

Larissa D'Angelo / Stefania Consonni (eds.)

New Explorations in Digital Metadiscourse

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Larissa D'Angelo / Stefania Consonni
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New Explorations in Digital Metadiscourse

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GIROLAMO TESSUTO

Medicine and biology science communication blogs: Investigating stance patterns for gender identity construction

1. Introduction

At a time when Web 2.0 environments have evolved for collaborative frameworks (Garzone et al. 2007; Garzone 2020; Herring et al. 2013) and the popularity of blogs as a genre (Herring et al. 2005; Myers 2010) has ramped up across the board, the multifunctional nature and use of blogging in diverse fields have made it extremely easy for anyone to personalise content by building communities of practice worldwide around their blog niches. Just as blogs determine the style of writing and method of communicating relevant information in the public sphere through multisemiotic elements, so too they lean heavily on the evaluative and dialogic features of language use across diverse fields (Myers 2010; Bondi/Diani 2015; Tessuto 2015; Bondi 2018; Tessuto 2020a, 2020b, 2022). When it comes to the take-up of blogging in wider academic science communication, utilization of these linguistic and discoursal features becomes material to how bloggers frame ideas, beliefs, attitudes, and positions in a rhetorical event such as in argumentative-styled blogs, and the ways they are reflective of an ideology or value system in writer-reader interaction. At the same time, this usage allows for rhetorically persuasive patterns of interactions to support *visual cultures of science* (Pauwels 2006) involved in today's scientific communication blogging practices for knowledge building and, interestingly, provides an influential source of gender representation in this alternative form of academic communication and scientific research output.

Language and gender studies have been consistently developed since their inception (Lakoff 1975), with their theoretical and methodological perspectives drawing upon diverse disciplines. In this kind of research, the notion of gender comes through as a dynamic performance, signifying that gender “is continually produced, reproduced, and indeed changed through people’s performance of gendered acts, as they project their own claimed gendered identities” (Eckert/McConnell-Ginet 2003: 4). Being essentially context-dependent in a variety of social practices, this flexible process of ‘gendering’ bears upon different facets of the individual’s social identity including linguistic behaviours enacted by the social-cultural factors of male-female differences that frame gender (Butler 2007; Cameron 2009). Not only this, but this process also allows for male and female social categories to draw together the discourse of authority and power in the construal of their social and professional identities (Wodak 1995; Mullany 2007). Under these terms, the idea of enacting social and gender identities in a variety of contexts brings discursive styles much closer to norms and stereotypes of masculinity (McElhinny 1995) or femininity (Mullany 2007), and carries over to the principal instrument and effect of gendered order, relations, and practices that are culturally and experientially relevant in context-dependant language.

Quite apart from these social constructionist approaches to gender, however, different studies have also addressed the potential influence of gender differences in academic writing. So, in addition to gender schematic information being a significant aspect of social identity building (Yaeger-Dror 1998), studies reveal, for instance, that men and women are more similar than different in their argumentative writing style (Robson et al. 2002; Seyyedrezaie/Vahedi 2017), except for epistemic, deontic, or native language features (Seyyedrezaie/Vahedi 2017). Other studies suggest that women are more inclined to employ hedging devices in university student (Dousti/Eslami 2016) or article writing (Mirzapour 2016), with males using the first person plural pronoun more than women (Mirzapour 2016). Still, others claim that boosters (such as amplifiers and intensifiers) are far more frequently employed by male than female writers of computer conference (Fahy 2002) or articles (Yeganeh/Ghoreyshi 2015), or that

different strategies for tying writer with reader at the level of text are used by male and female writers alike, or even that metadiscourse is an important tool for gender as well as disciplinary variation in book reviews across different fields (Tse/Hyland 2006; D'Angelo 2008). So, while gender remains an important variable in this kind of research, web-mediated communication is no less significant to provide a rich source of gender disparity, allowing for a predominantly male (Shema et al. 2012) or female digital content (Brenner 2012) to reap its benefits, or suggesting that gender may also play a role in content and decisions related to blogging practices (Fallows 2005; Pedersen/Macafee 2007).

Now that evaluative language provides a principled way of understanding how interactional meanings are produced in academic science blogging and gender identity reflected in discipline-specific rhetorical practices, further opportunities arise from the need to investigate gender-favoured treatment of language that, to the best of this author's knowledge, is still largely missing from the science blog research landscape. In an attempt to bridge this gap, this study sets out to describe and interpret how evaluative stance-making linguistic features and gender identities go side by side in disciplinary blogs dedicated to 'hard' science research-related content and dissemination. Such features are approached from the perspective of information, text, and genre. To this end, the study is guided by two interrelated research questions:

RQ1: How do evaluative stance features used by male and female writers compare in the open format of academic science blogging and disciplinary practices?

RQ2: How do evaluative stance-making meanings and resources allow male and female bloggers to articulate particular aspects of their academic and disciplinary identities and roles by revealing where they stand on the issues they discuss and orienting to immediate social and communicative situations?

Prior to presenting and discussing the main results related to my research aims, I will first outline the empirical material and research method employed.

2. Material and Method

2.1. Corpus data

The empirical data source for this study came from a randomized corpus of social media texts from 100 blog posts on medicine and biology ‘hard’ disciplines sanctioned by the UK-based BioMed Central (BMC) publishing platform and collected over a five-year period (2015-2020).¹ As part of Springer Nature, BMC describes itself as a large open access science publisher that produces several dozen open peer review journals across the ‘social science’ and ‘hard’ disciplines, including all branches of medicine and nursing, physiology, biochemistry, biology, genomics, and ecology (‘About BMC’ page). A total of 50 single-authored posts were obtained from each category of ‘BMC Blog Network’ – namely, *On Medicine* blog and *On Biology* blog, both covering the most significant research published across flagship open access journals (*BMC Medicine* and *BMC Biology*). The sampled corpora were compiled in equal numbers according to gender combinations, namely, twenty-five posts written by male authors and twenty-five by female authors in each disciplinary blog, again totaling 50 authored blogs in both corpora.

Standing alongside these gender combinations are the academic or professional credentials of blog authors and the style of blog writing. In the former, all of the posts were written by internationally-dispersed male or female authors who were either part of BMC staff editors, or held academic or practitioner roles in the disciplines, so that the bloggers’ profile carried the author’s name over the platform

¹ On Biology blogs and On Medicine blogs available from <<http://blogs.biomedcentral.com/about/>>

and spiced up the text with his or her institutional position and research interests at the top, whether or not with a small colour photo headshot running alongside multimedia content. In the latter, the emphasis on ‘research’ makes it clear from the outset that sampled blog posts take the form of short essay-styled commentaries on scientific findings published across those journals upon which bloggers essentially argued from their own perspectives and contributed in the public arena well outside informal exchanges. In this way, sampled posts can be thought of as a means of distributing scientific content and sparking discussion with the academia and others, thus having the role of a mediating instrument between the wider audience of peers and public (Butler 2005).

Sampled posts were retrieved and downloaded from the chosen database and subsequently converted into text format. The WordSmith retrieval system (Scott 2015) was then used to compute different quantitative data of the posts in text-based entries alone, leaving out structure-wise features in blog posts. The overall data source for this study was a 79,884-word corpus of representative texts posted by the open access science publisher (Table 1), with the medicine corpora size being virtually identical with that of the biology corpora.

DISCIPLINE	<i>Total tokens</i>	<i>Total sentences</i>	<i>Total mean (in words)</i>	<i>Mean length per text</i>
<i>ON MEDICINE BLOG</i>	39,653	1,667	23.79	793.06
<i>ON BIOLOGY BLOG</i>	40,231	1,605	25.07	804.62
COMBINED	79,884	3,272	24,41	798,84

Table 1. Quantitative data of medicine and biology blog posts collected from BMC Blog Network website through Word Smith Tools 6.0 (Scott 2015).

2.2. Analytical procedure

To account for the qualitative and quantitative analysis of gender-typed evaluative language features of blog posts in the ongoing corpus, reference was made to Hyland’s (2005a) taxonomy of interactional stance markers in academic discourse – namely, *hedges*,

*boosters, attitude markers, and self-mentions.*² Stance taking here recognizes “an attitudinal dimension and includes features which refer to the ways writers present themselves and convey their judgements, opinions, and commitments” alongside “the ways that writers intrude to stamp their personal authority onto their arguments or step back and disguise their involvement” (Hyland 2005a: 176). Just as these stance-taking resources “have a dialogic purpose in that they refer to, anticipate, or otherwise take up the actual or anticipated voices and positions of potential readers” (Hyland 2005a: 176, after Bakhtin 1986), so too they become relevant for the broadest sense of identity, defined as “the ways that people display who they are to each other” (Benwell/Stokoe 2006: 6). Together these broad evaluative resources were taken to determine the subjective presence of bloggers in texts as they adopt stances in relation to both the topics and findings they present and discuss in open access research publishing, thus providing a measure of the gender and discipline constructed for the bloggers’ academic identity in this digital genre. Using MonoConc Pro, a text analysis and concordance programme, all the text-based entries of posts were analysed for their stance-performing functions and frequencies, and were integrated with grammatical and evaluative *that*-clause structures to fine-tune the blogger’s strategy for an affective stance (Biber et al. 1999; Biber 2006; Hyland/Tse 2005). Electronically searched lexical items relied primarily on Hyland’s (1998, 2005b) list of keywords for such interactional features and were supplemented by other keywords showing these macro-functions.

² Emphasis on these features draws together a number of ‘evaluation’ analytical methods dealt with elsewhere via academic discourse, such as those coming under the headings of *evaluative orientations* (Lemke 1998), *evaluation* (Hunston/Thompson 2000; Bednarek 2006), *stance* (Conrad/Biber 2000; Hyland 2005a; Biber 2006; Hyland 2009), *metadiscourse* (Hyland/Tse 2004; Hyland 2005b), and *appraisal* (Martin/White 2005). These methods claim as much ground as possible for their chosen object of inquiry.

3. Analysis and Discussion

3.1. Stance features by frequency: overall corpus findings

Analysis of the corpus indicates the significance and role of evaluative stance features in the research-focused commentary genre, with roughly 3,372 instances overall being signaled almost once every twenty-five words (Table 2).

FEATURE	<i>n.</i>	%
HEDGES	1,513	45
BOOSTERS	864	26
ATTITUDE MARKERS	627	19
SELF-MENTIONS	368	10
TOTAL	3,372	100

Table 2. Frequency of stance features in medicine and biology blog posts.

The frequency counts in Table 2 show that hedges are by far the most common interactional resources in the sample, accounting for almost half of the total devices in the corpus (45%), and are followed by interactional boosters (26%), attitude markers (21%), and self-mentions (10%) along the way. On the whole, the importance of creating an evaluative cooperative context through these interactional forms comes closer to the frequency of interactional stance features realized in the legal (Tessuto 2015: 92-93) or medicine blog genre (Tessuto 2020a: 238), where evaluative items help writers connect their texts with their disciplines for persuasive goals. This context also, however, tells us something about the text meanings and discourse functions served across discipline-approved writing practices, such as the research article genre (Hyland 2005a, 2005b, 2010), although intuitively the narrow space constraints of the genre in the current corpus can only allow the blog writers to present more succinct arguments and claims than the writers of the research article genre presenting more extensive arguments through such evaluative forms. In other words, these interactional evaluative resources are

recontextualized by the blog writers within the existing digital genre, which facilitates a very different form of academic writing to traditional research article writing where interactional language is bound by disciplinary conventions of the scholarly community.

3.2. Stance features by discipline: overall corpus findings

Yet, the analysis of evaluative stance features in the current corpus also reveals some differences between the two disciplines. Table 3 shows that the medicine sub-corpus uses slightly more stance features overall (1,737 occurrences), providing a slightly unstable pattern when discipline is taken into consideration. Despite this, data indicate again that all bloggers are concerned with a shared purpose of evaluating some claim or proposition from the community's bodies of knowledge.

FEATURE	<i>Medicine</i>		<i>Biology</i>	
	<i>n.</i>	<i>%</i>	<i>n.</i>	<i>%</i>
HEDGES	642	37	871	53
BOOSTERS	520	30	344	21
ATTITUDE	397	23	230	14
MARKERS				
SELF-MENTIONS	178	10	190	12
TOTAL	1,737	100	1,635	100

Table 3. Frequency of stance features in the blog corpus by discipline.

If we look more closely at stance frequencies by discipline in Table 3, we will see overall that medical bloggers tend to make a fairly balanced use of hedges (37%) and boosters (30%), accounting for around a third each, followed by a fairly large proportion of attitude markers (23%) and a small portion of self-mentions (10%) along the way. Biology bloggers, on the other hand, tend to make far more use of hedges (53%) than boosters (21%), attitude markers (14%), or self-mentions (12%), suggesting how disciplinary culture may

differentially affect the bloggers' evaluation of factivity in their medicine or biology posts. In both cases, the primacy of evidentiality hedges over other resources exemplifies the bloggers' need to weight the expression of their commitment depending on how they qualify the epistemic value of their statements and to pragmatically position writer-reader relations. It can also be seen from the Table that, except for biology bloggers choosing to intrude slightly more into their text by self-mentions (12%), medicine bloggers are more willing than biology fellows to tone up their claims for their readers by boosters (30%) or to express their affective dimension towards topics and readers by the lexical selection of attitude markers (21%).

So, while these rhetorical resources square with the writers' epistemological and disciplinary orientation to blogging about specific 'hard' science topics and negotiate social relations, they do point to the realities of variation operating at a highly contextual level as bloggers can employ evaluations on any occasion of use in the unfolding text by relating independent beliefs to shared experience.

3.3. Gender-linked use of stance features

The ways in which evaluative stance features consciously work for the rhetoric of both disciplines in the genre can also be seen by the gender preferences for these linguistic features. Table 4 presents the gender distribution of these resources in the male and female corpus, each comprising 50 posts in both disciplines.

GENDER	<i>Medicine & Biology: 50 posts</i>		<i>Medicine & Biology: 50 posts</i>	
	MALES		FEMALES	
	<i>n.</i>	%	<i>n.</i>	%
HEDGES	689	40	824	51
BOOSTERS	498	28	366	23
ATTITUDE MARKERS	376	21	251	15
SELF-MENTIONS	192	11	176	11
TOTAL	1,755	100	1,617	100

Table 4. Frequency of stance features in the male and female blog corpus.

As we see from this Table, men employ slightly more evaluative stance-making features overall (1,755 occurrences) than women do (1,617 occurrences) for text meanings, suggesting that they are more likely to fill up a public space for interactionally social relationships and evaluate and position themselves and their research issues in relation to other members of their groups and the public over the Internet. The fact that men are more willing to occupy this public space than women points toward other studies where men are “more interested in information and opinion” in their interactional blogging platforms (Pedersen/Macafee 2007: 1481), or are given greater control over science blogging practices than women (Shema et al. 2012), thus running counter to the general claim that women use social networking sites (including microblogging) more actively than men for interactional goals (Brenner 2012).

Standing alongside these data are the measurable gender differences in the frequency of individual interactional forms used in the 50 corpus samples from both disciplines. Here, Table 4 shows that female bloggers tend to use more hedges (51%) than male bloggers (40%) writing for medicine or biology posts, while the reverse is true for boosters (28%) and attitude markers (21%) being more popular among male bloggers, leaving self-mentions to stand on an equal footing between men and women (11% – 11%). This tendency for female bloggers to produce more interactional hedges corresponds to the findings of recent studies that women make more use of such devices in their academic writing (Dousti/Eslami 2016; Mirzapour 2016), but is at odds with the significant male use of hedges found in biology (Tse/Hyland 2006) and cross-disciplinary book reviews (D’Angelo 2008). While the male-preferential use of boosters in the current study aligns with boosting strategies employed by men in other academic writing studies (Fahy 2002; Yeganeh/Ghoreyshi 2015), overall data in this study contrast with previous findings that men and women are more similar than different in their essays (Robson et al. 2002) or their article style of argument (Seyyedrezaie/Vahedi 2017).

This comprehensive picture of gender-identified differences in the male and female sub-corpus is further reinforced in Table 5, which provides a breakdown of gender results by disciplinary sub-corpus, each comprising 25 posts.

GENDER	<i>Medicine: 25 posts</i>		<i>Medicine: 25 posts</i>		<i>Biology: 25 posts</i>		<i>Biology: 25 posts</i>	
	MALES		FEMALES		MALES		FEMALES	
	<i>n.</i>	<i>%</i>	<i>n.</i>	<i>%</i>	<i>n.</i>	<i>%</i>	<i>n.</i>	<i>%</i>
HEDGES	315	37	429	53	361	40	408	51
BOOSTERS	242	28	177	22	259	28	186	23
ATTITUDE MARKERS	195	23	116	14	198	22	118	15
SELF-MENTIONS	99	12	92	11	95	10	82	11
TOTAL	851	100	814	100	913	100	794	100

Table 5. Frequency of stance features in the two gender groups by discipline.

Regardless of which discipline they open up their posts to, women are more inclined to use hedges (53% – 51%) to delimit the scope of their statements, while men are more likely to use boosters (28% – 28%) and attitude markers (23% – 22%) to reinforce their arguments and indicate their affective attitude to textual information, respectively. In all cases, men and women bloggers display generally similar frequencies in their overall usage of self-mentions. Under these terms, therefore, Table 5 illustrates that single-gendered bloggers in each discipline use stance features in pretty similar ways regardless of the discipline.

3.4. Operationalizing gender-preferential type and function of stance features in texts

We now turn to examine how different types of evaluative stance features flesh out text meanings and discourse functions in interactional blog posts, and the ways they signal particular aspects of

the bloggers' gender identity and role that relate to their scientific argument and discipline and help them to accomplish their rhetorical and persuasive goals in the genre. We begin with hedges.

3.4.1. Hedges

Consistent with the gender differences identified in Tables 4 and 5 between the two disciplines, a variety of female-linked resources of stance-making hedges are mobilised across the samples. As shown in (1-4), female bloggers may see lexical devices of hedging as more suitable for their purpose of conveying caution and negotiating an interpersonal space for positions of alignment or misalignment with others. So they are able to create different rhetorical effects with readers when communicating research:

- (1) The trigger for pigment alterations is still *unclear*, but drusen *appears* to have a strong relation to RPE dysfunction. [MED – female]
- (2) Greater height and obesity have been *suggested* as *possible* prostate cancer risk factors, but [...]. [MED – female]
- (3) By extension, some individuals *may* also have gene expression patterns which *would* confer resilience to the *potential* effects of head trauma due to overly efficient DNA repair mechanisms in the brain. [BIO - female]
- (4) Based on recent work conducted in collaboration with Wageningen University in The Netherlands, it *seems likely* that the introduction of badger vaccination, [...]. [BIO - female]

While, as in (4) using an 'it' subject, the frequent use of hedges minimises the personal role and identity of the female blogger and highlights the phenomenon under study, all the examples reveal the women's interpretative responsibilities for the evaluation of research and the ways they help readers get behind plausible arguments within the practices and meanings of their disciplines. Of course, it is impossible to identify a single reason for every example given above, but the greater use of female-linked lexical and grammatical devices of hedging in the data may be attributable to personality factors, such as women perhaps not feeling realistically confident in their own research judgment because of the status afforded to them by some male peers, thereby allowing female bloggers to purposely control and

consciously adjust their statements to avoid hostile responses in the interactional nature of science blogging. Consistent with the claim that hedges have been classified as “women’s speech” (Lakoff 1975: 19), presenting arguments with appropriate qualification and stance in the above and other examples becomes an important part of how female bloggers ‘identify themselves’ with such claims and their readers and how these claims ‘genderise’, as it were, the female bloggers’ personal and social dimensions of the research topics under discussion.

3.4.2. Boosters

At the same time, male bloggers appear to be more reliant on boosters, which allow them to stress their commitment and rule out alternative positions to their own. This can be seen in the examples below, where different kinds of boosting features allow male bloggers in single or co-authored posts to make bold statements and fully get behind their scientific claims:

- (5) Our study conducted among men aged 35-64 who were employees of the London Transport Executive during the 1950s *found* that drivers had a higher risk of developing heart disease as compared to conductors. [MED – males]
- (6) *I am sure* we are all well aware that having little physical movement (sedentarism) is not the best thing for our health and we *actually* do experience some unfavourable outcomes, [...]. [MED – male]
- (7) Already at first sight, the ventral mucus glands, which open to the pad contact surface, differ *clearly* in their morphology from the dorsal ones. [BIO – male]
- (8) *We believe* that the epidemiological profile of this novel pathogen *should* be monitored as part of a ‘better’ surveillance system as there is *evidence* to suggest that [...]. [BIO – males]

Not only do these male-authored posts draw readers into the research topic and promote interpersonal solidarity in the unfolding arguments, they also allow male bloggers to present the significance of their research (5), or to present broad epistemological issues or ideological assumptions of scientific progress (6-8) as part of disciplinary patterns reinforced by the use of personal pronouns. The observation that male bloggers are more inclined to confident assertions than female bloggers suggest an effort to present research written by someone who is a subject-matter expert in the academic field and who is associated

with seniority practices in the academy or profession. And, indeed, many such bloggers are depicted as academic or professional experts on the blog website. So, the greater use of male-linked boosting features to present statements forcefully and evaluate material as objectively and accurately as possible allows male bloggers to specify the actual state of their knowledge on the subject, claiming credit for undisputable positions and creating a conclusive argument in scientific discourse.

3.4.3. Attitude markers

As with boosters, attitude markers tend to be more common among male bloggers overall, offering them another opportunity to deal with their judgements and evaluations in the interactional dimension. In the examples below, we see male bloggers making use of explicit attitudinal lexicon in the form of attitudinal verbs, adverb, adjectives, and nouns for positive or negative meanings, allowing them to consider something reasonable or due (*expect*), indicate difference of opinion (*disagrees*), express value, significance and importance (*effective*, *importantly*, *significant*), indicate weaknesses and shortcomings (*limitations*), or consider something hard to deal with (*difficult*) or even problematic to get on with (*issue*):

- (9) In the future, we *expect* that experimentally and clinically validated mathematical models of cancer subtypes, similar to the one presented in our work, will become a *significant* part of identifying *effective* drug combination therapies [...]. [MED – males]
- (10) Indeed, there are *limitations* to the conclusions that can be drawn from current analyses, [...]. [MED – male]
- (11) *Importantly*, we identified gland clustering also in non-arboreal frog species that do not regularly climb and stick. This observation *disagrees* with the hypothesis that the toe glands are specifically adapted towards attachment. [BIO – males]
- (12) In behavioral research, it is notoriously *difficult* to measure authentic human behavior in the controlled setting of a laboratory, and this makes the regulation of behavioural features a complex *issue* to tackle. [BIO – male]

As can be seen, evaluative perspectives are highlighted and enhanced through such attitudinal markers, informing the readers about the

bloggers' points of view and their positions in the research texts. Not only this, but in a stance-making category of this kind we see again the need for male bloggers to professionally communicate their competence and credibility with readers as measured by their construction of a critical and persuasive dialogue. This, then, situates both the social aspects of their research and their readers.

3.4.4. Self-mentions

Lastly, male and female bloggers stand on a par with their overall usage of self-mentions realised by exclusive first-person pronouns³, revealing that the two gender groups do not differ in how they create different roles or identities with varying degrees of authorial presence in research posts. This can be seen in the examples below, with male and female-authored posts not only appearing more personally engaging than otherwise realized through *it* or other impersonal structures seen before, but mostly exemplifying what bloggers themselves have done in their research work. And the pronominal function in (13) and (14) does help the bloggers highlight their own interpretation of a given point, announce a purpose (*we explore*) and thereafter state results/claims (*We found*) in (15), or explain a procedure in (16):

- (13) Although *I* have seen no molecular evidence of AA exposure in cancers from South Asia or South America, AA-containing herbal remedies are probably still used in both areas. [MED – male]
- (14) Prior to speaking to H, *my* research had led me to underestimate the effects of FD on an individual's life. [MED – female]
- (15) In the current paper, *we* explore how common the innervation of the male copulatory organ is in spiders and whether [...] *We* found nerves in the palpal organs of every spider species *we* investigated. [BIO – male co-authored post]
- (16) To demonstrate *our* workflow, *we* sequenced DNA barcodes of >7,000 specimens of Phoridae (“scuttle flies”) [...]. [BIO – female co-authored post]

³ As should be expected, exclusive self-mentions in the corpus add to an inclusive alternative of *we* pronoun to pull readers into the discourse (Hyland 2005a: 182, on *engagement* devices), but they were ruled out of this study on stance-taking resources.

It is quite clear that these subjective cases of exclusive pronouns are context-specific, negotiated with potential readers, and actualized in self presentations, thus being one and the same for the pragmatic purpose of the genre to provide a rhetorical space for self-presentation alongside a specific professional gender identity. Implied in these cases of subjectivities is the fact that male and female bloggers are also highlighting the relevance of their own contributions to the 'hard' fields; in other words, they create an appropriate authorial role or identity by means of self-mentions. This is essential to project an image of competence and reliability in science blogs and gain credibility in the eyes of their peer readers.

4. Conclusion

In this study, I have sought to describe and interpret how disciplinary conventions bear upon male and female rhetorical choices of stance-making resources in a corpus of medicine and biology research-commenting blog posts. On the whole, the stance frequencies in this study show that the public space of the genre writing is somewhat characterized as more 'masculine' than 'feminine', with 'masculine' blogging strategies not only helping male agents to share evaluation with a like-minded audience in an interactional dimension, but also appropriating interactional perspectives and practices that carry over into a moderately male advantage when writing science blogs. Individual stance-making resources in the data surveyed are largely variable between the two disciplines and genders, with a tendency overall for male and female bloggers to engage in rhetorical positions as they present and discuss the topics persuasively for an immediate audience and contribute to evaluations of research-focused issues from within the boundaries of their disciplinary discourse worthy of posting. In this vein, we see female bloggers setting out their arguments more circumspectly by hedges than their male counterparts, who are more self-assured in putting forward their views by boosters,

or are more comfortable with attitudinal meanings expressed by attitude markers than females. By contrast, we see a tendency in the male and female bloggers' use of self-mentions to provide the extent of their own authorial presence. Because such differences as well as similarities in gender-privileged features of language suggest shared evaluative concerns in both disciplines, male and female bloggers are thus able to blog about their niche topics, disseminate and promote science, and ultimately forge aspects of their disciplinary roles and identities through the merging of the academic and public space of scientific communication.

Over and above, these findings reveal that the patterns of text meanings, roles and identities are grounded in the discursive choices of argumentative stance features available for social goals of the genre, and emphasize that gender impinges on disciplinary discourse while also accounting for how research issues can be discussed in agreed ways. Thus, viewed as an influential, but not major source of discourse variation in the texts examined, gender essentially allows male and female bloggers to shape their opportunities and expectations for the textual and discursive practices of their medicine and biology disciplines, giving a plausible appearance to 'masculine' and 'feminine' evaluations of the topics in this kind of argumentative and persuasive writing. Of course, gender here cannot be taken only at face value in that, as mentioned, male and female bloggers come from and adopt the values of different cultures that might act upon their blog content and style alongside their scientific research culture recognized by the 'hard' disciplines. In line with this, gender and other variables may not only determine the ways of performing "gendered acts" (Eckert/McConnell-Ginet 2003: 4) in the interactional public space of the social medium, but may also account for the scientific roles, identities, writing style and content decisions of male and female bloggers in the immediate social and communicative situations, thus realizing opportunities and expectations for both genders in the texts. But it is possible to go beyond the ordinary limits of blog writing here and perceive the gender identity of male and female bloggers as being constructed by individual predispositions as much as by the persistence of social pressures that influence their behaviour in line with the predominant gender roles and stereotypes.

This is nothing new since gender is formed during the socialization process, albeit being a complex phenomenon in this kind of process, and as such shapes opportunities and expectations for both male and female bloggers writing in accordance with their preferred discourse practices as well as their social and epistemological questions of constructing science in the chosen fields. Despite the complexity of 'gendered' language, discursive and linguistic findings presented in this study may unravel some of the interesting relationships between discipline and gender that are still largely missing from the research landscape of 'hard' science disciplinary blogs. Thus, this study aims to contribute additional evidence to the body of published research.

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Corpus

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