the Methods section but depicts him/her as a “recounter” in the Results section:

- (14) Similarly, in the current study we divided the methylation groups into nonmethylated (no methylated genes) and methylated group (at least, one methylated gene) (...). (SPENG1)
- (15) We next measured the level of CACs and EPCs in the blood after treatment with AMD3100 or G-CSF in healthy donors for allogeneic stem cell transplantation. (ENG10)

The “opinion-holder” and “originator” roles appear to suggest that researchers are active members involved in research programs in order to interpret new information or established facts. At the same time, they display appropriate respect for alternatives –thus inviting the reader to participate in a debate. The “opinion-holder” role comes to the fore when “we” is linked

to linguistic devices revealing a shared opinion, view or attitude, through the expression of agreement, disagreement or interest. This is shown in examples (16) and (17):

- (16) The short number of patients included in our report limits the statistical analysis of the data and somehow the interpretation of our findings which we think are clinically relevant anyway. (SPENG21)
- (17) However, we believe that the definitions used provide sufficient reliability (...) (ENG8)

In contrast, the “originator” situates writers in a position from where they have to highlight findings and knowledge claims advanced in the study and stress their “newsworthiness”. This is shown in examples (18) and (19):

- (18) In this study, we defined a novel surface antigen expressed on murine platelets and endothelial cells with the help of a new mAb. (SPENG14)
- (19) We have developed a new method to produce relatively large numbers of human erythroid cells in liquid culture from undifferentiated hESCs. (ENG22)

Similar discourse uses of first-person personal pronouns are most recurrent in the Discussion section of the two subcorpora (where writers foreground the relevance of their research for persuasive purposes). These roles tend to overlap, as illustrated below in examples (20) and (21):

- (20) Because ALPs are potent apoptotic inducers in cancer cells and MM is a slowly proliferating tumor of long-lived plasma cells, we reasoned that this disease could be particularly suitable for the therapeutic use of ALPs. (SPENG4)
- (21) This novel phenotype clearly affects the clinical therapy of patients with reduced VWF survival; thus, as more patients with this phenotype are identified, we propose a future new designation for these patients, VWD type 1C (1-Clearance). (ENG11)

In example (20), writers rely on reasoning (“we reasoned”), with the subordinate clause introduced by the reason subordinator “because” emphasizing the writers’ expression of factual evidence. The SPENG scholars seem to show awareness of these roles by merging the “originator” identity in “we reasoned” with the “opinion-holder” signalled by the modal “could”, which minimizes the possible imposition and face-threatening

potential of the “originator”. Moreover, the adverb “particularly” and the adjective “suitable” explicitly mark writers’ evaluation of the result of their “reasoning” as being useful for “therapeutic use”. Therefore, they hedge the use of “we” both to signal that they are competitive, since they have the capacity to provide useful solutions to the problems of the discipline, and to minimize the degree of imposition and show deference to their colleagues. The ENG writers manage to include both the “originator” and the “opinion-holder” roles in one verb (“we propose”). The “new” feature of their “proposal” is underlined by the adjectives “future” and “new”. At the same time the verb “propose” signals deference: although it is from the researchers that the designation comes, it is only a suggestion, hence allowing the audience the freedom to agree with it or not. This identity represents writers who make their claims by combining cautiousness with commitment in this particular rhetorical section. However, ENG writers use overt positive evaluation and then draw a conclusion (i.e., “thus ... we propose”).

Conclusions and implications

The current study has explored the frequency of first-person plural references and their different discourse functions (Tang & John, 1999) in the various sections of biomedical RAs written by NES and (Spanish) NNES. The analysis indicates that they mainly have an “exclusive-collective” referential value, with a large number of authors engaged in collaborative work. In general, the presence of such references in the selected corpus suggests that both groups of writers use the RA genre as a “promotional” instrument (Hyland, 2000: 68). Bhatia defines promotion as the merging of “private intentions with socially recognized communicative purposes” in an “attempt to establish credentials” (1997: 197-198).

The need to “create a research space” in Introduction sections, to indicate consistent observations in Results sections and to point out the significance of research outcomes in relation to previous outcomes in Discussion sections, drives both NES and NNES biomedical RA writers to explicitly signal their presence in these sections through first-person references. However, Spanish writers publishing in English tend to be more visible in their texts than writers from an Anglo-American context, particularly when they justify the “newsworthiness” of their research in the Introduction section.

The fact that the nonnative writers project themselves through “we” pronouns in Introduction sections should also be framed within the concept of the privileged position of English as the lingua franca for academic exchange (Tardy, 2004; Curry & Lillis, 2006; Ferguson, 2007) –hence, the nonnative writers’ need to make themselves more visible, factual and “credible” when presenting new research in international “English-only” journals (see also Mur, 2007; Pérez-Llantada, 2007). This does not appear to be the case with scholars from the Anglo-American contexts –which confirms previous claims that authorial self-representation in academic writing may differ according to the authors’ cultural background (Vassileva, 1998; Breivega et al., 2002; Martín Martín, 2005; Yakhontova, 2006; Giannoni, 2008a). Moreover, the analysis of “we” pronouns across the RA sections has revealed that instances of “we” in Results sections tend to recur when writers refer to past research processes and outcomes so as to indicate specific observations and highlight their findings.

On the other hand, the combination of “we” and “our” in Discussion sections seems to suggest reasons of pragmatic politeness: as writers have to show awareness of potential readers that might reject their claims, they tone down their role to seek readers’ acceptance of the new knowledge claims. The possessive form “our” has also shown to be important in this last section of the articles and its presence, as described previously, may likewise be attributed to reasons of politeness. The use of “our” is also prominent in this particular RA section, as it restricts the claims made, implying that these claims only involve specific research conducted by the authors. A possible reason for this is that writers in both Spanish and Anglo-American contexts seem to be aware of the need to show deference in the final section of the article, where the international audience of experts has to take a final decision of either accepting or rejecting the claims made in their paper. However, in the present study, findings suggest that in the context of English as a lingua franca nonnative writers have the chance to “go native” (Canagarajah, 2002: 37), especially in the Introduction section, and still be published.

Although quantitative data point towards cross-cultural variability, particularly in terms of self-mention in the Introduction section written by Spanish writers, genre requirements and disciplinary factors may account for the similar use of “we” pronouns in terms of their discourse roles in each RA section. In general, “we” pronouns have shown to serve the main function of presenting the researcher as an accepted member of the discourse community, with an emphasis on personal involvement and responsibility

(Kuo, 1998). In addition, more visible writers may exert a strong impact on their audience, a community of researchers who must be convinced of the “newsworthiness” of the research (Hyland, 2000, 2001 & 2005).

Both Spanish writers and their Anglo-American counterparts signal their identity as producers of the text through the “architect” role in Introduction sections, while they successfully establish writer-reader interaction through the “guide” or “recouter” role, without threatening their readers’ face (Myers, 1989) or making themselves invisible in Results sections. Along similar lines, the “originator” and “opinion-holder” roles are made acceptable for the communicative purpose of Discussion sections, where writers rely on the use of the less visible possessive determiner “our”.

Similarities across subcorpora may support the view that these roles and identities reflect genre conventions and instantiate how writer identity is created in international English-medium journals by a combination of discursive choices intrinsically related to the specific communicative purpose of each RA sections. In agreement with Pérez-Llantada (2007), a possible interpretation in this study is that the relatively similar linguistic realizations of authorial voice through first-person references across RA sections may be explained by the growing interest of Spanish academics (under increasing institutional pressure) in publishing in international scientific journals. This increases their exposure to the influence of standard academic English (see also, Mauranen, Pérez-Llantada & Swales (eds.), forthcoming).

The use of the prevailing international discourse norms of native English seems to be associated to the growing trend towards the internationalization—and progressive standardization—of academic discourse (Benfield & Howard, 2000; Mauranen, 2001; Bondi, 2004; Ferguson, 2007). Thus, while similarities in the use of “we” realizations between the two groups of scholars should be attributed to compliance with genre-specific conventions, different clines of authorial visibility through first-person plural references arise from the social and institutional specificities of variables other than language alone, for instance, academic competition or the need for promotion in the academic world (Bhatia, 1997; Hyland, 1997; Swales, 2004).

The focus on first-person plural references in the present study is an attempt to provide a picture of both cross-cultural similarities and differences in the use of self-mentions. Pedagogically, the results suggest the need to raise novice writers’ awareness of the rhetorical effects of first-person plural references for conveying disciplinary knowledge while, at the same time,

persuading audiences of the validity of new knowledge. Contrasting L1 and L2 realizations (Salager-Meyer & Alcaraz Ariza, 2004; Martín Martín, 2005; Mur, 2007; Moreno, 2008) may also contribute to our knowledge of emerging features of English as an academic lingua franca (Tardy, 2004) as opposed to the “go native” trend (Canagarajah, 2002: 37).

(Revised paper received July 2009)

References

- Ädel, A. (2006). *Metadiscourse in L1 and L2 English*. Amsterdam: John Benjamins.
- Becher, T. & P.R. Trowler (2001). *Academic Tribes and Territories. Intellectual Enquiry and the Culture of the Discipline*. Buckingham and Philadelphia: The Society for Research into Higher Education & Open University Press.
- Belcher, D.D. (2007). “Seeking acceptance in an English-only research world”. *Journal of Second Language Writing* 16: 1-22.
- Benfield, J.R. & K.M. Howard (2000). “The language of science”. *European Journal of Cardio-thoracic Surgery* 18: 642-648.
- Berkenkotter, C. & T.N. Huckin (1995). *Genre Knowledge in Disciplinary Communication*. Hillsdale, NJ: Lawrence Erlbaum.
- Bhatia, V.K. (1997). “Genre mixing in academic introductions”. *English for Specific Purposes* 16: 181-195.
- Biber, D., U. Connor & T.A. Upton (2007). *Discourse on the Move: Using Corpus Analysis to Describe Discourse Structure*. Amsterdam/Philadelphia: John Benjamins.
- Bondi, M. (2004). “If you think this sounds very complicated, you are correct: awareness of cultural difference in specialized discourse” in C.N. Candlin & M. Gotti (eds.), 53-78.
- Breivega, K.R., T. Dahl & K. Fløttum (2002). “Traces of self and others in research articles: a comparative pilot study of English, French and Norwegian research articles in medicine, economics and linguistics”. *International Journal of Applied Linguistics* 12: 218-239.
- Canagarajah, S. (2002). “Multilingual writers and the academic community: towards a critical relationship”. *Journal of English for Academic Purposes* 1: 29-44.
- Candlin, C.N. & M. Gotti (eds.) (2004). *Intercultural Aspects of Specialized Communication*. Bern: Peter Lang.
- Curry, M.J. & T. Lillis (2006). “Professional academic writing by multilingual scholars: interactions with literacy brokers in the production of English-medium texts”. *Written Communication* 23: 3-35.
- Fairclough, N. (2003). *Analysing Discourse. Textual Analysis for Social Research*. London: Routledge.
- Ferguson, G. (2007). “The global spread of English, scientific communication and ESP: questions of equity, access and domain loss”. *Ibérica* 13: 7-38.
- Fortanet, I. (2003). “The use of ‘we’ in university lectures: reference and function”. *English for Specific Purposes* 23: 45-66.
- Giannoni, D.S. (2008a). “Popularizing features in English journal editorials”. *English for Specific Purposes* 27: 212-232.
- Giannoni, D.S. (2008b). “Biomedical laboratory narratives: linguistic and disciplinary traits” in M. Solly, M. Conoscenti & S. Campagna (eds.), *Verbal/Visual Narrative Texts in Higher Education*, 73-88. Bern: Peter Lang.
- Gosden, H. (1993). “Discourse functions of subject in scientific research articles”. *Applied Linguistics* 14: 56-75.
- Harwood, N. (2005). “We do not seem to have a theory ... The theory I present here attempts to fill this gap: inclusive and exclusive pronouns in academic writing”. *Applied Linguistics* 26: 343-375.
- Hyland, K. (1997). “Scientific claims and community values: articulating an academic culture”. *Language and Communication* 17: 19-31.

- Hyland, K. (2000). "Speaking as an insider: promotion and credibility in abstracts" in C.N. Candlin (ed.), *Disciplinary Discourses: Social Interactions in Academic Writing*, 63-84. London: Longman.
- Hyland, K. (2001). "Humble servants of the discipline? Self-mention in research articles". *English for Specific Purposes* 20: 207-226.
- Hyland, K. (2005). *Metadiscourse: Exploring Interaction in Writing*. London: Continuum.
- Hyland, K. (2006). "Disciplinary differences: language variation in academic discourses" in K. Hyland & M. Bondi (eds.), *Academic Discourse Across Disciplines*, 17-45. Bern: Peter Lang.
- International Committee of Medical Journal Editors (2008). *Uniform requirements for manuscripts submitted to biomedical journals: writing and editing for biomedical publication*. URL: <http://www.icmje.org/> [25/02/09].
- Kuo, C.-H. (1998). "The use of personal pronouns: role relationships in scientific journal articles". *English for Specific Purposes* 18: 121-138.
- Lorés, R. (2004). "On RA abstracts: from rhetorical structure to thematic organisation". *English for Specific Purposes* 23: 280-302.
- Martin Martín, P. (2004). "Personal attribution in English and Spanish scientific texts". *BELLS: Barcelona English language and literature studies* 12. URL:<http://www.publicaciones.ub.es/revistes/bells12/PDF/art09.pdf>[03/07/2009].
- Martin Martín, P. (2005). *The Rhetoric of the Abstract in English and Spanish Scientific Discourse. A Cross-Cultural Genre-Analytic Approach*. Bern: Peter Lang.
- Mauranen, A. (2001). "Descriptions or explanations? Some methodological issues in contrastive rhetoric" in M. Hewings (ed.), *Academic Writing in Context. Implications and Applications*, 43-54. Birmingham: University of Birmingham Press.
- Mauranen, A., C. Pérez-Llantada & J. M. Swales (forthcoming). "Academic English: A standardised knowledge?" in A. Kirkpatrick (ed.), *The Routledge Handbook of World Englishes*. London/New York: Routledge.
- Moreno, A.I. (2008). "The importance of comparable corpora in cross-cultural studies" in U. Connor, E. Nagelhout & W.V. Rozycki (eds.), *Contrastive Rhetoric: Reaching to Intercultural Rhetoric*, 25-45. Amsterdam: John Benjamins.
- Mur, P. (2007). "'I/we focus on...': a cross-cultural analysis of self-mentions in business management research articles". *Journal of English for Academic Purposes* 6: 143-162.
- Myers, G. (1989). "The pragmatics of politeness in scientific articles". *Applied Linguistics* 10: 1-35.
- Nwogu, K.N. (1997). "The medical research paper: structure and functions". *English for Specific Purposes* 16: 119-138.
- Pennycook, A. (1994). "The politics of pronouns". *ELT Journal* 48: 173-178.
- Pérez-Llantada, C. (2007). "Native and nonnative speakers publishing research internationally: a small-scale study on authorial (in)visibility". *Journal of Applied Linguistics* 4: 217-238.
- Peterlin, A.P. (2005). "Text-organising metatext in research articles: an English-Slovene contrastive analysis". *English for Specific Purposes* 24: 307-319.
- Rounds, P. (1987). "Multifunctional personal pronoun use in educational setting". *English for Specific Purposes* 6: 13-29.
- Salager-Meyer, F. & M.A. Alcaraz Ariza (2004). "Negative appraisals in academic book reviews: a cross-linguistic approach" in C.N. Candlin & M. Gotti (eds.), 149-172.
- Salager-Meyer, F., M.A. Alcaraz Ariza & N. Zambrano (2003). "The scimitar, the dagger and the glove: intercultural differences in the rhetoric of criticism in Spanish, French and English medical discourse (1930-1995)". *English for Specific Purposes* 22: 223-247.
- Samraj, B. (2002). "Introductions in research articles: variations across disciplines". *English for Specific Purposes* 21: 1-17.
- Scott, M. (1999). *Wordsmith Tools*. Oxford: Oxford University Press.
- Stotesbury, H. (2003). "Who is speaking in research article abstracts? I/we, impersonal agents or previous authors in citations?" in M. Koskela & N. Pilke (eds.), *Kieli ja asiantuntijuus [Language and expertise] AFinLA Yearbook 2003*, 259-274. Jyväskylä: Publications de L'association finlandaise de linguistiques appliqué.
- Swales, J.M. & C.B. Feak (2004). *Academic Writing for Graduate Students: Essential tasks and skills*. Ann Arbor: University of Michigan Press.
- Swales, J.M. (1990). *Genre Analysis. English in Academic and Research Settings*. Cambridge: Cambridge University Press.
- Swales, J.M. (2004). *Research Genres. Explorations and Applications*. Cambridge: Cambridge University Press.
- Tang, R. & S. John (1999). "The 'I' in identity:

- exploring writer identity in student academic writing through the first-person pronoun". *English for Specific Purposes* 18: S23-S39.
- Tardy, C. (2004). "The role of English in scientific communication: lingua franca or Tyrannosaurus Rex?". *Journal of English for Academic Purposes* 3: 247-269.
- Valero-Garcés, C. (1996). "Contrastive ESP rhetoric: metatext in Spanish-English economics texts". *English for Specific Purposes* 15: 279-294.
- Van Bonn, S. & J.M. Swales (2007). "English and French journal abstracts in the language sciences: three exploratory studies". *Journal of English for Academic Purposes* 6: 93-108.
- Vassileva, I. (1998). "Who am I / who are we in academic writing? A contrastive analysis of authorial presence in English, German, French, Russian and Bulgarian". *International Journal of Applied Linguistics* 8: 163-185.
- Vázquez, I., E. Lafuente, R. Lorés & P. Mur (2006). "How to explore academic writing from metadiscourse as an integrated framework of interpersonal meaning: three perspectives of analysis" in R. Alastrúe, C. Pérez-Llantada & C.P. Neumann (coords.), *Proceedings of the 5th AELFE Conference*, 197-208. Zaragoza: Prensas Universitarias.
- Yakhontova, T. (2006). "Cultural and disciplinary variation in academic discourse: The issue of influencing factors". *Journal of English for Academic Purposes* 5: 153-167.

Oana Maria Carciu is a doctoral student at the University of Zaragoza. She is currently working on her PhD thesis on intercultural and inter-linguistic variations in the manifestation of authorial voice in medical research articles. Her main research interests are English for Specific Purposes and English as a lingua franca of academic writing.

NOTES

¹ The personal pronoun "we" encodes two referential values: inclusive and exclusive reference (Harwood, 2005); "inclusive we" refers to the writer and the reader together, also called "inclusive authorial we" (Ådel, 2006), while "exclusive we", which initially referred only to the writer, nowadays may also include other persons associated to the author, such as co-writers. According to Ådel (2006), this latter is known as "exclusive-collective", as opposed to another exclusive reference (such as "editorial we").

² The biomedical section of SERAC was compiled by the InterLae research group (<http://www.interlae.com>) at the University of Zaragoza and kindly made available for the present study. It comprises 24 medical research articles written in English by Spanish scholars (the SPENG subcorpus), and 24 medical research articles written in English by writers belonging to an Anglo-American context (the ENG subcorpus). In each subcorpus articles were numbered from 1 to 24. A total of 48 medical academic articles were analyzed, which involved more than 164,000 words of core text. The writers of these articles were all researchers or professors with an university affiliation. All research articles are representative of the genre as they adopt the text form of scientific or objective argumentation, are written in standard English and conform to rhetorical practices of the international English-speaking scientific academic community. Also, for the sake of comparison, the InterLae research group carefully checked that none of the nonnative English papers had gone through language reviewers' hands, as this factor might have hindered the results of the study. In order to have a corpus that is also representative in terms of the status of the publication, the samples were drawn from prestigious academic journals in the field of hematology: *The British Journal of Haematology*, *The American Society of Hematology*, *International Society for Experimental Hematology*. Text length of the articles ranged from 2,000 to 6,000 words of core text and all texts were published between 2000 and 2006 so that changes in terms of discourse practices could somehow be maintained under control.

³ For the ease of identification, in each subcorpus SPENG and ENG, research articles were numbered from 1 to 24. Hence, each text has been labelled with the abridged title of the subcorpus it belongs to and a unique number.