

‘Extending this claim, we propose...’ The writer’s presence in research articles from different disciplines

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Abstract

In today’s academic world, creating an appropriate authorial identity by means of self-mention resources is essential to project an image of competence and reliability in research articles (RAs), and to highlight the relevance of one’s contributions. This paper offers quantitative and qualitative data on the use of exclusive first person markers in RAs from four different disciplines, namely Applied Linguistics, Business Management, Food Technology and Urology, complemented by insights from specialist informants in each of the fields. Moreover, the main discourse functions performed by authors when using exclusive “we” have been studied. The results indicate that there are significant variations in the frequency of these resources and in the preferred functions for which they are used across disciplines, although this variation is not entirely consistent with the dichotomy between hard and soft sciences.

Key words: research article, metadiscourse, disciplinary variation, personal pronouns, identity.

Resumen

“Extending this claim, we propose ...” La presencia del autor en artículos de investigación de diferentes disciplinas académicas

Hoy en día en el mundo académico es esencial crear una apropiada identidad como autor que ayude a los investigadores a proyectar una imagen de competencia y fiabilidad a través de sus artículos de investigación, así como a destacar la relevancia de sus contribuciones. En este artículo se ofrecen datos cuantitativos y cualitativos sobre el uso de marcadores exclusivos de primera persona en artículos de investigación de cuatro disciplinas distintas, y se

complementan estos datos con ideas aportadas por informantes especializados de cada una de esas áreas. Asimismo, se han estudiado las funciones discursivas más importantes utilizadas por esos autores al emplear el pronombre “we” en su uso exclusivo. Los resultados muestran que existen importantes variaciones disciplinares tanto en la frecuencia de estos recursos como en las funciones más comunes que éstos desempeñan, aunque estas variaciones no son del todo coincidentes con la dicotomía tradicional entre áreas duras y blandas.

Palabras clave: artículo de investigación, metadiscurso, variación interdisciplinar, pronombres personales, identidad.

Introduction

Academic discourse has traditionally been perceived as impersonal and objective prose. This conventional interpretation is partly based on the positivist view that science rests on empirical results that are dissociated from the personal beliefs or subjective perceptions of the individual. Style guides and textbooks for academic writing are also a factor which has contributed to this generalised perception, since they often advise authors to avoid a personal style of writing and to conceal one’s personal views under conventions of impersonality and anonymity. However, a substantial amount of research carried out over the last decade (Ivanic, 1998; Tang & John, 1999; Hyland, 2001, 2002a & 2002b; Harwood, 2005a & 2005b; Vázquez Orta et al., 2006; among others) suggests that academic writing is moving away from its traditional image of distance and impersonality, and that the presence of the writer in the text and, more particularly, the use of some first person markers can be appropriate in certain contexts.

In order to explain this increase in the degree of writer presence that is found in academic writing, researchers have examined the social negotiations involved in the creation of scientific knowledge. According to Kuo (1999), the use of certain rhetorical strategies such as first-person pronouns is related to the dynamic and paradoxical nature of modern scientific research articles, where the writer has to balance the need to claim significance for his/her research with the humility and modesty towards the community that is necessary to obtain their agreement. In the same way, Hyland (2001: 209) contends that showing humility is only part of the picture, as “writers must carefully balance this with vigorous argument for the originality of their claims”.

Hyland's (2001) perspective draws on the insights of sociologists of science like Benkenkotter and Huckin (1995), who relate the increasingly personal tenor that appears in research articles to the researcher's growing need to highlight the originality of their own contributions in order to promote their work. As Benkenkotter and Huckin (1995) suggest, today writers make more frequent use of self-promotional features in order to advertise their research partly because getting one's work published in a prestigious journal has become harder than ever. Personal pronouns are one of the "marketing tactics" (Harwood, 2005a) which, together with evaluative markers and boosters, writers use in order to promote their work and facilitate its entrance into the increasingly competitive world of academia.

Researchers have also tried to account for the growing presence of self-mention features in research articles by studying the identities that authors are expected to project in their texts. As Tang and John (1999) or Hyland (2001 & 2002b) point out, language is used by academic writers as a resource for creating a particular self or 'persona' (Cherry, 1988) which represents them as knowledgeable and reliable members of the discipline. The adoption of a competent identity or persona is instrumental in order to make an article persuasive and this is partly achieved through the use of self-mention markers such as first person pronouns and self-citation (Hyland, 2001), inasmuch as they allow writers to emphasize their own contribution to the field and to gain credibility in the eyes of their peer readers.

Personal pronouns and other self-mention resources allow writers to construct an appropriate authorial identity and to present themselves as competent and original members of their discourse communities. Nevertheless, as Tang and John (1999) point out, the first person pronoun in academic writing is not a "homogeneous entity", but instead it can help to project a number of different roles or identities with varying degrees of authorial presence. Developing Ivanic's (1998) idea of a continuum of authorial presence, Tang and John (1999) propose a typology of six different identities or roles behind the first person pronouns in academic writing and dispose these roles along a cline in terms of authorial power. According to this continuum, certain roles signalled by exclusive personal pronouns like "originator" (involving the writer's conception of the ideas or knowledge claims which are advanced in the essay) or "opinion-holder" (the person who shares an opinion, view or attitude with regard to known information or established facts) allow writers to make themselves visible and to show a high level of authority in the text. Conversely, other roles of inclusive pronouns

like “representative” of a larger group of people or “guide”, convey a small degree of authorial presence.

Apart from Tang and John (1999), a number of researchers (Vassileva, 1998; Kuo, 1999; Hyland, 2002a; Harwood, 2005a & 2005b; among others) have suggested their own functional taxonomies for personal pronouns in academic discourse. Sometimes the analysis of personal pronouns has been approached as a self-contained rhetorical phenomenon, comprising both inclusive and exclusive uses (see for example Kuo, 1999, and Harwood, 2005a). In contrast, Hyland (2002a) contends that exclusive first person pronouns and possessive adjectives fulfil a different set of roles from those of inclusive pronouns and that, consequently, they should be studied as a separate metadiscourse category which Hyland (2001) dubbed “self-mention”, a class of metadiscourse strategies where he also includes self-citations. In his work, Hyland (2002a) proposes a typology of four different discourse functions for self-mentions in research articles: (1) stating a purpose, (2) explaining a procedure, (3) elaborating an argument, and (4) stating results/claims. This typology, like that of Tang and John (1999), recognises that certain functions such as stating a purpose and explaining a procedure entail a lower degree of personal exposure, while others (i.e., elaborating an argument and stating results/claims) are considered to involve a much more powerful authorial presence.

According to Hyland (2001, 2002a & 2002b, among others), the way writers use self-mention resources to construct their authorial self can vary depending on the social and epistemological practices of each discipline. Hyland (2001) shows that self-mention resources are more common in RAs belonging to the soft disciplines than in RAs in the hard sciences, where authors tend to downplay their own role in the research and to highlight the phenomena being studied. In his view, showing the appropriate degree of authorial presence constitutes an important way to signal membership to a particular community of scholars. Moreover, by using the codes and identity of their community, writers are recognised as competent and well-informed members and so acquire credibility and authority. However, even though complying with disciplinary expectations is crucial in order to make an article persuasive, there are few studies on the incidence of self-mention resources in many specific disciplines and on the different identities or roles that writers tend to adopt when using exclusive pronouns (Mur-Dueñas, 2007; Carciu, 2009).

In the present study, I will address the issue of disciplinary variation in the use of self-mention resources by analysing a corpus of research articles from four different fields of knowledge, as well as using ethnographic data obtained from interviews with specialist informants. Additionally, I will elaborate on previous work to suggest a refined categorisation of the major discourse functions of self-mention strategies in academic texts and will provide statistical data on the distribution of these functions across disciplines.

Materials and methods

The corpus I have used in my research comprises 96 journal articles belonging to four different disciplines: Food Technology, Urology, Business Management and Applied Linguistics (see Table 1). Each of the four subcorpora consisted of 24 articles that had been randomly selected from recent issues of three international journals identified by specialist informants as being among the most prestigious in their field. Therefore, eight articles were extracted from each of the journals and were numbered from 1 to 8 (for example: “J. of Urol.1”, “J. of Urol.2”). The articles not available online were scanned and manually revised. Furthermore, the reference sections, tables and abstracts were deleted, to form an electronic corpus of nearly half-million (473,000) words. The random selection of research articles adopted for this study was intended to provide a typical sample of articles from each of the disciplines. This sampling procedure, however, entailed an imbalance in terms of the number of single-authored and multiple authored articles, the latter being clearly predominant in the hard sciences and in Business Management (see Table 1).

	Business Management	Food Technology	Urology	Applied Linguistics	TOTAL
Single-authored	6	1	0	12	19
Multiple-authored	18	23	24	12	77
TOTAL	24	24	24	24	96

Table 1. Number of single-authored and multiple-authored articles.

For the purpose of selecting the disciplines in the corpus it seemed appropriate to adopt the opposition between soft and hard science disciplines (Becher, 1989), particularly considering the existing research

supporting the validity of the hard-soft separation (Hyland, 2001 & 2002b; Harwood, 2005a; among others). In order to cover a wider spectrum of the academy, a decision was made to include a further division within each of the two areas. Consequently, the soft science field was separated into the social sciences and the humanities (Business Management and Applied Linguistics in the corpus), while the hard sciences were broken up into the bio-medical field and the technical sciences (Urology and Food Technology in the corpus). Other practical criteria such as the possibility of finding specialist informants, as well as having access to the most important publications in those fields, were also taken into consideration. Finally, the UNESCO international nomenclature for the fields of science and technology was used as a standard to establish that the four disciplines in the corpus were indeed representative of broadly different fields of the academic world.

To carry out the quantitative analysis, I used the concordance software WordSmith Tools 4®. After all the concordances had been automatically produced by the software, they were analysed in context and all the instances of inclusive pronouns and inclusive possessive adjectives, as well as uses inserted in literal quotes or examples, were left out. Subsequently, all the uses of exclusive “we” were examined so as to identify their main function and to create a corpus-driven categorisation of these functions. The pronoun “we” was the first-person marker analysed for creating this categorisation inasmuch as it was the most frequent self-mention marker in the corpus, as well as a more obvious indication of writer presence than the possessive adjective “our”. The author of this research and a colleague with experience in conducting similar research worked together in the manual analysis of the data. This triangulation of investigators helped to reduce bias and enhance the reliability of both of the sorting processes described above.

Ethnographic tools have been increasingly viewed as valuable tools in order to explain possible differences appearing in corpus data (Connor, 2004), as they allow us to investigate the culture within which the text was created. In order to elicit data, ethnographic interviews and focus group meetings were carried out with selected specialised informants from each of the disciplines. These elicitation procedures aimed at investigating the researchers’ perceptions and disciplinary expectations as to what constitutes appropriate use of self-mention resources in RAs. A total of 14 researchers participated in the individual interviews and focus groups, all of whom had some experience in the publication of RAs in international journals. The informants were Spanish and foreign researchers based at the University of

Zaragoza (Spain), as well as foreign scholars we had access to during the celebration of conferences and seminars.

Interviews were mechanically recorded and transcribed into written protocols to help find patterns. Despite the fact that the external validity of the ethnographic data was partly compromised by factors such as the limited number of informants or their diverse academic status, the qualitative information obtained allowed in some cases for the triangulation of research methods, thus lending greater empirical support to the interpretation of the data.

Results and discussion

Overall quantitative results

The analysis of the corpus reveals several interesting findings related to the use of self-mention features across disciplines. As we can see in Table 2, first person pronouns and possessive adjectives were quite recurrent in three of the four sub-corpora: Business Management, Applied Linguistics and Urology. Only Food Technology, which is classified as a technological area related to engineering, showed a very low occurrence of these features.

	Business Management	Food Technology	Urology	Applied Linguistics	AVERAGE
WE	594 (40.1)	32 (3.9)	186 (30.9)	372 (20.1)	1,184 (20.84)
US	18 (1.2)	1 (0.1)	4 (0.7)	11 (0.6)	34 (0.72)
OUR	358 (24.5)	30 (3.7)	189 (31.4)	175 (9.5)	752 (15.9)
I	59 (4.0)	0 (0.0)	0 (0.0)	27 (1.5)	86 (1.82)
MY	4 (0.3)	0 (0.0)	0 (0.0)	16 (0.9)	20 (0.42)
TOTAL	1,093 (70.1)	150 (7.7)	458 (62.9)	721 (32.5)	2,422 (43.69)

Table 2. Raw and normalised occurrence (x 10,000 words) of self-mention realizations.

The results also reveal that, while the raw occurrence of first-person plural pronouns is clearly higher in the soft science disciplines studied (i.e. Business Management and Applied Linguistics), the relative incidence of markers of self-mention is notably higher in Urology, a medical hard science, if compared with Applied Linguistics, and almost as high as in Business Management. A debate over whether raw or normalised frequencies are more reliable indicators of tendencies is beyond the scope of this paper. Nevertheless, it is worth noting that the surprisingly high relative number of

self-mention resources in Urology may be taken to indicate that, with regards to the use of this type of interpersonal language, Urology does not conform to the conventional description of hard science academic texts that often appear in writing manuals, where writers are advised to adopt an impersonal and objective writing style.

These preliminary results will be discussed in more detail in the following sections.

Use of personal pronouns and possessive adjectives

As can be seen from Table 2, the patterns of use of first person singular pronouns and possessive adjectives in the corpus are very different from the ones of plural pronouns, which is not surprising given that only one of the 48 articles from the hard science subcorpora was single-authored. The paucity of single-authored articles in hard sciences could ultimately be explained by the fact that research in these areas is expected to be the result of the joint effort of a team of researchers, which makes it difficult for individual researchers to stake claims individually. As Becher (1989) points out, team work is more common in “urban” disciplines, where the number of hot issues for research is limited and there is a higher competition and more intense interaction among disciplinary members. Interestingly, according to the reports obtained from specialist informants in those fields, researchers in their disciplines actually do write some articles on their own, although in those cases it seems to be common practice to compose them and publish them as if they had been created by the whole group of specialists:

Usually I write the article myself, as the first author, and then I hand it around to my colleagues so that they can give their opinion. However, when it comes to signing the article we always do this as a group. At least in our field, it is normally assumed that the researcher appearing first is the one who wrote it and developed it, while the one appearing last is the head of the research group. (Food Technology, Informant 4)

While the personal pronouns “I” and “my” were non-existent in the hard science disciplines analysed, they were slightly more frequent in the Business Management corpus (see example 1) and in Applied Linguistics. Unfortunately, the results obtained on the use of the first person markers (“I” and “my”) across the four disciplines analysed are not comparable, as 6 of the 24 RAs in the Business Management corpus were single-authored,

while 12 of the RAs in Applied Linguistics had one author. Nevertheless, it was interesting to find that in both disciplines the pronoun “I” was only used very differently by these single authors. When researchers in Business Management decided to employ the first person singular pronoun in their business articles they did so quite abundantly, i.e., close to 20 times per article (see example 1).

- (1) To test the preceding hypotheses, I gathered survey, interview, and archival data on both locked-out firms and successful firms competing in the same market and over the same time frame. (*Acad.Manag.Jour.*5)

In contrast, a number of single authors in both disciplines decided to avoid using exclusive first person pronouns altogether or, perhaps more surprisingly, opted for the use of exclusive plural pronouns and possessive adjectives rather than singular ones when referring to themselves in their text. In sum, there seems to exist a degree of variation among individual authors as to the ways in which singular pronouns and possessives are used in single-author RAs in the disciplines studied. However, a deeper investigation of this aspect of pronoun use would require a fully comparable corpus of single-author and multiple-author RAs in each discipline, such analysis being beyond the scope of the present study.

According to my results (Table 2), there is also a very large difference in the incidence of the two plural first person pronouns analysed in the corpus, namely “we” and “us”. The exclusive subject pronoun “we” was used very frequently in all the subcorpora except for Food Technology, where its incidence was notably low (3.9 tokens per 10,000 words). The highest values were found in a discipline belonging to the social sciences, i.e. Business Management. These results are roughly in agreement with those obtained by Hyland (2001) in RAs in Marketing, a field which is closely related to Business Management. In addition, the incidence of the pronoun “we” in Applied Linguistics is only slightly lower than the one reported in the same study by Hyland.

The high incidence of the pronoun “we” in Urology was somewhat unexpected (see example 2). Although a high frequency in the use of first-person pronouns in other hard disciplines like Physics or Biology has already been reported (Hyland, 2001), to my knowledge there is no reference in previous research to the fact that self-mention markers are so recurrent in the medical disciplines.

- (2) In this study we found that the prevalence of psychological distress in patients with bladder cancer is relatively high and this level slightly decreases in the early postoperative period. (*J. of Urol.*2)

The results for Urology RAs, as well as Hyland's (2001) results for Physics and Biology, are in apparent conflict with the traditionally accepted view that articles from hard science disciplines are descriptive and impersonal and that the results they report are independent observable truths. This finding might suggest that urologists tend to be aware of the importance of using first person pronouns so as to project a strong authorial voice and to take credit for one's findings. Moreover, the researchers' decision to use personal markers in order to clearly stand behind their research findings and conclusions might also be affected by factors like the journals' status, inasmuch as self-mention resources may be perceived as a necessary marketing strategy in order to get their research published in prestigious international journals. This hypothesis was supported by the comments of a scholar in this field:

It all depends on the journal. When a journal has a high impact ranking and if I send a very large series [of results] and the study is very elaborate, and I have worked for years with a large number of patients, then I feel capable of saying things like "we can conclude". Because your contribution is greater and also because these journals expect you to do so, due to the impact ranking. They are very tough in their selection process. If you are not sure of what you are doing it is not gonna get published. (Urology, informant 1)

Unlike the pronoun "we", the object pronoun "us" seems to be very rare in RAs, as it was used only 34 times in the overall corpus. Despite its low occurrence, it should be noted that this personal pronoun was used most often in Business Management and Applied Linguistics, while it was used merely once in Food Technology. According to my data, in the soft disciplines the pronoun "us" mostly appeared following verbs such as "allow", "enable", "help" or "provide" in the explanation of the benefits or limitations of particular methodological decisions (example 3). In doing this, the authors seem to attempt to reveal the sound logic underlying their decisions and to stress their competency as researchers.

- (3) We did not ask them what they could do, as that would have invited them to list a number of possibilities. All three teachers were shown the same

episodes and this technique enabled us to compare their responses to the same events. (Ap.Ling.2)

The first person plural marker “our” was overall a very frequent indicator of writer presence in RAs in the corpus, only second to the pronoun “we” (see Table 2). However, there are some notable differences in the incidence and use of these two self-mention features. The use of the possessive adjective “our” was comparatively more frequent in the hard science disciplines (Urology and Food Technology) than in the humanities and social sciences. In particular, in Urology the plural possessive adjective was even more frequent than the personal pronoun. In order to investigate this cross disciplinary variation in the use of the exclusive possessive adjective we need to consider the uses and collocations of this word in RAs. In the hard disciplines, the word “our” is often used to express the authors’ ownership of the research being reported or the data or results obtained from this research in expressions such as “our results”, “our data”, “our findings”, etc. These noun phrases tend to function in the sentence as the inanimate subjects of epistemic lexical verbs such as “suggest”, “indicate”, “imply”, and also more emphatic verbs such as “show” or “demonstrate”. These “abstract rhetors” (Halloran, 1984: 74) help writers to present data as the originators of the findings, thus concealing the part played by subjective interpretation in the conception of that claim. By using inanimate subjects the potential threat inherent in the presentation of personal claims or findings is notably hedged, and the writer’s commitment to the truth of that statement is also reduced. Interestingly, in example 4 the writer additionally reduces the potential threat of making a claim by sharing with previous researchers the credit she might receive for her contribution to the discipline.

- (4) *Our* data and those of others have demonstrated the safety and effectiveness of this procedure even in elderly patients with significant comorbidities. (J. of Urol.5)

The use of “our” when presenting claims or stating hypotheses may also fulfil another hedging function different from that of abstract rhetors. In some cases, researchers use expressions such as “our results”, “in our series”, or “in our sample” in order to suggest that the findings or conclusions they have arrived at are not assumed to have general validity for other studies, as the quotes below illustrate:

I always refer to the results: “In the results obtained we can find...” Why is this necessary? Because people may do the same study and find different results. (Food Technology, Informant 5)

We would normally say: “our results agree...”. I think that “we agree” is stronger than “our results agree...”. It is as if you were saying that mine does resemble this other (...) but maybe some other article won't. It is as if your opinion was better than that of another person. (Food Technology, Informant 5)

Through these expressions, authors are in fact purportedly limiting the external validity of their research in a strategic attempt to limit their individual responsibility for the findings (see example 5).

(5) In *our* experience, this approach was successful in most of these challenging cases, with only minor and infrequent complications. (Urol.2)

The social and epistemological expectations of different communities can sometimes be recognised when looking at the editorial policy of journals as stated in the style guides for authors. It is worth noting for example that, in one of the journals in the Business Management sub-corpus, *Academy of Management Journal*, authors were explicitly advised to avoid describing models or theories as acting like animate subjects. Moreover, researchers were encouraged to put sentences in the active voice and to intrude into the text by using first person pronouns. In contrast, style guides in Food Technology (*Food Chemistry*) and in Urology (*Journal of Urology*) do not make such recommendations but concentrate instead on how the information should be organised and structured in order that the article complies with the expectations of the reader and the experiment described can be reproduced.

To summarise, the use of the possessive adjective “our” seems to be comparatively more frequent in the hard sciences analysed than in the soft science disciplines. A possible explanation for this difference may lie in the lower degree of writer commitment conveyed by the use of the first person plural possessive compared to the first person pronoun “we”. Writers in the hard disciplines tend to favour this self-mention resource because they seem to be aware that the use of “our” followed by “results”, “data”, “findings”, among others, allows them to reduce responsibility for their statements and, therefore, protects them from the potential negative consequences of having their claims refuted. Moreover, it has been argued that the small incidence of the personal pronoun “we” may also be related to the authors' desire to gain

“persuasive authority” (Hyland, 2001) and credibility by highlighting the objective and impersonal nature of the research process. In contrast, it could be argued that in the soft science disciplines, the possibility of isolating variables and replicating research is much more tenuous, and therefore the risk of having one’s findings refuted in subsequent studies is smaller.

The results discussed up to this point indicate that unlike singular pronouns and possessives, the pronoun “we” and the possessive adjective “our” are relatively common in all the disciplines except Food Technology, albeit to different degrees in each of these disciplines. Moreover, it has been shown that the two plural personal markers follow rather different patterns of use, which seem to be related to the epistemological specificities of each discipline and to the identities which authors want to project in their texts. However, in order to accurately account for the way researchers construct their authorial identities in different disciplines we cannot simply take into account the quantitative incidence of these markers, but we also need to examine the discourse functions or roles these self-mention resources fulfil in the text. This analysis will be undertaken in the following section.

Discourse functions of exclusive “we”

It has been argued here that personal pronouns and other self-mention resources allow writers to construct an appropriate authorial identity in order to present themselves as competent and original members of their discourse communities. Nevertheless, as Tang and John (1999) point out, first person pronouns in academic writing do not behave as a homogeneous element, but instead they can help to project a number of different roles or identities with varying degrees of authorial presence.

Several different taxonomies have been proposed in the literature for the classification of the rhetorical functions fulfilled by first person pronouns in academic texts (Vassileva, 1998; Kuo, 1999; Tang & John, 1999; Hyland, 2002a; Harwood, 2005a; among others). However, the examination of my concordance output revealed that a different classification might be called for in order to map the diverse rhetorical identities adopted by the writer through the use of the personal pronoun “we”. Consequently, a new taxonomy was elaborated based on the concordances obtained from the corpus as well as on some of the already existing classifications – notably, Tang and John (1999), and Hyland (2002a).

As Table 3 shows, my categorisation establishes some additional divisions with respect to the four basic functions established by Tang and John (1999) and Hyland (2002a), aside from including several areas of overlap in the identities or roles projected by these functions.

IDENTITIES (Tang & John, 1999)	FUNCTIONS (Hyland, 2002a)	FUNCTIONS (My proposal)
Architect of the text	Stating a purpose	1. Structuring the information or moves present in the article/ referring backwards or forward
		2. Stating a goal or purpose
Recounters of the research process	Explaining a procedure	3. Explaining the procedures, steps or research decisions taken
		4. Stating expectations, hypotheses, beliefs or agreement with a particular view
Opinion holder	Elaborating an argument	5. Expressing strengths or limitations
		6. Stating results or findings
Originator	Stating results or claims	7. Making claims or assertions

Table 3. Different categorisations of the functions and identities projected by exclusive “we”.

The first three functions identified in my corpus, “structuring information”, “stating a goal” and “explaining the procedures”, are related to the identities of “architect” and “recounters of research” defined by Tang and John (1999) and, just like those identities, they involve a less manifest authorial presence than other of the pragmatic functions for which self-mention markers are used. As shown below, authors may use self-mention resources when making anaphoric (example 6) and cataphoric references (example 7) with the aim of structuring the information in the text. On the surface, these uses may seem to perform a textual instead of an interpersonal function, inasmuch as they are typically used to give cohesion to the text by referring to information appearing previously in the text or announcing what is to come. Nevertheless, sometimes the RA authors can simultaneously make a strategic use of this anaphoric function in order to imply that their past intervention effectively proved one of their claims (example 6), thus manipulating the readers’ interpretation of the text.

- (6) Previously, *we* have shown that rMLP can be considered a chain-breaking antioxidant. (Food Res. Int.8)

- (7) *We* next discuss the social psychological research that we used to make predictions. (J. of Manag.1)

The second function identified in my corpus, “stating a goal”, does not correspond to any of the identities described by Tang and John (1999), although it appears to overlap with the role they define as “recounter of the research process”. When expressing their goals, authors often refer to choices they made when focusing their research on a particular issue (example 8). In doing so, the expression of goals can also contribute to projecting the identity of the efficient researcher, who recounts her research explaining the steps followed or the choices made. “Explaining research procedures” is in fact the third function of “we” included in my classification and it is clearly illustrated in example 9.

- (8) As a first step in our analysis, we wanted to check whether EFL learners had a tendency to over- or underuse ... (Ap.Ling.8)
- (9) After creation of the pneumoretroperitoneum, we started by dissecting preprostatic fatty tissue to expose the pubic bone and the endopelvic fascia, identifying the prostate. (E.Urol.2)

In contrast to Tang and John's (1999) proposal and also to my own classification, Hyland (2002a) claims that researchers state their goals so as to clarify the schematic structure of the argument and to organise the discourse for their readers. Consequently, Hyland considers that structuring the information in the article does not constitute a separate rhetorical function (see Table 3), and must instead be treated as an additional pragmatic effect of statements of purpose. In my view, this position appears to overlook the fact that in many utterances containing exclusive “we” a text structuring function is clearly dominant and is unrelated to the expression of purpose, as is the case in example 6. Therefore, for my analysis it seems reasonable to maintain the division between these two rhetorical functions: “structuring information” and “stating a goal”.

The relative occurrence of the seven pragmatic functions I propose was analysed in order to investigate possible differences across disciplines (see Table 4).

	Business Management	Food Technology	Urology	Applied Linguistics	AVERAGE
Structuring information	2.33	0.37	0.66	2.38	1.80
Goals & purposes	1.10	0.00	1.33	1.51	1.10
Procedures	23.49	1.96	15.26	8.53	12.87
Hypotheses/ assumptions	5.89	0.12	4.65	2.43	3.38
Limitations & strengths	2.19	0.00	1.49	1.78	1.56
Results & findings	2.74	0.61	4.98	2.38	2.52
Making claims	1.92	0.86	1.16	1.24	1.37

Table 4. Relative occurrence x 10,000 words of the discourse functions of exclusive “we”.

With regard to the incidence of the first three functions, it can be observed that the explanation of procedures and research decision is by far the most frequent function of exclusive “we” in all the disciplines under study, with a noticeably higher incidence in the Business Management and medical corpora. According to researchers in Business Management, in certain cases the explanation of the decisions or steps taken during the research process may be exploited as a purposeful rhetorical strategy. Authors may do this by establishing a comparison between the decisions made in previous studies and their own, thus showing a gap in research and highlighting their own contribution:

We also use the pronoun we at the beginning, in the introduction. For instance, we sometimes say that some authors have done this or that, and that we think that there exists a gap. This way we show our contribution. (Business Management, Informant 3)

Another significant finding is that the two soft disciplines, Applied Linguistics and Business Management, displayed a considerably higher use of “we” in order to structure the information in the article, possibly in order to make up for the wordiness and complexity of their texts. In other words, it could be argued that the need to use more structuring resources may be related to the fact that articles in the soft disciplines follow a more flexible and synthetic structure and arguments are less linear than in the hard sciences. Consequently, researchers in soft disciplines have a greater need to guide the readers around the article and point out to them the different moves performed in the text.

The interpersonal effects brought into play through the use of “we” in expressions of expectations and hypotheses, or in evaluation of one’s research (functions 4 and 5 in my classification) are clearly different from the ones described herein for the first three functions. When RA writers state

their assumptions (example 10) or remark on the strengths of their research (example 11), they commit themselves to a particular position or line of thinking. In doing so, they project a more visible authorial presence, but also expose themselves more clearly to potential criticism.

- (10) On this point *we* agree with authors [28] practicing contrast enhancement color Doppler ... (E.Urol.5)
- (11) By incorporating both objective and subjective measures (...) *we* were able to more readily compare the social capital effects on career success. (Acad.Manag.Jour.5)
- (12) Thus, *we* only have one recorded session of dinnertime conversation from around ... (Ap.Ling.5)

One's individual position is also expressed when pointing out limitations in one's research (example 12), although the threat to the author's face inherent in this context is much smaller, because the author projects an image of humility which will be perceived as appropriate by the discourse community:

Sometimes, I would use it (*We* to describe limitations). I think that is very good style. I think it is formal, polite, discreet and appropriate. (Applied Linguistics, Informant 1)

Unexpectedly, my results indicate that applied linguists were less willing than urologists and authors in Business Management to make themselves visible when putting forward their hypotheses or assumptions, possibly, it might be argued, because hypotheses are not enunciated so often by researchers in Applied Linguistics. In contrast, researchers in Food Technology clearly avoid appearing in the text when evaluating the strengths and limitations of their own research or when expressing their hypotheses or assumptions.

The last two functions put forth in my analysis, "stating results" (example 13) and "making claims" (example 14), were integrated by Hyland (2002a) into just one category, "elaborating an argument". While I agree that in both cases the writer fulfils the role of originator of new scientific knowledge, in my view making claims involves a more powerful authorial presence and a correspondingly greater threat to the writer's face. When making claims researchers stress their ownership of the new knowledge being presented. Yet, claims are not originated merely by the application of sound scientific procedures, as is the case when presenting results, but they demand a personal participation in the interpretation of results and in the elaboration

of a claim. Moreover, claims to new knowledge constitute a considerable threat to the negative face of the readers (Myers, 1989), as they impose on the readers' right to accept or reject a particular interpretation.

- (13) In the current study *we* found a 44.6% preoperative prevalence of psychological distress in all patients. (J. of Urol.2)
- (14) In this work, *we* have shown that it is possible to distinguish infrared spectra of honey from those of honey samples adulterated with sugar solutions. (J.Agric. Food Chem.2)

The results obtained appear to support my hypothesis that these two functions need to be considered separately. As can be seen in Table 4 above, the self-mention marker “we” was generally used more often for the presentation of results than for making claims. This would suggest that researchers in the fields studied generally prefer not to indicate their authorial presence by means of exclusive “we” when fulfilling the most authoritative function, since this pronoun appeared four times less often in this rhetorical move, i.e. “making a claim”, than when presenting results or hypotheses. It is interesting to note, however, that this trend did not apply to Food Technology, as the exclusive pronoun appeared slightly more often when making claims than when presenting results. Nevertheless, the very small overall frequency of this pronoun in Food Technology makes it impossible to formulate any sound hypotheses on the use of these two rhetorical moves based on our statistical data.

According to the data obtained from informants, the expression of claims using an exclusive first person pronoun seems to be acceptable under some specific conditions, despite potentially constituting a very imposing and face-threatening rhetorical move. For instance, according to an informant from the field of Food Technology, in the discussion section of RAs there is some scope for the use of this rhetorical function, as this is the part of the RA where writers are expected to take more risks and to make their own interpretations:

I don't think saying “we have shown” is too strong in the discussion section. The adventure is always in the discussion section. While in the results (...) you simply report on the findings obtained. When you are discussing the results, *that* is when you have to be a bit more careful. (Food Technology, Informant 1)

Other factors such as the journal's citation impact and the amount of data have also been mentioned by informants as key issues determining the use of "we" for expressing personal claims. In fact, in the informant's view it is the journals with the highest impact ranking that expect the writer to adopt a strong authorial identity by means of self-mention markers, among other resources. This hypothesis is partly supported by the fact that the style guides in the *Academy of Management Journal*, the journal with the highest impact ranking in Business Management, explicitly advise authors to employ first person pronouns rather than passives or inanimate subjects.

To summarise, the pronoun "we" can be used in RAs in the performance of a number of rhetorical functions which entail different degrees of writer presence and of risk to the readers' face. In order to more accurately explain the interpersonal negotiations present in RAs from different disciplines we need to take into account the function they fulfil in context as well as the pragmatic effects they are intended to create.

Conclusions

In the increasingly competitive world of academia, the creation of an appropriate authorial identity by means of self-mention resources is essential for researchers in order to present themselves as competent and reliable members of the discipline, and to persuade readers about the relevance of their contributions. However, the results presented here suggest that the way writers construct this authorial self varies according to the specific epistemological and social norms of their own disciplinary communities.

My analysis has attempted to show that the ways first person pronouns function clearly reflect the epistemological and social practices of particular discourse communities. In order to make their text persuasive, researchers must draw on these social conventions and project the degree of authority and credibility that is expected by their community, but they must also balance those strong authorial features by presenting themselves as appropriately modest and unassuming. In fact, as suggested by the comments of informants, failure to show humility to the community may involve risking the chance of getting one's paper published.

In addition, it has been argued here that disciplinary expectations also have an influence on the rhetorical functions or moves which these self-mention

strategies fulfil in research articles. This entails that, unless we examine the pragmatic effects which these and other interpersonal resources provoke in context, our analysis of academic discourse may overlook some important factors and variables which may help us account for the negotiation of meaning present in these texts.

The results presented here seem to confirm that disciplinary norms and expectations have some bearing on the writer's decision to adopt a more or less authoritative stance. Nevertheless, previous research has also pointed at other factors which may influence the choice of interpersonal metadiscourse strategies, like for example the authors' cultural background (Vassileva, 1998, 2001; Martínez, 2005), or even individual factors (Salager-Meyer, Alcaraz-Ariza y Zambrano, 2003; Vold, 2006) such as sex, seniority, native command of the language or personality, among others. The high degree of individual variation in the frequency and choice of self-mention resources which has been reported here is obviously consistent with the notion that individual factors play a significant part in the way authors handle these and, possibly, other interpersonal strategies. Unfortunately, the analysis of the extent to which these individual factors are responsible for variations in the use of self-mention resources is beyond the scope of the present study.

In spite of the valuable insights provided by existing research, the extent to which writers should project their authorial identity within different disciplinary communities remains problematic. Hence more research is necessary in order to map out the variations that exist not only across different fields but also across specific disciplines and subdisciplines within broad areas of knowledge such as the social or the medical sciences. The possible influence of cultural and individual factors also needs to be investigated by future research. In addition, the designers of ESP courses aimed at future or novel researchers should take into account the key significance which the use of these and other interpersonal metadiscourse strategies may have in order to obtain acceptance for the publication of one's research.

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Appendix

List of journals and related abbreviations in the corpus:

Applied Linguistics:

- Journal of Pragmatics (J.of Prag.)
- English for Specific Purposes (ESP)
- Applied Linguistics (Ap.Ling.)

Business Management:

- Academy of Management Journal (Acad.Manag.Jour.)
- Journal of management (J. of Manag.)
- Information and Management (Info. & Manag.)

Urology:

- European Urology (E.Urol.)
- Journal of Urology (J. of Urol.)
- Urology (Urol.)

Food Chemistry:

- Food Chemistry (F.Chem.)
- Food Research International (Food Res. Int.)
- Journal of Agricultural and Food Chemistry (J.Agric. Food Chem.)