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Social-Epistemic Rhetoric of (Un)certainty in Biomedical and Psychiatric Scientific Academic Writing: a Diatextual Analysis

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Abstract
In line with the general aims of scientific textuality, research papers in the biomedical and psychiatric academic domains mostly attempt to demonstrate the validity of their assumptions and to contrast with the sense of uncertainty that sometimes frames their conclusions. Moving from this premise, the present paper aimed to focus on these features and to investigate if and the extent to which biomedical and psychiatric texts convey different social-epistemic rhetoric of uncertainty. In view of this, a qualitative study was conducted adopting diatextual analysis to investigate a corpus of 298 scientific articles taken from the *British Medical Journal* and from the *British Journal of Psychiatry* published in 2013. Our analytical approach led to identifying two different types of social-epistemic rhetoric. The first one was mostly oriented to "describing" the world, accounting for the body-mind nexus as conceptualized within the "medical" point of view. On the other hand, the second one was oriented to "interpreting" the world, debating the problematic and critical features of the body-mind relationship as developed within the psychiatry discursive realm.

Keywords Scientific academic writing · Uncertainty · Discourse analysis · Mitigation · Social-epistemic rhetoric

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Introduction

Since ancient times, medical practice has been considered a science guided by a system of beliefs constantly in balance between the need for certainty and the experience of doubt. Across the last decades, the promotion of evidence-based medicine (EBM) has improved the need for judiciously using the best evidences to take decisions about patients in the clinical domain (Sackett et al. 1996). Being proposed as a reassuring and encouraging paradigm, EBM is an important cultural frame in post-modern times, "when doctors are no longer infallible heroes" (Maier 2006: 325). The available evidences represent the core of a methodological path that, offering empirical support for effectiveness and safety, can legitimate medical practices in the more general context of law and society. Even if psychiatrists tried to seriously be considered in the medical disciplines, some features of this scientific domain can limit the applicability of EBM (Gray and Pinson 2003), especially referring to the validity of a diagnosis as well as to issues of complexity and non-linear dynamics (cf. Maier 2006). This complexity has been fully confirmed enlarging the Cartesian "body/mind" dichotomy to a wider effort to understand the holistic nature of human existence and thus to develop sophisticated nursing techniques. This complexity has finally led to the definition of two distinct disciplinary domains: (bio) medicine and psychiatry.

Moving from this premise, the present research aims at investigating how these two distinct disciplinary domains have shaped their identity in discourse, focusing on one of the most salient features of both: uncertainty. The experience about the world oscillates in a continuum from highest levels of certainty (such as in tautological sentences) to deepest levels of uncertainty (such as in subjective preferences). In the scientific domain, these poles are translated in the distinction between "knowledge" (founded on certainty) and "belief" (based on uncertainty), even if this difference is not adequately explanatory, since it does not take into account what is either "unknown" or "neglected" (Bongelli et al. 2012). However, the epistemic axis "certainty-uncertainty" is related to different attitudes: whereas what is "certain" is comforting, what is "uncertain" is disturbing; if a claim is "certain", a person is confident with what is said, whereas if a sentence is "uncertain", its enunciator cannot trust with its contents. Therefore, since the core objects of biomedical and psychiatric sciences deal with people's health and well-being, the efforts to investigate the discursive construction of (un)certainty about these matters can be essential in order to comprehend the construction of a shared knowledge. Some of these pathways can be caught through a call for "evidence" and the use of the "modals", as well as to the importance of the genre of discourses. In particular, the specific genre investigated in this work can make use of a dialectic argumentation also founded on the epistemic uncertainty (McBurneys and Parsons 2001). Yet, this study considers uncertainty as a multidimensional discursive construction, linked to the meta-pragmatic level of communication: its modulation can be set through textual and contextual resources, in line with the cultural contexts, such as prosodic, lexical, grammatical, syntactic, rhetoric and stylistic ones.

Therefore, we argue that the academic texts, namely scientific research reports and papers, produced within the biomedical and the psychiatric domains, could account for two different enunciative modalities of uncertainty, because they refer to two specific universes of meaning, articulated around "health" and "illness". The comparison among different sense-making domains enabled both the researchers and the several stakeholders to create a zone of "accepted risk" which can be valued thanks to the awareness to be "semiotic" and to construct a semiotically based knowledge, where

complexities coming from different disciplines can reciprocally meet (Landowski 2010).

In view of this, the study attempts to point out that any variation in the tone of uncertainty emerging from the academic texts chosen as a corpus could be anchored to the modulation of two main types of social-epistemic rhetorics (Berlin 1993), that is two different constellations of expressive routines, accounting for the systems of beliefs and values used by enunciators to validate their claims.

Therefore, the present paper is intended to contribute to the investigation of the relationship between rhetoric and ideology introducing the notion of diatext, meant as a psycho-semiotic device useful to reveal the profound relationship binding texts, interlocutors and contexts of talk (Mininni 1999, 2005; Mininni et al. 2014a; Manuti et al. 2012; Mininni and Manuti 2017) and consequently proposing diatextual analysis as a further opportunity to study social-epistemic rhetoric.

The focus on scientific academic writing is legitimized by the evidence that this one represents a distinctive and privileged discursive context where professional and institutional identities meet and shape each other. Accordingly, scientific research is always a "social enterprise (…) that principally define what disciplines are and how knowledge is agreed and codified (…) and written texts are the principle embodiment of this" (Hyland and Salager-Meyer 2008: 2).

Because of its complex nature, scientific research has been investigated by four main perspectives. The first is that proposed by applied linguists who have largely focused on the rhetorical and stylistic organization of written texts for descriptive or pedagogic purposes (Hyland 1995). A second perspective is the one proposed by information scientists who have drawn attention on the role of texts in the classification, manipulation, retrieval and dissemination of information (Hjørland 1998). Third, we find the perspective brought about by historians, who, together with several applied linguists, have been attracted by the rhetorical evolution of the research article (Taavitsainen and Pahta 2000). Finally, the fourth one is a sociological perspective that attempted to explore how the debate about science could be oriented to maintain social order (Dant 2013).

Considering the plenty of significant contributions in the field, the present paper proposes a possible fifth perspective, namely a psycho-discursive one, complementing the previous ones with a special focus on (dia)textual analysis that could unveil how texts concretely tell about their authors, about their psycho-discursive practices (values, claims, beliefs) and about their embedded relationship with the cultural and social context (the wider scientific community they belong to) that has inspired the texts as well (Manuti et al. 2006). This proposal is aimed to enlarge research horizons on scientific communication, including to more objective, descriptive and evolutionary perspectives an in-depth analysis of the psycho-semiotic claims that guide argumentative options, declaring cultural identities.

Literature Review

(Un)certainty as a Psycho-Discursive and Cultural Construction

The study considers a corpus of scientific research papers published in two peer-reviewed journals respectively referred to distinct disciplinary domains: medicine and psychiatry. The focus of the study is to investigate uncertainty as a specific feature of these texts. To this aim,

uncertainty has been considered as a multidimensional discursive construction, referred not simply to the psycho-linguistic level, but also to the meta-pragmatic level of communication (Bongelli and Zuczkowski 2008; Bongelli et al. 2012; Caffi 1999, 2007, 2013). Being a result of special "psycho-discursive practices" (Wetherell 2008), uncertainty is a fundamental cognitive configuration, manifesting itself in the tension between stability and instability, between "figure" and "background", and between "secure base" and "need for exploration".

Therefore, uncertainty could be framed within a system of values and preferences, which is historically marked (Poggi 2006, 2007). Yet, the process of sense making generating uncertainty could be differently put into words if the enunciation is produced within the psycho-discursive practices of the juridical system (Mininni et al. 2014b), or within those inherent to the religious domain (Scardigno and Mininni 2014), or within those generating the scientific texts (Salager-Meyer 2001; Hyland and Salager-Meyer 2008) or within ordinary conversations (Knobloch et al. 2007). As a result, the meaning of certainty could be shaped through radically different discursive modalities. For instance, to affirm, "I know for sure that Abdul al Samadhi is guilty for the slaughter in Paris" is not the same to affirm that "I know for sure that Jesus Christ is reborn". Likewise, the sentence "I know for sure that the molecular composition of water is è H2O" discursively constructs a different meaning of certainty with respect to the one stating "I know for sure that Catia is fallen in love with Francesco".

In this vein, the present research aims to show that uncertainty is a situated psycho-discursive move addressed to legitimize claims for validity within different specific universes of meaning. Therefore, the formula "I know for sure" could have different epistemic values depending on the ideal enunciator who is behind the assumption: the judge, the (Christian) believer, the chemist, the common man.

Given this evidence, the attempt of the study is to adopt diatextual analysis to penetrate the intricate network of the psycho-discursive claims behind the scientific texts selected trying to catch the complex articulation of the sense-making processes that substantiate them through discourse. To this aim, attention is drawn on different discursive and meta-discursive cues not only to "quantitatively" describe their structural configuration, rather to "qualitatively" access the socio-epistemic rhetoric they developed and conveyed.

Pragma-Linguistics of (Un)certainty in Scientific Academic Writing

In biomedical and/or in psychiatric scientific academic writing, uncertainty is a discursive stance undertaken with respect to the nature of the information proposed by the textual world (Koustantoni 2004; Wesson and Pulford 2009). It could be declined according to different psychosocial strategies. The construct of "social-epistemic rhetoric" (Berlin 1993) aims to organize such differences according to some interpretative patterns.

The main assumption underpinning the concept of social-epistemic rhetoric is that knowledge is found in "the dialectic interaction between the observer, the discourse community (the social group) in which the observer is functioning and the material conditions of existence" (Berlin 1993: 488). These three elements are all verbal constructs grounded in language: "we cannot talk or write about them apart from language" (Berlin 1993: 488). As a result, we cannot access and understand knowledge as a social vivid construction without using rhetoric, since it is through rhetoric—meant as the ways through which discourse is generated—that knowledge comes to life and is reified in language.

In our culture, the word "rhetoric" is inevitably linked to the interest for the "style", that is the category that connects "the linguistic and the psychological level" (Caffi 1999). However, the word "rhetoric" evokes also connotations of "instrumentality": it evokes "organizational assets" that could be functional to the specific aim of persuasion, establishing special links with the uncertainty modality (Van Eemeren and Houtlosser 2006). Rhetoric is perfectly attuned with the modern pragmatic perspective on language, finding one of its best examples in the construct of "mitigation" and showing that "the co-production of meaning is a diffused process generated by multiple factors and layers" (Caffi 1999).

In line with these assumptions, the study focuses on the identification of the discursive and meta-discursive markers (Crismore, Markannen & Steffensen, 1993; Hyland 1996, 1998, 2004; Hyland and Tse 2004) useful to differentiate two positioning modalities, namely two social-epistemic rhetorics, regarding some argumentative moves that are typical of scientific (biomedical and psychiatric) academic writing. Far from being a generalizable analysis, the study is aimed at proposing the integration of the psycho-semiotic perspective brought about by diatextual analysis to this specific context of talk.

More specifically, the analysis concentrated on the recurrence of a special kind of diatextual cue, namely "mitigation" (Caffi 2013), that is a discursive option intended to "lessening" the intensity of one or more than one intentional parameter. As such, it attenuates the interlocutors' obligations (Wunderlich 1976) improving the interactional aims. Generally, mitigation fosters interpersonal exchanges by avoiding a double risk: the risk of self-inconsistency at a personal level and the risk of refusal and conflict, at an interpersonal level. This twofold direction inspired the theoretical distinction proposed by Caffi (1999, 2007, 2013) between "lenitive mitigation" and "tempering mitigation". The difference between these two mitigation strategies could be found in the different linguistic act they accomplish. It is "lenitive" if mitigation uses "exercitive" (to announce, to warn) and "directive" (to order, to beg, to give advice) linguistic acts. Since these discursive acts could be "face-threatening" (Brown and Levinson 1978), this kind of mitigation mainly aims to damp addressee's commitment as well as potential repudiations. It is "tempering" if mitigation uses "assertive" and "verdictive" linguistic acts (to feature, to classify, to describe, to interpret, to evaluate). In this case, the enunciator aims to lessen his/her personal convincement; therefore, (s)he can prevent any risk of being disapproved.

With special reference to the textual genre of scientific communication investigated in the present paper, tempering mitigation seems to fit better, since assertive and verdictive linguistic acts recur more frequently. Yet, the main aim of the scientific texts analysed could be resumed by the second conversational maxim suggested by Grice (1975): "you should not say something you have not enough evidence to prove". This discursive option could be useful for authors to protect themselves from the risk of error/misinterpretation that might have important implications for their reputation inside the scientific community.

Aside from this "formal" typology, referred to the different "illocutive macro-types", it is possible to highlight a "functional" differentiation (Caffi 1999, 2007, 2010) between several linguistic and discursive tools, allowing a modulation of the perlocutive effects of scientific communication.

This functional categorization is the one used in the present study to investigate uncertainty in scientific academic writing.

The markers of mitigation act as "bushes" when addressed to lessen the intensity of an attitude or to introduce vagueness to the propositional content of discourse. Therefore, bushes are expressed through markers aimed at limiting the implications of an assumption (e.g. "a

bit", "a kind of"), through omissions (e.g. "etcetera", "and so on") and through glosses (e.g. "namely", "more or less") in order to "soften" the implications of one's own assumptions.

Conversely, the markers of mitigation act as "hedges" when aimed to damp one's commitment to the illocutive power. From a pragmatic point of view, this mitigation strategy could be found out when authors need to invoke a procedure (e.g. "If I have understood well", "if I am not wrong") or when they warn their readers about the limitedness of their assumptions ("all things considered I would say", "how to say"). Moreover, these markers might recur when assumptions are aimed to signal an epistemic engagement ("maybe", "if only", "probably") and/or when the authors need to "subjectivate" their assumptions ("according to me", "in my opinion").

Finally, the markers of mitigation could be "shields" when the authors aim to distribute the enunciative responsibility and thus when they attempt to manipulate the role of the enunciator and/or to exclude him/her from discourse, acting both at the actor level (*non-ego*) or at the spatial-temporal level (*non-hic/non-nunc*)—e.g. "when one is so…". Shields can also act by specific dialogical tools, such as inverted commas and quotations (e.g. "so to speak") that were mostly recurrent in the corpus of texts analysed in the present study.

Bushes and hedges work across several degrees of either epistemic commitment (for bushes) or illocution (for hedges), while shields are "dichotomous" according to two dimensions of deixis and subjectivity (e.g. *ego* vs. *non-ego*; *nunc* vs *non-nunc*).

The Study

Aims, Corpus of Data and Methodology

Moving from the background drawn above, our study aims to investigate the following research questions:

1. How do biomedical and psychiatric scientific academic texts discursively construct uncertainty?
2. Do they convey a different social-epistemic rhetoric of uncertainty?

The study considers a corpus of 298 scientific articles.[1] We have selected the issues published online from January to December 2013 in the *British Medical Journal* (*BMJ*; available at https://www.bmj.com/archive/print/2013) and in the *British Journal of Psychiatry* (*BJP*; available at https://www.cambridge.org/core/journals/the-british-journal-of-psychiatry/all-issues). For the sake of the study, we focus specifically on the research sections. By this, we have selected 200 articles from the *BJM* and 98 from the *BJP*. The corpus is differently

[1] The present study is part of a wider research programme involving other colleagues apart from the ones who worked on the paper. The study comes out from a 3-year financed research project on uncertainty in biomedical and psychiatric scientific academic writing. Within this context, the research team collected a huge amount of textual data that was first analysed through computed-aided content analysis (using the software T-Lab) to investigate the thematic recurrences and the argumentative strategies that were distinctive of the corpora considered. Then, on a second step, diatextual analysis was used to go deeper inside the texts, adopting special psycho-semiotic cues in order to detect how mitigation strategies were used to construct and convey uncertainty. To this purpose, texts were "scanned" and coded by the research group, using a "paper and pencil" methodology that took us months of work.

composed because the journals differ a little in the organization of the table of contents. The choice of the two journals is guided by the acknowledgement of their leading role within the international peer-reviewed journals' panorama in the field of medical and psychiatric sciences. More in detail, *BMJ* has an impact factor of 23.562 and is ranked 4th among general medical journals; the *BJP* has an impact factor of 5.867 and is 10th among 142 psychiatry journals. Through a great variety of scientific proposals—original research papers, commentaries, letters and correspondences—concerning health and mental health, these journals can help practitioners and doctors making better clinical and research decisions as well as to promote (mental) health globally. For the sake of the study, among this composite corpus, we concentrate on research articles.

The texts collected have been downloaded and analysed adopting diatextual analysis (Mininni 1999, 2005), a special address within discursive studies, that concretely attempts to "go through the text". The term "diatext" is a neologism adopting the Greek prefix "dia" (namely "through") to underline the effort accomplished by the diatextual researcher to "penetrate" texts and to consider their discursive and rhetorical peculiarities as expressions of the subjective, ideological and social world of the enunciators. By this, the diatext can be considered both a theoretical notion inspiring a psycho-semiotic analysis mainly aimed to catch the dynamic-constructive and dialogical-contractual nature of the social and psychological context of discourse. Thus, the diatext is "the context as it is perceived by the enunciators of the text, as they imagine it and show that they take it into account" (Mininni 1992: 63). Accordingly, diatextual analysis is a special address within discourse analysis, based on the assumption that sense does not reside permanently within texts; rather, it permeates them because of the conjunct (discursive) action of the interlocutors, who constantly (re)negotiate the frame of the situation—the stake—in which they are actively involved.

Underlying this methodological option, there is the idea that diatextual analysis could further enrich the debate about the features of academic scientific writing, being this one the discursive context chosen for the present study. Yet, moving from the huge amount of authoritative studies in the field that have mostly concentrated on the description and on the categorization of the linguistic and on the meta-linguistic features of academic scientific writing (Hyland 1996, 1998, 1999, 2010, 2018; Hyland and Tse 2004; Hyland and Salager-Meyer 2008; Giallaerts and Van de Velde 2010; Cao and Hu 2014; Jiang and Hyland 2018; Kim and Lim 2013; Salager-Meyer 1994, 2001), our study is mostly addressed to consider these texts as diatexts, that is as larger psycho-rhetorical constructions, accounting for a dialectic relationship between interlocutors' identities and social contexts and resulting in specific claims and discursive moves.

In line with its "holistic" approach, diatextual analysis is worthwhile firstly highlighting the "genre" of the discourse (Bakhtin 1979): since thematic contents, style and compositional structure are related to the whole of the utterances as well as to the types of the discursive event, in our work, this "type" has specific communicative functions, whose purposes are shared by authors and users. In the specific case, the scientific article is not a "free" genre, rather it is founded on criteria set out by the scientific community itself. By its nature, it is a discursive event with an argumentative intent, because it is the privileged channel for introducing new discoveries into the scientific communities. Indeed, its main purpose is to invite other scholars to take charge of its own message, to accept or defend a specific position, to accept any new knowledge produced (Hyland 2001).

On the other side, diatextual analysis makes use of a more "micro" psycho-linguistic approach. Its psyhosemiotic markers aim to catch meanings in text and talk by focusing on

three basic features that organize the interpretative procedures: subjectivity, argumentation and modality of discourses. Pragmatically speaking, by focusing on some specific discursive markers, diatextual analysis argues that texts reveal traces of "subjectivity" (Who is saying that?) whenever they allow permeating the identity of the interlocutors that is to investigate how do they shape their personal identity and the identity of their audience through discourse. Moreover, diatextual analysis could be useful to highlight "argumentation" (Why does he/she say it?) and "modality" (How does he/she say it?) strategies, that is the strategies through which such stances are supported and consequently shaped in discourse (Mininni and Manuti 2017). The answers to these questions enabled the psycho-semiotic researcher to (a) clarify the way in which the text talks about its characters and traces the dialogue between the enunciative positions of the ideal author and the ideal addressee; (b) to point out axis of semiotic pertinence which articulate arguments through "meanings why"; and (c) to flexibly shift from the "dictum" and the "modus" of discourse according to which meaning is shaped, that is how it acquires a Gestalt quality. An example of the semiotic emphasis offered by diatextual analysis concerns the valuation of non-propositional aspects, e.g. the expressions of comment and reformulation through "meta-discourse" (Crismore et al. 1993; Hyland 1996, 1998) used to organize the text coherently as well as to gain the enunciator's credibility. Two forms of meta-discourse can be distinguished: "textual" and "interpersonal". The textual meta-discourse favours more suitable interpretations about the authors' intentions, to be identified through "logic connectors" (e.g. "and", "so", "furthermore", "as a consequence"), "frame markers" (e.g. "concluding", "I repeat", "our aim here"), "endophoric markers" (e.g. "above-mentioned", "we will see later"), "evidential" (e.g. "x believes that…") and "gloss practices" (e.g. "that is", "in other words"). The interpersonal meta-discourses are more oriented to "attune" the relations among interlocutors, thanks to the use of "attenuators" (e.g. "could be", "maybe"), "intensifiers" (e.g. "actually", "clearly"), "behaviour markers" (e.g. "I agree"), "personal markers" (e.g. "I", "me", "our") and "relational markers" (e.g. "frankly").

Therefore, one of the main tasks for the psycho-semiotic researcher is to specify the diatextual powers in action within a communicative event, that is the links between text and context in the way they are filtered by the cognitive engagement of interlocutors. In the investigated field, this feature can be especially constructed also through the modal articulation (De Luca Picione et al. 2018; De Luca Picione et al. 2019): being set among the categories of necessity and possibility, will and duty, it works as a special feature for the semiotic organization of the contextual and dynamic sense-making processed typical of all the discursive practices connecting different levels of sense. Therefore, the balance between certainty and uncertainty can be usefully investigated also through modality, since it connects and mediates between subjectivity and alterity, as well as contributes to construct an agentive context. These features are particularly relevant in biomedical and psychiatric scientific texts, a domain where the connections among agency, responsibility and social context are essential to give life and improve public choices and practices.

In view of the specific aims of the present paper, adopting the psycho-semiotic approach described above, diatextual analysis concentrates on these three constituitive dimensions of the texts, mainly analysizing the use and recurrence of the mitigation linguistic means used to shape uncertainty through specific social-epistemic rhetorics that could feature scientific (biomedical and psychiatric) academic writing (Dahl 2004; Hyland 2005).

Main Results

On the Diatextual Tracks of (Un)certainty

Results from diatextual analysis confirms that uncertainty in the biomedical and in psychiatric scientific texts selected for the study is shaped through two different social-epistemic rhetorics. However, the analysis of their discursive features showed that there were recurrences mostly due to a common horizon of research practices, being both journals addressed to a wider audience of medical professionals and scholars. As a result, the paratext—that is the organization of the text into paragraphs, the use of footnotes, of the iconic support—is structured following the specific expectations manifested by the scientific community of experts, who might be authors, editors, referees, practitioners and readers. Likewise, the main argumentative strategies are also similar in the two corpora. More specifically, both corpora base the validity of their positions on a rational reasoning, leaving space also for a critical debate with opposite expert and documented arguments. As a result, the main aim of the study is described as a natural attempt to fill a gap in the existing literature.

1.

> However, no study has evaluated the long-term effects of this prevention programme on substance use behaviours across adolescence, as well as the contribution of key intra-individual and environmental risk factors that may potentially explain these effects. Thus, the aims of the present study were to conduct a secondary analysis and examine the long-term intervention effects on adolescent substance use and whether these effects are explained by a reduction of risk factors targeted by the intervention, in accordance with either the behavioural dysregulation or the social deviance models (*BJP*, September 2013).

2.

> Thus, it is possible that the existing studies have not been large enough to detect a potentially modest effect of job insecurity. The relation is also suggested to vary by employee age, sex, or study context—that is the national unemployment rate and type of welfare regime—all of which are linked to factors that could increase the fear of adverse consequences, such as lack of re-employment opportunities and economic insecurity. To deal with these limitations, we conducted a systematic review and meta-analysis to summarise all available prospective evidence on perceived job insecurity and incident CHD (*BMJ*, August 2013).

Finally, another common feature is the preference in both journals for paraphrasing rather than for direct quotations while documenting literature and references in support to one's own argument.

3.

> Psychotherapy is one of the recognised treatments for various mental health problems, particularly for depressive and anxiety disorders, which represent the major burden of mental illness in the general population" (*BJP*, February 2013).

4.

For instance, some studies reported that women with breast augmentation may be more likely to be diagnosed as having advanced cancers whereas others have reported no such difference (*BMJ*, May 2013).

Quotations Between Semiotic Opacity and Transparency

Within the corpus of texts considered, the voices of the others emerge through an intertextual dialogue, namely in the form of general reference to other scientific texts/articles. Probably even for the sake of synthesis in the construction of the text, the alternative positions are not explicitly mentioned, rather they are "recovered" through a validation of the sources quoted between the brackets or at the end of the paper.

Therefore, to adopt the functional categorization of mitigation strategies suggested by Caffi (1999, 2007, 2013), "quotation shields", namely direct quotations (signalled by inverted commas), are nearly absent from the texts. This textual strategy contributes to increase the impression of certainty that gives an assertive tone to the evidences supported by the author, although, conversely, it reveals a rather monological nature of the texts analysed.

In fact, the use of quotation, even if sporadic, is one of the few discursive cues that signals a dialogic tension of the text. Within both corpora, authors use quotations following two different principles of communication: semiotic transparency and semiotic opacity.

In the case of semiotic transparency, quotation aims to suggest the reader how to interpret the issues debated, and it concretely orients his/her reading according to well-documented pieces of scientific knowledge. This is a quite expected use of quotations that legitimize them as a meta-discursive marker referring the contents delivered to a solid scientific expertise (see examples 5 and 6). This use of quotation could be moderately found in both corpora.

5.

(…) such treatments, termed as "interventional strategies (*BMJ*, March 2013).

6.

Since DSM-III, agitation has been listed as just part of the fifth criterion for a major depressive episode: 'psychomotor agitation or retardation nearly every day' (…) (*BJP*, July 2013).

Pragmatically speaking, the words between inverted commas are "introduced" by some ritual formulas such as "termed as", "as", "so called", and "identified as" or simply by a punctuation mark. These words and/or these expressions could refer to the definitions of pathologies, options and research variables. As for the names of the pathologies described, there are both scientific references (e.g. "The search query combined synonyms for 'D-dimer' with synonyms for 'venous thromboembolism'", *BMJ*, May 2013) and more colloquial references that certainly could be easily understood by the expert audience of readers (es. the "healthy patient" effect […] a

"failed hip" state). Such options aim to construct certainty through specific discursive acts: namely, to identify, to clarify, to categorize (e.g. "designated by the American Congress as the 'Decade of the Brain'", *BJP*, August 2013).

7.

> At three months, 4% of 46 treated microinvasive (Clark level II) and invasive (Clark level III/IV) SCCs were assessed as having 'excellent' cosmetic appearance, 48% assessed as 'good,' 44% assessed as 'fair' and 4% assessed as 'poor' (*BMJ*, November 2013).

8.

> Individuals who used cannabis 410 times in a month were assigned to the 'heavy' use condition (n = 10), whereas individuals who used cannabis 510 times per month (n = 10) were assigned to the 'light' use condition (*BJP*, May 2013).

Completely different is the use of quotation with respect to semiotic opacity. In this case, inverted commas could be considered as meta-discursive markers that leave any conclusion open to subjective interpretation and thus exposed to multiple speculations.

In some cases, references to uncertainty are more explicit: for instance, the sentence "the presence of tumour or 'close to' the margin" (*BMJ*, November 2013) proposes a communicative contract where the reader is invited to carefully read before deciding where to position one's self. On the other side, with respect to the functions of identification and specification played by inverted commas addressed to convey semiotic transparency, ambiguity is elicited through references to the "undefined" ("anti-epileptics and 'other kinds of drugs'", *BJP*, May 2013) or through an unfocused sense of wisdom (e.g. "Among both men and women, a 'prudent' dietary pattern", *BJP*, December 2013). By comparing the two journals, such tendency seems to be more frequent in *BJP*, where allusive references aim at mitigating the authors' assertivity ("we may have overestimated the 'true' effect size"—*BJP*, April 2013).

The modulation of the borders between semiotic transparency and opacity, and between certainty and uncertainty is shaded in some cases, as for instance in common sayings and/or in metaphors (e.g. "grace period", *BMJ*, April 2013). Yet, within biomedical communication, even the reference to the "common sense" could be used as a support to the argumentative strategies, in its reassuring even if undefined features. Furthermore, other expressions are found between denotation and connotation that even when aimed to "make more compact", the sense conveyed by the text do not give precise references. For instance, they mainly rely upon qualitative adjectives as in the following extracts: "had a 'clinically meaningful' superiority" (*BJP*, September 2013) and "severe depressive symptomatology" (*BJP*, October 2013), both taken from the *BJP*. Therefore, the use of meta-discursive markers that is mainly aimed to involve the reader in the management of sense making here reveals a specific strategy of modulation of uncertainty alternating attitudes of involvement and detachment toward the enunciation.

Empowering and Weaking Discursive Positions

Meta-discursive and mitigation markers are other two helpful cues that help highlighting differences in the use of subtler interpretative assets in both corpora of texts.

Meta-discourse refers to any expression of comment and reformulation dealing with either the authors' intentions, to encourage a more suitable interpretation of discourse—in this case, authors make use of "textual" markers—or with the balance of the relation that it is meant to construct—"interpersonal" markers (Crismore et al. 1993; Hyland 2004; Hyland and Tse 2004). As such, they facilitate a more coherent organization of discourses as well as a more complete knowledge of the author's rhetoric attitude.

Accordingly, the label "textual meta-discourse" refers to the mode of discourse (Halliday 1973), namely to all the devices which allow the reader to unmask the author's intentions by establishing precise and explicit interpretations. As a consequence, textual meta-discourse could be investigated through the use of specific textual indices, such as logical connectives (e.g. "in addition", "thus", "and", "therefore"), frame markers (e.g. "finally", "to repeat", "our aim here"), endophoric markers (e.g. "noted above", "see Fig. 1, below"), evidentials (e.g. "according to", "X states that") and code glosses (e.g. "namely", "in other words", "such as"). The broader function of these markers is to help the reader in grasping meanings by connecting clauses, explaining concepts and referring information from other sources.

On the other hand, "interpersonal meta-discourse" refers to the tenor of discourse (Halliday 1973) and identifies all the communicative devices alerting the reader about the author's perspective, thus shaping their reciprocal relationship. Interpersonal meta-discourse is evident using hedges (e.g. "might", "perhaps", "it is possible"), emphatics (e.g. "in fact", "obviously", "definitely"), attitude markers (e.g. "I agree", "X claims that"), person markers (e.g. "I", "me", "our") and relational markers" (e.g. "frankly", "note that", "you can see"). The function of these items is to highlight the author's attitude both to the content of communication and to the readers (Giancaspro and Manuti 2015).

With special reference to the corpus analysed, biomedical discourse is mostly featured using textual meta-discourse, aimed at consolidating its argumentative asset (e.g. "Additionally", "Moreover", "Figure 2"), as showed by the following examples:

9.

Additionally, we excluded reviews, editorials and non-human studies (January 2013).

10.

For example, in England and Wales in 2010 at least 123 different brands of acetabular cups and 146 brands of femoral stems were used (February 2013).

11.

This in turn leads to a low specificity of D-dimer testing in older patients (May 2013).

12.

Figure 2 summarizes the risk of bias for the study (November 2013).

13.

Moreover, four articles reported results for different types of strokes (August 2013).

Psychiatric discourse, on the other hand, uses frequently interpersonal meta-discoursive cues, to give power to one's own argumentation (e.g. "However", "Thus", "To our knowledge").

14.

However, it is not possible to establish what accounts more for this trend (August 2013).

15.

Thus, one must be cautious in inferring that prior description of an LAI caused differences in outcomes (September 2013).

16.

To our knowledge, this is the first RCT to focus on occupational and productivity outcomes in employed patients (November 2013).

17.

Because we had no information on other potential confounding factors including substance misuse and family history of suicidal behavior, we cannot completely rule out bias because of these confounders (December 2013).

18.

However, it is also important to note that complex ethical issues are raised potentially when treatment is given to patients fro the benefits of their carers (February 2013).

Another path of differentiation is found out in the analysis of the mitigation markers described earlier that are used in the texts. In its pragmatic function, mitigation is a resource for biomedical and psychiatric scientific academic writing. It enlives through debates and empirical proposals that construct its own claim for validity and innovation. In both journals, hedges and bushes differently featured the sections of the articles.

Comparing the "Introduction" sections, sketching the theoretical and methodological frame of the whole study, proposing definitions, questions and reviews of previous studies, a difference could be observed between the "claim for certainty" exhibited in the *British Medical Journal* and the "the taking on of responsibility on a set of problems" manifested in the *British Journal of Psychiatry*.

More specifically, the first words in the "Introduction" sections of the articles considered from the *BMJ* aim at introducing the issue in its relevance. The Introduction section generally opens with a general statement pointing out the topic of the article. This discursive move presents the topic as an evident truth of science. Therefore, the main aim is probably that of discursively constructing a common ground of shared knowledge, thus reassuring readers about the solidity of any assumptions enounced further.

19.

Cutaneous squamous cell carcinoma (SCC), the second most common type of non-melanoma skin cancer after basal cell carcinoma, arises most commonly in sun exposed areas of the body from keratinocytes in the epidermis. Invasive SCC, characterised histologically by the spread of malignant cells into the dermis, could arise de novo or

from the transformation of precursor lesions such as actinic keratosis and Bowen's disease (November 2013).

20.

Approximately 40% of people with acute coronary syndromes receive early invasive management involving coronary angiography and percutaneous coronary intervention within 48 hours of hospital admission (July 2013).

However, following the development of the Introduction section, mitigation markers could be found. First, *hedges* that are addressed to mitigate the illocutive power of the arguments are presented especially through modal verbs ("may", "can"), conditionals ("could", "might") and conjunctions ("however").

21.

That said, PSA screening is not a single intervention and men can be screened in different ways. There is surprisingly little evidence to support many aspects of contemporary screening guidelines. In particular, the age at which screening starts and the frequency of PSA testing is rarely justified in terms of empirical data. Recent evidence has suggested that a single PSA measurement can predict the long term risk of clinically relevant prostate cancer. This suggests that a baseline concentration could be used to determine whether a man might benefit from subsequent PSA tests and, if so, when these should be administere (May 2013).

22.

The risk of complications from influenza, including lower respiratory tract infection, admission to hospital, and death vary depending on factors such as age and the type of comorbidity that may be present. Currently, the World Health Organization and most countries prioritise specific high risk groups for vaccination. Although some recommendations are consistent, such as vaccination of healthcare workers, pregnant women, and those with certain high risk conditions, there are also discrepancies, such as the age groups that need to be prioritised (September 2013).

Moreover, also *bushes* are used: adverbs ("modestly", "relatively") and expressions recalling common sense (e.g. "are considered") or even recalling what is socially believed to be true (e.g. "known as"). These last expressions reveal a weak commitment to the content of the text, though they attempt to reinforce a sense of belonging to the scientific community.

23.

Although systematic reviews and randomised trials of antibiotics in acute sore throat have shown a modest effect on symptoms, prescribing antibiotics prevents both suppurative complications (quinsy, otitis media, sinusitis, cellulitis) and non-suppurative complications, although non-suppurative complications are probably currently rare in resource rich settings. Thus it is important not to deny those patients at major risk of severe illness or complications the benefit from antibiotics. Both patients and general practitioners are concerned about the danger of severe illness from upper respiratory

> tract infections, and in the absence of evidence general practitioners currently use a range of ad hoc clinical criteria to justify prescribing antibiotics. A better understanding of those patients who are or are not at risk of poorer outcomes could help tackle such concerns (December 2013).

In the *BJP*, the problematic and complex nature of the issue debated is constructed already in the very first lines of the introduction section. Nouns, adjectives (e.g. *BJP* April 2013 "weak evidence"), verbs, conjunctions and adverbs (e.g. *BJP* May 2013 "not consistently") concur to reduce the illocutive power of the arguments and to show the "soft" adhesion to what was presented, in a superordinate perspective to problematize the issues discussed.

24.

> Suicide is known to be associated with psychosocial factors, but epidemiological evidence linking suicide to other environmental factors is limited. As regards diet, a modifiable factor that could influence mental health, a few studies to date have examined specific nutrients and foods including fish and omega-3 fatty acids, coffee, alcohol– and tryptophn in relation to suicide risk (December 2013).

25.

> The recent literature is characterised by a consensus that cocaine dependence is associated with significant neuropsychological impairment, although the aetiology and the severity of these impairments are a matter of ongoing debate. Existing studies with dependent users indicate persisting cognitive impairments including deficits predominantly in the domains of attention, working and declarative memory, and, less consistently, in the ill-defined concept of executive functions. However, given that these previous studies differed in their inclusion and exclusion criteria regarding comorbid psychiatric diseases, polytoxic drug-use history, abstinence time and verification of self-reported drug intake, the specific impact of chronic cocaine use on cognitive processes has been difficult to determine (July 2013).

Beside *bushes*, in the 98 articles from the *BJP*, mitigation is constructed through expressions and circumlocutions (e.g. "it is not yet fully understood whether"—*BJP* January 2013) that in some cases take clearly the *shields* function. For instance, by using expressions like "making the results hard to interpret" (*BJP* January 2013) and "make it difficult to reliably identify neuronal regions or networks" (*BJP* June 2013), the authors perform a dialogic capsizing with respect to the reader, aiming at involving him/her in the difficulty to make definite assumptions about the issue debated.

The shielding impression performed by the authors of the *BJP* is amplified in the sections devoted to methodology (see extracts 26 and 27). The big difference between the two corpora is that while in the "biomedical" journal most of the predicates used are declined in the active form and using the first-person plural, in the articles selected from the "psychiatric" journal, sentences are mostly constructed in a passive way. Certainly, this difference should be related to the journal's house style: the *BMJ* invites authors to write in "clear, active and direct style",[2]

[2] https://www.bmj.com/about-bmj/resources-authors/house-style

while the *BJP* makes no explicit invitation about the writing style.[3] However, the pragmatic effect generated by the different stylistic choices of the journals resulted in two epistemic attitudes toward scientific academic writing that consequently impact differently on the readers.

26.

> Although all patients were instructed to use the light box every day, practical constraints (travel, changes in routine, etc.) meant that this was not always possible. Therefore, during the treatment phase, the participants were asked to record how many days they actually used the light box (*BJP*, May 2013).

27.

> The UK Department of Health Attitudes to Mental Illness survey is conducted by Taylor Nelson Sofres plc as part of an omnibus survey and has been carried out annually since 2008 as a part of the Time to Change evaluation. Although TTC received funding in October 2007, the social marketing campaign activity did not begin until after the survey was run in 2009. Thus, the Attitudes to Mental Illness survey provides baseline and follow-up indicators of mental health-related knowledge, attitudes and behaviour among a nationally representative sample of adults residing in England. Approximately 1700 respondents were surveyed each year from 2009 to 2012. The sample surveyed had slightly higher representation of individuals in lower socioeconomic classes compared with individuals from middle and upper socioeconomic classes and this was corrected through sample weighting (*BJP*, April 2013).

Within the 200 research articles selected from the *BMJ*, predicates include verbs, even repeated several times, that imply cognitive evaluations but also operative implications (just to quote some examples taken from the same article "we conducted", "we scrutinized", "we followed", "we excluded", "we extracted", "we assigned", "we extracted", "we assumed", "we contacted", "we used", "we computed", "we evaluated", "we considered"). Verbs are generally associated with adverbs highlighting coherence and continuity in the pianification and actualization of the research (e.g. "we also conducted", "first… then…"). Such discursive cues suggest a complete and aware participation of the authors, which consequently construct a subjectivity based on *embrayage* strategies[4] and thus aimed at enhancing agency (see extracts 28 and 29).

28.

> We conducted a case-control study to examine the association of Tdap vaccination and pertussis infection among people 11 years and older. We defined cases as people who tested PCR positive for pertussis during the study period from January 2006 to December 2011. We compared the Tdap immunization status of these cases with that of two

[3] https://www.cambridge.org/core/journals/the-british-journal-of-psychiatry/information/instructions-contributors

[4] In the perspective of diatextual analysis, *embrayage* and *débrayage* refer to any strategy aimed to reveal whether the author is involved or not (I-here-now) in discursive acts.

control groups. The first control group consisted of people who tested PCR negative for pertussis during the study period (*BMJ*, July 2013).

29.

We considered networks that had five or more treatments, contained at least two closed loops, had at least twice as many studies as nodes, and had individual trial level data or estimates available. The eligibility criteria aimed to generate a sample of networks that had many treatments and studies and sufficient data to explore the impact of exclusions. We used a systematic literature search that has been published previously that identified potentially eligible networks. We also attempted to contact study authors for missing individual data at trial level. We included an additional network from an MTC conducted by our team, where we had direct access to the primary data at trial level. In studies that considered more than one outcome using MTCs, we favoured the efficacy outcome over safety outcomes (*BMJ*, September 2013).

This discursive option, which concretely allows authors to take the enunciative responsibility about what they are writing and that is highly relevant in the sections dedicated to the definition and development of the research, is milder within the corpus from the *BJP*, where uncertainty and mitigation in the methodological sections passed using *shields*. Here operative and cognitive tasks typical of a research design development are transformed by using a passive form, obscuring any reference to the "I-here-now".

30.

Baseline measures included the Long Version of Conners' Parent (CPRS-R:L), and Teacher Rating Scale (CTRS-R:L), which were used to quantify ADHD symptoms. Parents and teacher were asked to describe the child's behaviour in a medication-free period when filling out the questionnaire. T-scores 563 on the Conners ADHD subscales (L, M and N) were considered clinical. The CPRS-R: L also assesses symptoms related to oppositional defiant disorder (for example angry and resentful, argues with adults, loses temper, irritable, temper outbursts) on a four-point ordinal scale (*BJP*, August 2013).

The reduction of the illocutive power, constructed using discursive markers acting as *hedges*, again became salient in the *BMJ* in the sections about results—even if alternating with clues of precision—discussion, limitations and strengths, and conclusions.

31.

Our study has identified robust, generalisable, and independent risk factors that may alert clinicians to children at risk of severe outcomes when presenting with influenza-like illness during a pandemic (*BMJ*, August 2013).

32.

The meta-analysis of the 11 other studies, which assessed decolonization alone without skin decontamination, also found a statistically significant protective effect against *S aureus* surgical site infections (0.70, 0.50 to 0.97). However, none of the studies

compared nasal decolonization alone with nasal decolonization plus skin decontamination (*BMJ*, June 2013).

In extract 31, the first part of the period, made "certain" by the presence of adjectives such as "robust" and "generalisable", is followed by a second part that was "mitigated" by the modal verb "may" and by the contestualization that allows to limit the range of generalization. The range of uncertainty that featured the final sections of the articles, and the section devoted to the "strengths", is paradoxically elicited also by the "certainty" expressed by some sentences (e.g. "Our study has limitations"—*BMJ*, July 2013; "This study has several limitations that should be recognized"—*BMJ*, March 2013).

A similar trend was observed in the *BJP*, where mitigation is largely used in the results, discussion, limitations and strengths, and conclusions sections to reduce the illocutive power of the statements provided (e.g. "it is not possible to know whether […] Unfortunately, there are few studies with…"—*BJP* June 2013; "Some major limitations of this study should be kept in mind"—*BJP* January 2013).

33.

This study has limitations besides those discussed above. The CHDS sample size is not as large as the ALSPAC or other relevant studies, so the sample may be insufficiently powered to detect true associations of small effect size. Generalisability of findings should also be considered relative to the sample attributes of both the New Zealand and UK cohorts included in the present study. The CHDS analysis presented here is based on European-descent samples from New Zealand, and so results may not generalise to other data sets from countries with different healthcare systems and cultural features. However, the presence of similar results in the ALSPAC cohort from the UK mitigates this issue considerably (*BJP*, February 2013).

34.

Although our findings highlight the effect of early problems, suggesting that interventions when children are young may help in ameliorating the potential impact of these difficulties, randomised controlled trial methodologies are required to determine whether early identification approaches are cost-effective in improving outcomes (*BJP*, October 2013).

In this case, even the explicitation of strengths and weaknesses of the study is mitigated (e.g. "Perhaps the main strengths […] However, perhaps the main limitation is that (…)"—*BJP*, September 2013), conveying the idea that the necessity to be "cautious" is one of the few certainties of the studies reported (e.g. "Thus, one must be cautious in inferring that (…)"—*BJP*, September 2013).

Conclusion

Although oriented to make mostly evident claims for certainty, the texts of the scientific biomedical and psychiatric communication could be considered as conversational "situated" events that often leave traces of uncertainty as already showed by previous research in the field (Kohler 2018, 2020).

Accordingly, academic scientific writing is always interactional and dialogic (Hyland and Salager-Meyer 2008). By discussing a specific issue, it essentially involves "positioning", since it expresses a point of view in relation to both the topic debated and to the ideal community of readers who would preferably read the text and maybe share its core. To be recognized as "competent experts" and then to have the opportunity to be read, scientific authors must prove their disciplinary competence, thus enhancing their reputation within the community. However, their competence is not taken for granted. It is a social construction that derives from the "dialogue" that the authors wish to establish with the scientific community through their published work as well as by the acknowledgement they receive by readers with respect to the solidity and authority of their ideas in a certain disciplinary field. This effort toward the establishment of a dialectical interaction becomes concrete in text and talk through two specific discursive strategies: stance and engagement (Hyland 2005). Stance refers to the linguistic and metalinguistic cues that allow writers to present themselves through their text, shaping their identity, expressing their beliefs, opinions and commitments. Engagement, on the other hand, refers to all the strategies writers adopt to connect to their (ideal) readers: focusing their attention, anticipating their doubts, acknowledging them as discourse participants and guiding them to interpretations.

Both strategies recall the dialectic relationship between ideology and rhetoric that is inbuild in academic scientific writing and that concretely manifests in discourse through the recurrence of specific socio-epistemic rhetoric as described at the beginning of the paper.

Basing on these assumptions, the aim of the study was to unveil the presence of specific socio-epistemic rhetoric of uncertainty in a group of research articles selected from the disciplinary domains of biomedics and psychiatry. Diatextual analysis was adopted as a methodology and showed that although several recurrent traits mainly due to the common belonging to the "academese genre" (Manuti et al. 2006), the two corpora of scientific academic texts differed a little for the socio-epistemic rhetoric conveyed.

The discursive practices featuring the *BMJ* are showed to be mostly oriented to "describe" the world. Thus, interlocutors in this context display "assertive and narrative" argumentative strategies, to be perceived as much credible as possible in their scientific community. Accordingly, the rhetorical/argumentative strategies go in the same direction enhancing the assertive intention overall in the phases of research design.

35.

> The most consistent association has been between a high intake of sugar sweetened beverages and the development of obesity, but not all published meta-analyses have reported a statistically significant link. The expert consultations organised by the World Health Organization and the Food and Agriculture Organization of the United Nations and the scientific updates undertaken by WHO have adopted a classification of carbohydrates and clarified definitions of various groups of sugars including the category of 'free sugars'. This classification enables a more standardised approach to examining potential adverse health effects (*BMJ*, January 2013).

The *BJP* articles, on the other hand, are mostly linked to cognitive operations that expressed the intention to "interpret" the world. Therefore, in this case, the enunciators know that in their scientific community, they could be reliable only if they adopted problematic and critical attitudes.

36.

> Cross-national comparisons of disability-free life expectancy are hampered by the lack of harmonisation of the underlying measures. Comparability issues are perhaps slightly less problematic for mental health expectancies since there have been initiatives such as the European Study of the Epidemiology of Mental Disorders (ESEMeD, a cross-national epidemiological survey of adults in Belgium, France, Germany, Italy, The Netherlands and Spain (2001–2003; n=21425)),10 aimed at producing harmonised measures across Europe. Furthermore, mental disorders are strongly associated with physical morbidity and disability crossnationally (….) (*BJP*, April 2013).

The mind/body debate featuring the theoretical review, the empirical research design and in the discussion of results is described as highly problematic. This argumentative strategy is addressed to epistemically detach the enunciator from the enunciation, thus highlighting the critical dimension of the issue.

37.

> Some care is needed in drawing conclusions on the relative burden of mental disorders in different European countries from these analyses (…) However, by omitting them we make the assumption that the institutional sector will have similar rates of these common mental disorders to those outside of institutions and, for the disorders we have considered, this assumption seems tenable (…) we are unable to draw conclusions about recovery from mental disorders since Sullivan's method is based on prevalence. However, prevalence itself is a function of duration and therefore as the duration of mental disorders increases then prevalence (and the years with mental disorders) would increase (*BJP*, April 2013).

Indeed, in the process of co-construction of knowledge, positioning and intentions are not so neatly defined: in the proposal for theoretical and methodological reflections within the scientific review of the literature, the game between certainty and uncertainty is constant and assumes specific configurations and relationships in the different sections of the articles analysed. By rationing lexical aspects, meta-discursive markers, quotations and mitigation tools, authors propose to the scientific community a communicative contract based on a delicate balance between a reasonable outburst and a cautious slowdown, recalling the dilemmatic nature of knowledge and biomedical communication and testifying the awareness about the performative range of its texts.

The scientific paper is a text which involves specialized contents and structure, due to the potentialities and constraints of its discursive genre. Its mainly rhetoric expositional and argumentative weave assumes an informative and persuasive function. Apart from tackling unsolved problems or matters not yet defined by science, it is also a means for promoting scholars at the academic and professional level. Therefore, a "cautious" attitude is often recurrent for several reasons:

a) Avoiding assuming definite responsibilities in the application of specific procedures.
b) Launching critical reflections about the proposed matters, including the need for additional investigations.
c) Obtaining approving within the scientific community and reducing the probability of criticism or refusal while encouraging a space of discussion between experts.

In conclusion, the study has contributed to enlarge the focus on the study of scientific (biomedical and psychiatric) communication, proposing diatextual analysis as a critical discursive tool allowing to penetrate the thick relationship between enunciators' identity, texts and contexts of enunciation. Accordingly, using the discursive traces of subjectivity, modality and argumentation disseminated within both corpora, diatextual analysis has allowed to point out how the academic biomedical and psychiatric disciplinary domains discursively construct and convey two distinct social-epistemic rhetorics of uncertainty that are not simply expression of two different communicative modalities of scientific writing. Conversely, these differences are profoundly inscribed into distinct interpretative repertoires, systems of beliefs and cognitive frames that substantiate the difference between "health" and "illness" as specific universe of meaning passing through discourse.

Accordingly, if it is true that "the way we speak might be important in terms of how reliable and valid our representations are" (Morgan 1999: 66), discursive approaches have largely contributed to show how the dominant representations of health and illness circulating in medical and human sciences have impacted on modern societies. Yet, it is evident that the socio-linguistic aspects of experience relate to our material existence: beliefs and representations of health and illness are constantly fed by our social discourses about them and heavily influence the way we relate to healthy and/or ill people in our daily experience (Stam 2000; Yardley 2002). Yet, research on the physical and behavioural aspects of illness and health could be fruitfully complemented by considering also the impact of linguistic and cultural aspects that could be detected through discourse analysis as showed by the present study.

In view of the above, academic scientific writing holds a great responsibility in shaping the representations and the discursive construction of illness and health. In fact, as confirmed by the results coming from the study, aware about this evidence, the authors tended to avoid assuming definitive responsibilities about the (relative) certainty of their conclusions and preferred to underline the intrinsic limitations of scientific knowledge, meant as a partial representation of reality, as a body of statements and discourses, which are produced in a social context and therefore are inevitably affected by individual and collective interpretations (Foucault 1970).

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