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CERLIS Series
Volume 1

Stefania M. Maci & Michele Sala (eds)

Genre Variation
in Academic Communication
Emerging Disciplinary Trends

CELSB
Bergamo

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CERLIS SERIES Vol. 1

CERLIS

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GENRE VARIATION IN ACADEMIC COMMUNICATION.

EMERGING DISCIPLINARY TRENDS

Editors: Stefania M. Maci, Michele Sala

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LUCIA ABBAMONTE / FLAVIA CAVALIERE

Book Chapters in Academia: Authorship in Methods (Re-)Presentation and Conditional Reasoning

1. Introduction

Constellation and *colony* are among the most quoted metaphors to describe the sets of existing academic genres (Swales 2004); Book Chapters (BCs) are included in this hierarchy, but their typology has not been so extensively analysed as Research Articles or Abstracts *moves*. Yet, BCs are a rich and significant territory of study when notions such as agency, saliency and authorial disclosure in texts are at stake. On the one hand, generic expectations consistently influence the construction of individual text types, according to community-shared text-internal/external characteristics (Bhatia 2004), so as to engage the specialized audience by meeting their *habitus* of acquiring/disseminating information. On the other, both in the text and in the research construction there is scope not only for *commonality* but also for *individuality* (Gotti 2009), as is apparent also in BCs.

Meaningful aspects in this genre are not only the choice of method, but also the discourse about the method, which is not limited to the Methods Section. Our pilot study is meant to highlight epistemological differences between Cognitive and Medical Sciences in BCs from edited collective volumes.

2. Aims and analytical perspectives

From a genre-aware approach, we contrastively analyse how different uses of Conditional Reasoning (CR) in Method re-presentations are displayed in two scientific fields namely in Medical (Med) and Cognitive Sciences BCs (CogSci BCs), thus revealing different authorial identities. Such issues have not received much critical attention as yet. It must be observed that even in the much investigated Research Articles, as Swales (2011) notes,

the ‘humble’ methods section has been largely ignored. However, [...] methods are the epistemic centers of disciplines, and we also know [...] that editors of major journals often operate ‘methodological screens’, rejecting out of hand submissions that do not meet their methodological expectations.

We selected a corpus of 60 BCs from edited collective scientific volumes, divided into two sub-corpora¹: one consisting of 30 Cognitive Science BCs and the other of 30 Medical BCs, whose structures follow the typical Research Articles IMRD pattern (Swales 1990), with minor variations. However, in their chapters, academic writers do not limit their argumentations about method to the specific Methods Section. Thus, to better understand the different ways authors *(re)present, support* and *argue* for their research methods, we need to extend our analysis to the whole texts under scrutiny.

Data were evaluated in a Discourse Analysis perspective, more specifically within an Academic Discourse Analysis (ADA) approach. Such ‘delicacy of focus’ was required by the peculiar status of the authorial voice in scientific discourse, which is restrained both by academic genres tradition and disciplinary community norms: predictably, academic authorial *personae* cannot be so ‘overt’ as in socio-political discourse at large. It is mainly through the use of pronouns and self-referencing that ‘proximity’ with readers (Hyland 2010) is achieved in such texts; e.g., *we* is frequently used to

¹ For the numbered lists of the BCs in our corpus, see Appendix 1 for CogSciBCs and Appendix 2 for MedBCs.

involve/include readers in (conditional) reasoning about method choice.

The presentation/justification of methods is the arena where the argumentative skills of researchers play an essential role. In this perspective, we investigated their uses of CR all over the texts, with a special focus on pronoun use, by considering the occurrences of hypothetical thinking patterns. Significant differences emerged between the two disciplinary domains especially as far as argumentative modes are concerned. To contrastively highlight epistemological similarities and differences between the two disciplinary domains, the salient linguistic features to investigate appear to be the linguistic *formulae* of Hypothetical-deductive vs. Probabilistic Reasoning thinking patterns (see 5.2), in connection with the use of first persons pronouns “investigated as markers of authorial identity and stance” (Gotti 2009:10), and of indefinite subject pronouns, together with verbs combined with these pronouns. When dealing with the disclosure of authorial identity/salience in genre-texts, together with the subjective presence of communicative participants in the same *loci*, aspects both of genre analysis and of scientific discourse need to be taken into account. This twofold approach illustrates how the (dia-)logic quality of such language is displayed in the inter-subjective relation between texts, readers’ beliefs and value systems. Drawing on discourse analysis and corpus linguistics tools, Hyland (2004) illustrates how academics use language to organise their professional lives and research work, collectively establishing what will be recognized and assessed as knowledge.² He explores the relationships between the cultures of different academic communities and their unique discourses – engineers ‘report’, while philosophers ‘argue’, and biologists ‘describe’ – and the relationships between writers and their readers in published academic writing. Further, in his own words:

Academics in different fields represent themselves, their work and their readers in different ways. In the humanities and social sciences they take a more explicitly personal position than in the sciences and engineering, refer

2 Useful insights into such issues are offered by the numerous contributions by Swales (2004, 2011), Bhatia (2004, 2006, 2008), Gotti (2004, 2011), and Hyland (2000, 2005, 2006, 2010).

more to social actors and processes, claim significance in different ways and employ more citations. This is because rhetorical practices are closely related to the purposes of the disciplines and the ways they create knowledge. While this does not determine the ways we use language, it means disciplinary credibility and understanding can only be achieved through participating in communities and connecting with their socially determined and approved beliefs and value positions. (Hyland 2005: 2)

What is at stake is the process of the construction of both knowledge and texts, which emerges as the result of social interaction between writers and readers in a shared academic and professional context (Hyland 2006), and is subject to genre-based variation across disciplines (Bhatia 2004) developed as a multi-perspective, integrative “three space model for the analysis of discourse as genre integrating social professional space, social space and textual space” (Bhatia 2008: 166). These insights contributed in different ways – also contrastively – to the elaboration of the present ADA approach. Among the several aspects of academic discourse, our approach focuses on the epistemological features (and markers) of authorial method representations, both at lexical and textual levels. Actually, the study of methodological and discursive aspects of BCs textuality has been neglected so far, thus creating a gap, which the present study starts to address.

3. BCs as a situated genre

Recently, the relations between genres and discourse communities has captured critical attention, and a mediatory, evolutionary vision of generic integrity as responsive to particular generic events has been outlined (Swales 2004). In a similar vein, Bhatia and Gotti (2006) have shifted the focus of genre analysis from a pedagogic domain to professional and organizational contexts, within specific disciplinary domains. The integrity of genre can be defined by text-internal and - external characteristics which are subject both to constraints and to change over time and circumstances. In Bhatia’s words, “to appreciate

the dynamic complexities and variations within and across academic disciplines, genre theory needs to be developed in such a way that it accounts for discourse across generic boundaries on the one hand, and is also sensitive to disciplinary variations on the other" (2004: 52). In view of that, the practice of genre mixing/embedding, while preserving generic integrity, leads to professional expertise.

Since genres are functionally related to the expectations of academic and professional communities, genre-awareness is considered a necessary textual competence both in academic teaching/learning situations, and in professional contexts. In this scenario, RAs, despite competition from electronic publishing, still play a pivotal role, as compared to handbooks, research letters/reports, conference abstracts and other (occluded) genres.

BCs share many of their variously investigated textual features and goals, and are also included in this generic colony/hierarchy, but their typology is one of the least investigated (Swales 2004: 17). Indeed, RAs rather than book chapters provide specialized information to contemporary scientific communities and, not infrequently, only the abstracts and results of RAs are actually read. Written scientific dissemination is fast-evolving and not void of contradictions in the web-wired arena of contemporary readership (Abbamonte 2002, Boismenu 2004).³ What status, then, can quality BCs retain in this multi-layered context? Scientific volumes on given topics by prominent researchers, supervised by prestigious editors, are highly respected publications (Abbamonte 2008). As Myers points out (1990:17), "books are crucial in the life of fact, since they present a different sort of facts from journal articles, a mosaic of claims from which the personal and provisional have been removed

3 Science-texts partake of the tendency for media systems worldwide to become increasingly homogeneous, with cultural and structural differences among nation states disappearing in favour of a global pattern of journalistic professionalism and marketing-oriented politics which have progressively led to the 'technologization of discourse' with its drive towards standardization of discourse practices, across *and* within institutions (Cavaliere 2008). In this multifaceted scenario, prestigious scientific journals and reviews share the same fluid cyberspace as popular information, weblogs, newsgroups, wikis and peer-to-peer file sharing networks (Miller/Shepherd 2004); thus, virtually total freedom of expression coexists with highly constrained discursive practices.

and in which the pattern of the whole is constructed". The publication of the authors' research in edited volumes is the conclusion of a process of accreditation within the discourse community: thus, the BC status within the scientific community is high. Moreover, in terms of genre studies, when authorial identity in text types is the focus of interest, BCs are a rich and significant territory of study. They are organic parts of volumes, which generally evolve within an individual/original authorial project and pursue team-shared scientific goals. If we outline a commonality/individuality gradation among genres, as compared to RAs, BCs provide more opportunities for displaying researchers' argumentative skills. Instead, RAs in international scientific reviews and journals are subject to more standardized, 'globalized' and 'gate-keeper refereed' constraints. In BCs, the possibility to move more freely within the dimension of discourse community facilitates the production of situated meaning to engage the intended readership, and provides a framework for the conceptualization of recognizable practices and modes of enquiry. Thus, there is a wider scope for authorial negotiation of research hypotheses and results, through various discursive and endorsement strategies meant to enhance interest in research issues (Abbamonte/Cavaliere 2010). BC authors more freely modulate their stylistic choices, and their efforts to meet their discourse community's claim for more critical attention than they have received so far.

4. The language of hypothesis: Conditional Reasoning patterns

When moving from phrases to sentences and then to wider textual levels, we notice that both Cog Scientists and Med authors utilize CR thinking patterns to explain and justify their choice of method. Such discourses about methods are not confined to the Methods sections

themselves but permeate the whole texts. In Oaksford's words (2010: 4),⁴

The conditional, *if...then*, is probably the most important term in natural language and forms the core of systems of logic and mental representation. It occurs in all human languages and allows people to express their knowledge of the causal or law-like structure of the world and of others' behaviour, e.g., if you turn the key the car starts, if John walks the dog he stops for a pint of beer.

Schematically, within CR, Hypothetical-deductive (HD) thinking leads to logic, expected conclusions: '*if a, then b*', '*a*', *thus b*', as in the classic example: *If the geometrical figure is a rectangle, then it has four sides. A geometrical figure is a rectangle, thus it has four sides.*⁵ Suppositional/Probabilistic Reasoning (SR), instead, consists in making a hypothesis and inferring a probable consequence either by induction, or by abduction. *Induction* is the process of drawing a more general conclusion from the premises (*a* gives us reason to conclude *b*, but it does not ensure that *b* is true) e.g.: *if all of the rabbits we have observed so far are white (a), we may induce that all rabbits are white (b)*. However, the truth of the conclusion is not guaranteed. *Abduction* allows to abduce a hypothetical explanation *a* from an observed circumstance *b*, where *a* denotes the antecedent and *b* the consequent. It is a reasoning form leading to infer hypotheses from facts: so it is often used in order to construct post hoc hypotheses. See, for instance, the following examples: (b) *The lawn is wet. But if it rained last night*

4 Amongst the conditional expressions, 'If [...] then' is the most investigated one in the psychology of human thinking and in CogSci, given the close relationship between the modelling of conditionals and the elaboration of logical systems. Oaksford is in line with an emerging trend of thought that views people's CR behaviour more as successful probabilistic reasoning rather than strictly hypothetical-deductive and potentially errorful logical reasoning. He outlines an integrative approach to the competing theoretical positions developed over the last 50 years in this area (mental logics, mental models, heuristic approaches, dual process theory, and probabilistic approaches) to better explain the multifaceted phenomenon of reasoning with conditionals. The issue, however, is not free from controversy.

5 For further investigation, see Walton (1989), Palladino (2002), Evans (2007), Edgington (2008), Cavender/Kahane (2010).

(a), then it would be unsurprising that the lawn is wet. Therefore, by abductive reasoning, *If it rained last night, then the lawn is wet.*

We could say that SR thinking is not the expression of certainty, but moves along a continuum of probabilities. In the same vein, Schroyens (2008) considers the lifelong development of deductive rationality in human reasoning. It is assumed that a deductive rational behaviour satisfies the goals of deduction: thus, the conclusion of a deductively valid argument is necessarily true *if the premises are true*. Deductive thinking is always hypothetical thinking under the assumption of truth: it is reasoning under certainty. However, should factual knowledge conflict with the assumption of truth, then it would be necessary to engage in ‘contrary-to-fact’ reasoning. Here critical thinking (i.e., by and large, looking for possible alternatives) comes to the foreground: deductively rational behaviour is not prescriptive/normative in every circumstance, and the age factor appears to influence the choice in favour of critical/probabilistic thinking.⁶

Among many possible uses, CR is also utilized to perform various kinds of speech acts, such as *commissives* (offer, promise, refuse, threaten, volunteer), e.g. *if you go to the shops, I'll cook the dinner, if you don't pick me up, I won't come to the party; directives* (request, command, invite, suggest, forbid) e.g. *if you are not 18 years old, you can't drive a car in Italy; or expressives* (praise, congratulate, regret, deplore) e.g. *if I hadn't told her, she wouldn't be furious at me or if I hadn't married him, I wouldn't have to divorce him.* Further, CR patterns are used also to convey counter-factuality: e.g. *if the Nazis had won World War II, the course of history would have been tremendously different.*

To the purpose of the present study, the authorial choice between *suppositional-probabilistic* and *hypothetical-deductive* reasoning is a significant aspect. Both reasoning patterns require conditional forms and can be expressed by the *if a, then b* formula, but with different degrees and quality of certainty. By and large, the laws

⁶ Schroyens, Schaeken and Dieussaert (2008) hypothesize a developmental increase in critical-thinking (i.e. a better, more extensive search for counter-examples: alternative possibilities to putative conclusions). With age, people make more valid arguments; with age there are simply more counterexamples.

of Euclidean geometry, philosophical reasoning and cognitive sciences are more solid foundations for hypothetical-deductive reasoning, whereas research in medical, historical or anthropological domains more frequently relies on probabilistic reasoning, which displays lower degrees of certainty:⁷

- (1) (HD) If nest building behaviors are often driven by pre-programmed schemas, it is also obvious that they are flexible with individual variations (CogSci BC 30)
- (2) (SR) If splenectomy is required, antimicrobial prophylaxis is usually provided, at least until age five years, to decrease the risk of overwhelming sepsis caused by encapsulated organisms. (Med BC II)

It also needs to be taken into account that both in everyday and scientific communication, using *suppose/assume* instead of *if*, or adding intensifiers, boosters or downtoners may simply be a question of discoursal strategies. Moreover, CR thinking patterns must not be confused with other rhetorical devices, such as, for example, descriptions in the form of questions: *What can an image be if not a representation?* (CogSci BC 3)

Going to greater lengths, we have also analysed whole ‘Conditional Reasoning-tinged’ passages in our corpus, where the displaying of hypotheses require textual stretches well beyond the sentence boundary:

- (3) Suppose we were to admit that our \$20 billion a year “war on drugs” has been lost. Suppose we were to take the step of legalizing drugs, so that any adult with a special picture ID credit card could buy them in modest quantities in any liquor store, with the Drug Enforcement Agency’s computer keeping track of each purchase. There would still be a small illegal trade in drugs for juveniles, but billions of dollars would be removed from the underworld economy. (CogSci BC 5)
- (4) Suppose, for example, that a mutation caused a particular stem cell to replicate faster. That mutant lineage might take over its own compartment, outcompeting other stem lineages within the compartment. But spatial restrictions would often prevent the mutant lineage from spreading beyond its own small neighborhood. (Med BCXX)

7 The numbers in brackets refer to the lists of the BCs in our corpus.

In sum, to achieve correct understanding of CR patterns in BCs, our analysis cannot be confined to ‘surface’ lexical features, but needs to dig deep down into semantic/logic levels. Apparently, there is no automatic marker of CR thinking patterns: they are conveyed rather through the semantic balancing of sentences/paragraphs according to the (sometimes implied, underlying) formula *if a, then b, ‘a’, thus ‘b’* which shapes these either deductive or probabilistic forms – as shown in section 5.2., tables 10-11.

5. Materials and data

Originally our corpus (time span 1998-2010) comprised a larger number of texts, but since on average MedBCs are considerably shorter than CogSci BCs, we had to redefine our selection carefully by eliminating the shortest and the longest chapters on both sides. Our present corpus consists of two subcorpora:

- 30 CogSci BCs, for a total of 296,288 running words, mainly from the domains of Psychology, (Psycho)Linguistics, Computational Linguistics, Information Technology, Evolutionary Studies, Epistemology and Anthropology.
- 30 Med BCs, for a total of 199,285 running words mainly from the domains of Epidemiology, Virology, Genetics, Pharmacology, Cardiology, Obstetrics.

Given the different sizes of our subcorpora, they cannot be compared by utilizing corpus-linguistics usual tools, but rather by resorting to proportional criteria. In the following tables, examples of the features analysed (first persons and indefinite subject pronouns; verbs combined with these pronouns; Hypothetical-deductive vs. Probabilistic Reasoning patterns) are shown and compared contrastively.

5.1. Pronoun data

Here follow the quantitative data of pronoun occurrences which will be grouped into two columns, one for CogSci BCs and the other for Med BCs, to highlight the more meaningful differences in the data resulting from our contrastive analysis of the two subcorpora.

It is the most common option in our corpus, as expected in the domain of scientific discourse. The second and third most frequent options are *inclusive we* (Fløttum 2006) and *I* for CogSci, and *exclusive we* and *inclusive we* for Med Sciences. One possible reason for these choices is that authors-researchers use self-referencing pronouns (*I-We*) to effectively illustrate and endorse their research hypotheses and methodological choices and, also, to situate them within shared traditions. *I* self-mentions in single-authored BCs is the most marked assertion of authorial identity/agentivity. Further, the use of *we* as a ‘reader pronoun’ – or *inclusive we* – is the most explicit way of achieving ‘proximity’ with readers and is prominent in research papers (Hyland 2010). When the use of *we* is the choice, this gives “a clear indication to the reader of the perspective from which their statements should be interpreted, distinguishing their own work from that of others” (Hyland 2005: 148).

	<i>CogSci BCs</i> 296,288 running words		<i>Med BCs</i> 199,285 running words	
	<i>Frequency</i>	<i>TTR</i>	<i>Frequency</i>	<i>TTR</i>
IT	1,264	4.26	446	2.23
WE	1,088	3.67	127	0.63
<i>Inclusive</i>	728	2.45	19	0.09
<i>Exclusive</i>	360	1.21	108	0.54
I	544	1.83	48	0.24

Table 1. Subject pronouns occurrences.

More specifically, our findings (Table 1 and Figures 1, 2) highlighted a between-disciplinary difference within the book-chapter genre: the use of *inclusive we* is prominent in CogSci BCs, while *exclusive we* is consistently more frequent in Med BCs.

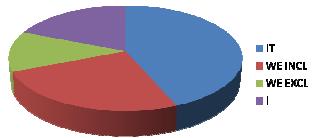


Figure 1. Med BCs subject pronoun ratio.

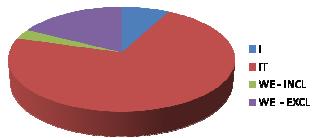


Figure 2. CogSci BCs subject pronouns ratio.

The examples in the tables below have been arranged according to semantic gradation criteria when possible. As anticipated, the use of *I*, which signals a more personal engagement in discourse, is by far most frequent in CogSci than in Med BCs. The following data isolate the varieties of *I* semantic ‘short-distance’ patterns.

<i>CogSci BCs – I am</i>	<i>Med BCs – I am</i>
sure/confident/well aware not aware/not denying after/inclined to prefer loath/afraid to speak	grateful in advantageous position _____

Table 2. *I am*.

<i>CogSci BCs – I can</i>	<i>Med BCs – I can</i>
in principle know about	could not find

also specify possibly speak/ truthfully assert cannot help/explain/see could possibly obtain /carry out couldn't fail to	_____ _____ _____ _____
--	----------------------------------

Table 3. *I can.*

<i>CogSci BCs – I have - present perfect</i>	<i>Med BCs – I have - present perfect</i>
already mentioned/described	discussed
become acquainted	_____
found it worthwhile/reached in	_____
included/listed them	_____
postulated/ insisted	_____
tried to apply	_____
This I have done and present the results	_____

Table 4. *I – Present perfect.*

<i>CogSci BCs – I – Future Tenses</i>	<i>Med BCs – I – Future Tenses</i>
am going to suggest/ to try and show	_____
The statement I am going to make	_____
shall discuss/ be less disturbed	_____
will abstain from quoting	_____
will be intent on	_____
will call/constantly have to draw upon	_____
will develop criteria	_____
will take pains to work out/will gradually work out/ say more later	_____

Table 5. *I – Future tenses.*

<i>CogSci BCs – I – Conditionals</i>	<i>Med BCs – I – Conditionals</i>
should not represent/limit	_____
should like to suggest/ counter/urge my readers	_____
should survive	_____
would normally say/ particularly pick out/ argue/	_____

Table 6. *I – Conditionals.*

<i>CogSci BCs – I – with Lexical verbs</i>	<i>Med BCs – I – with Lexical verbs</i>
started/used/ included	introduce/describe/ use
daresay /discuss /argue	discuss
come across/ explore/consider/ count	found
know/believe/ may ask myself/ doubt/ remain	(briefly) review
sceptical	enclose
What I have/had in mind	want to mention
intend/ mean/ understand	recommend/ expect
myself tend to/learnt to consider/as I myself did	suggest

ought to render as explicit/need to clarify possibly conceive/propose [+do not]/plan suggest that/ think/thought/(do) hope take it/my approach / the liberty try[ied] to make it plain/adopt /point out/ work out fully subscribe/uncritically succumb	_____ _____ _____ _____
---	----------------------------------

Table 7. *I* – with Lexical verbs.

On the whole, in CogSci BCs, *I* characteristic patterns of colligation are more lexically varied and display a higher degree of authorial involvement in research issues as compared to Med BC ones. In our tables we listed all occurring lexical patterns/colligations found in the two subcorpora. In CogSci BCs far greater lexical variety is displayed than in Med BCs (as apparent from the gaps in the Med BCs – indicating ‘no-occurrence’). Medical authors’ identity appears to be more ‘neutral’ and ‘data-driven,’ whereas CogSci authors put their epistemic choices in the foreground, especially when dealing with research issues more heavily relying on observation and reasoning rather than on experimental data.

Here follows the list of *inclusive we* semantic ‘short-distance’ patterns:

<i>CogSci BCs - Inclusive We</i>	<i>Med BCs - Inclusive We</i>
What we and our hearers have in mind/ Although we usually do not deny this general principle/ couldn't help being/ are not justified/ As far as we understand today, a common beginning/ What we know and do not know about/ could hardly avoid asking ourselves/	are far from a complete understanding/ But now we have only limited understanding/ can measure the age of a DNA strand expect that bioinformatics /
have to ask whether/ to assume/ have to expect consequences/ have to focus our interest upon/ have to realize/ have to unearth the hidden logical structure/ hence we may be well advised if/ objects that do not disappear when we do not look at them/ How could we rate the quality/	know a great deal/ need to rely/ virtually, everything we know about genome/ must first examine in detail/

Hence I think we may conclude that I take it we would be confronted I think we are justified in accepting I think we can prove I think we may safely call it I take it we would be confronted I think we are justified in accepting I think we can prove I think we may safely call it	may characterize one individual as being What have we learnt _____
may downright consider them may exhume the slogan must be alive to the fact that observe/experience/ investigate are apt to believe/ are social animals/are we not...? As we used to say/ now say/ ask As we know it/ have seen brood over can reasonably assume/ write can we associate...? cannot escape the conclusion that examine/define/employ didn't postulate/deal with them/ have half of the story/have no hints have to expect/have now arrived How do we produce reports..? interact with each other /ignore judge the academic account ought to be/ not to speak misperceive our percepts must allow /remember/ not consider reconstruct/summarise should not be surprised should bear in mind/ note this is not a measure need to move on/still have to explain Thankfully we do not need usually do not deny	_____

Table 8. Inclusive *we*.

As we can notice, there is a much greater variety of inclusive *we* lexical patterns in CogSci BCs, since those authors more explicitly aim at engaging their readership in their reasoning and at endorsing/sharing their epistemic choices. Conversely and predictably,

there is greater variety in the use of exclusive *we* in Med BCs, as is apparent in the following table, particularly from the ‘no-occurrence’ gaps in the CogSci BCs column.

<i>CogSci BCs - Exclusive We</i>	<i>Med BCs - Exclusive We</i>
are not restricting the use	abstracted / give an overview
are presenting/ considering here	adjusted /adopted/ chose
decided to begin/can mention	allow
As we understand this term/ the expression here	applied criteria (do not)
cling to the point of view/discuss	are interested/well aware
do not deal with them/want to elaborate further	ask
have said/observed/ chosen/ seen that	assumed/ believe/ considered
believe it is useful/ hypothesize	calculated /checked/assessed
have but the choice	have organized/ prepared
have stressed the feasibility/ made innovations	combined /compiled
discuss/focus/ not need to examine here	conducted
have been unspecific	contacted researchers
hesitate	created
take/mean/ report /show	(critically) analysed
rule out/claim	described/defined
will accept/ sketch	designed
_____	detected
_____	developed
_____	discarded
_____	drew on
_____	elected
_____	elicited
_____	eliminated
_____	employ
_____	examined/estimate/evaluate
_____	have included/excluded
_____	expect/ found
_____	focus
_____	demonstrated
_____	gave formal reports
_____	have arranged
_____	have audited its method and found
_____	have to reduce
_____	have used (not)
_____	How can we be sure that
_____	have shown
_____	have learnt
_____	can conclude
_____	can we reverse..?

Table 9. Exclusive *we*.

The grouping of lexical verbs in Med BCs has been more difficult, since they are less synonymous and more related to different phases of the research process. The following is a list of *It* occurrences in the two subcorpora:

<i>CogSci BCs – It</i>	<i>Med BCs – It</i>
clear /not surprising that	appropriate/ suggested/ not surprising
defined	/included
entirely wrong	believed/by now very well established
for this reason that	clear /evident/generally accepted
important/to clarify/note/stress/underline/	incorporated into the standard
distinguish/emphasize	important
(widely) held/(frequently) suggested	certainly and completely appropriate
necessary to summarize my position	expected/ideal
noteworthy that	completely natural
now urged	a mistake to try
plausible to assume /reasonable to	detected/similar
suppose	difficult to predict/estimate
proposed that the argument	useful to examine
time to readjust our appraisal of	for this reason that
to be taken as	seems likely/ seems that /impossible
viewed from outside	is it valid?
_____	necessary to bear in mind
_____	not possible / possible to modify
_____	heartening to note/intriguing
_____	unknown
_____	usually increased/ not compatible
_____	very difficult
_____	necessary/ vital

Table 10. *It* occurrences.

As apparent from our data, whereas *inclusive we* and *I* are very popular choices with CogSci authors/researchers, *it* and *exclusive we* are by far the most frequent options with the more ‘data-driven’ Med researchers/authors. Authorial saliency and individuality are decidedly more evident in CogSci when authors support their choice of Method by deploying argumentative strategies in their reasoning. As anticipated above, to engage the readership appears to be their explicit aim.

5.2. Conditional Reasoning data

The following examples drawn from the two sub-corpora (CogSci and Med BCs) show instantiations of authorial explanations of their research hypotheses and methods, formulated according to CR patterns, either HD or SR. It was necessary to provide more HD examples for GogSci to illustrate the greater variety of their patterns and formulations; conversely, more SR examples were reported for Med BCs, given their fact-oriented quality.

<i>CogSci BCs – HD</i>	<i>Med BCs – HD</i>
If the pictorial representation is employed to make clear the function of the objects within the whole system_ it is not important how exactly the objects look like i_e_ what color or texture their surfaces have_ or which light produces what reflections_ [...]. (24)	But what is most urgently needed is investment in cost-effective methods to monitor mortality if we are not to be similarly ignorant about health conditions in Africa 10 years hence. (XXVII)
Theories expressed as simulations possess three characteristics that may be crucial for progress in the study of language origins and evolution. First, if one expresses one's theory as a computer program the theory cannot but be explicit, detailed, consistent, and complete because, if it lacks these properties, the theory/program would not run in the computer and would not generate results. (3)	If both members of a couple are carriers of an α^0 -thalassemia deletion mutation (e.g., genotype $\alpha\alpha/\alpha\beta$), each of their offspring has a 1/4 risk of having Hb Bart hydrops fetalis syndrome. (X)
If, as I have postulated elsewhere, following Vygotsky [...], language is a system that is both communicatory and representational and that most of the representations we use are of linguistic support, it is also necessary to consider the existence in humans of nonverbal representational capacities. (27)	If both the placebo and spore suspensions contain compounds that influence the immune response of the host (e.g., certain bacteria), one obtains estimates of host response, which have to be seen within the light of this suspension. (XI)
Each module checks if the stem words match a particular relationship in the database. If they do not, the module returns the uniform distribution. (26)	Producing EEG figures is also notoriously difficult from paper EEGs particularly if blue ink was used. (XXVI)
Even if we you were able to do this, you would still not have understood	They are codominant, meaning that if the FYA is inherited from one parent

Chinese the same way you understand the meaning of English words. (2)	and the FYB allele is inherited from the other, both gene products, Duffy Fya and Fyb antigens, will be expressed on the RBCs. (VII)
If communication is defined in its functional role as facilitating social coordination, we should seriously consider calling Franz's behavior communication. If, however, we define communication by means of symbol use, symbol use by means of appreciation of semiotic conventions, and the latter by means of representations of others' mental states, we cannot escape the conclusion that theory of mind precedes language. (16)	
If a system can be devised by which these positions of the organs are shown, one man will be able to indicate to another, by means of a drawing, the kind of sound he wishes to convey. (1)	
If human cognition, as Clark (1997, 98) proposes, 'is fundamentally a means of engaging with the world', then material culture is consubstantial with mind. (18)	

Table 11. Hypothetical Deductive reasoning patterns.

<i>CogSci BCs- SR</i>	<i>Med BCs - SR</i>
If women's smaller size and lesser strength were the limiting factor in their involvement in violence, then we would expect female/female homicide rates to be equivalent to male/male homicide rates, yet this is not the case. (9)	If better health improves the productive potential of individuals, good health should accompany higher levels of national income in the long run. (XVIII)
If we turn to the neuroscience of vision for an answer this will be, more or less, of the following general form: [...]. (19)	If the data coverage estimates were high enough to be meaningful, death rates for those aged five years and over were then adjusted accordingly. (XXIII)
	In current routine practice, if a GSWD occurs the technician is expected to detect possible associated ictal clinical symptoms such as eye opening, staring,

	cessation of overbreathing, myoclonic jerks, abnormal eye movements, automatisms and so forth. (XXVI)
	While there will remain a residue of deaths for which insufficient information is available to determine intent, this should be a small fraction of injury deaths if appropriate forensic and coronial investigations are carried out. (XXXIII)
	If quality improvement initiatives are to be developed based on events captured in the PSI, surgeons causing minor or moderate injuries may not be identified by the APL PSI and will not be targeted for quality improvement. (XIII)

Table 12. Suppositional/Probabilistic reasoning patterns.

Apparently, the observation-driven, probabilistic reasoning pattern is the most frequent option for Med researchers, whereas Cog scientists more heavily rely on HD reasoning to engage their readership more effectively by presenting their formulations as deriving from shared knowledge. Table 13 shows the quantitative data of ‘conditional lexicon’ – curiously enough *provided that* only occurred once in Med BCs and no instantiation was found in CogSci BCs.⁸

	<i>CogSci BCs</i>		<i>Med BCs</i>	
	Frequency	TTR	Frequency	TTR
<i>If</i>	547	1.84	163	0.81
<i>Seem(s)</i>	194	0.65	23	0.11
<i>Apear(s)</i>	144	0.48	65	0.32
<i>Suppose(s)</i>	40	0.13	3	0.01
<i>Assume(s)</i>	82	0.27	4	0.02
TOTAL	1,007	3.39	258	1.29

Table 13. Conditional (HD+SR) words/Running words ratio.

⁸ Here is the only quote: “The basic philosophy guiding the burden of disease approach is that almost all sources of health data are likely to have information content *provided that* they are carefully screened”. (Medical BCs IX).

The lower frequency of *if* in Med BCs is significant. Apparently, this finding mirrors the different epistemic attitude of medical doctors towards their experimental data and/or observations as compared to GogSci authors – the former being more factual than the latter, who tend to utilize more CR patterns, thus displaying a more argumentative attitude. The two graphics below visually represent the most commonly used conditional word distribution in Med and CogSci BCs:

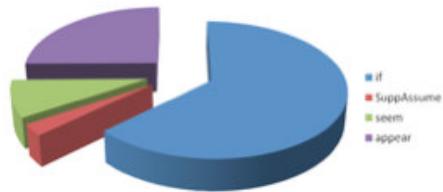


Figure 3. BCs conditional words



Figure 4. CogSci BCs conditional words

The more speculative *seem/s* is the favourite option for CogSci authors, while the more factual *appear/s* is in greater favour in Med BCs.

6. Discussion and conclusions

As our data have highlighted, CogSci writers more frequently utilize the self-referential pronouns *we* and *I* (Table 1) as compared to Medical authors. In particular, the use of *inclusive we*, which is prominent in CogSci BCs, construes a writer-reader-disciplinary community interaction, while *exclusive we*, comparatively more utilized in Med BCs, tends to remove the authorial presence from the readership and to focus the attention more on research effort and findings rather than on knowledge dissemination.

Also, we can infer that in CogSci BCs the emphasis on binding writer and reader together mainly through *inclusive we* aims at endorsing the saliency of the research in the readership perception, and at grounding its credibility in the dimension of *shared knowledge* (van Dijk 2006) often reinforced through Conditional Reasoning patterns. Indeed, our findings showed a higher frequency of Conditional Words in CogSci BCs as compared to Med BCs. Med Sciences authors appear to be less self-referential and to rely less on ‘*if*-argumentation’. The two significant differences identified in this comparative analysis – both in the use of pronouns and of CR patterns – are far from being independent from each other: CogSci authors use both more self-referential/inclusive pronouns and more conditional words.

More specifically, both Med and CogSci authors effectively engage their readers as participants in a ‘situated’ discursive interaction, but with scaling values of individuality (CogSci) / commonality (Med) ratio. BCs Med authors are present in their texts mainly as *researchers* (Fløttum 2006), i.e. in a somewhat modest, less directly argumentative way. Instead, Cog Scientists are more present as *arguers*: CogSci disciplines (Linguistics among them) draw on various other disciplines for their research, and, maybe, that is the reason why argumentative resources are more in the forefront.

The voicing of authorial individuality has to comply with both discipline and genre-specific rules, and “the scope for the unpredictable is much more limited: hybridity and multiaccentuality

are constrained within the prescriptive norms that regulate scientific communication and its specialised, globally utilised genres" (Abbamonte / Cavaliere 2010: 372). Within the norms and constraints of scientific communication, the authors' intellectual attitude to their methods involves consistent effort of text-internal schematic elaboration. Different disciplines entail a different use of self-referencing and of other negotiatory resources in the continual dialogue among researchers and the intended discourse community (Hyland 2000, 2006, 2010, Bhatia 2006), as in the present case. The range of choices significantly contributes to construe alternative univocities both in the process of continuously reshaping knowledge and in the modes of its dissemination in academia.

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Appendix

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